



İZMİR SITUATIONAL ANALYSIS, 2013



İZMİR
Situational Analysis
2013

İZMİR

Situational Analysis

İzmir Development Agency
İZMİR SITUATIONAL ANALYSIS
2013

Date of Publish
July 2014

Place of publish
İZMİR

Graphic Design
Bia Halkla İlişkiler ve Reklam Ltd. Şti.

Translation
Çağrı Yüce

Graphic Design Application to English
Nefise Yıldız Torun

Press
NEXUS Büro Araçları Servis ve
Baskı Hiz. San. Tic. Ltd. Şti.

İzmir Kalkınma Ajansı
Şehit Fethi Bey Cad. No:49/1 Birlik Plaza K:3
35210 Gümrük / İZMİR, TURKEY
T: (0232) 489 81 81 • F: (0232) 489 85 05
www.izka.org.tr • info@izka.org.tr
www.izmiriplanliyorum.org

ISBN: 978-605-5826-12-3

© 2013, İZKA
All rights reserved. This publication or
parts thereof may by no means and
methods be used via processing,
reproducing, distributing reproduced
copies, selling, renting, lending,
representing, presenting, communicating
in fixed/wireless or other technical,
numerical and/or electronic methods
unless the appropriate written permission
in concordance to Article 52 of FSEK
(Turkish Law of Intellectual Property Rights)
no. 5846 is received from the rightful
owner prior to use.

All rights of the study prepared herein
belongs to İzmir Development Agency. This
İZKA study may be used for citations with
the condition relevant references are given.

Introduction

"I love İzmir and İzmirians; I am sure that the truehearted people of İzmir love me too "

İzmir, 11 Ekim 1925

H. Öztürk

For the İzmir that we imagine for the year 2023...

2013 İzmir Situational Analysis (2013 MDA - Mevcut Durum Analizi), was prepared in a period where we continued to observe a deep financial crisis that may occur only every 50-100 years throughout the world and its reflections on real sector.

2013 MDA was aimed to present a scientific foundation during the process of planning İzmir's year 2023 objectives. In this framework, analyses conducted and visions indicated with the use of scientific methods shall be a guide for preparation of strategic priorities and objectives.

Main developments in the global economy that are not to be disregarded when preparing 2014-2023 İzmir Regional plan may be listed as year 2008 financial crisis, new global branch of labour in the world, climate change, energy problem and innovation economies.

People's Republic of China becoming an economic power capable of determining the new conditions of global production and Indian economy taking the role of an 'outsourcing' pioneer in the services sector of global economy caused a new branch of labour to enter the agenda throughout the world economy. Year 2008 financial crisis caused significant demand shrinking in the consumption and investment products market of all countries, particularly developed ones, leading to a liquidity crisis that caused recession in developed countries.

With the relatively declining shares of industrialised countries within world production, developing countries that also include Turkey became the most important producers within global economy. Especially China and India economies achieved a power capable of directing the global production. Russia, Brazil and Mexico occurred to be other significant powers. Euro Region economies that are the most important trade partner to Turkey and İzmir experience slowdown, even recession in some countries. It is seen that the commerce world has to gain market-sensitive and rapid movement capability with smart cash management. İzmir increased its access to new export markets in line with the Turkish economy. Africa, Asia, Russia and China markets will be the growing markets of the future.

In this process where new production and consumption regions emerge at global scale, preparation studies of the Tenth Development Plan constitute an important opportunity for determining the necessary strategies and policies. 26 Regional plans that are to be prepared in line and accordance to the Tenth Development Plan shall be a means for revealing the participative mechanisms required for increasing the contribution the regions shall make to the 2023 vision of Turkey and the strategic priorities to be employed for achieving this vision.

Within the context of situational analysis studies that constitute the first stage of plan studies, initially efforts were made towards determining the social, economic, environmental and spatial analysis actions that would enable determination of the region's structure and dynamics. Turkey's leading think tank organisations and universities were contacted. Their opinions on the regional analyses İzmir required as priority were received. Within the framework of these analyses, initially the existing and demanded resources of İzmir were determined that are required towards realising purposes, objectives and strategies for the future. It is of vital importance to provide a wide participation and contribution for İzmir Regional Plan preparations in order to realise effective and efficient utilisation of the potential of İzmir, increase the province's contribution to Turkey's development, and actualise both the national and the regional plan.

We hope that 2013 İzmir Situational Analysis, produced for the purpose of constituting a scientific foundation for definition of the year 2023 vision of İzmir and for development of the policies and strategies required to achieve that vision, will be beneficial to public, private and civil society segments and universities and extend our gratitude to all who made contributions to this analysis for their interest, efforts and sharing our excitement.

İZMİR DEVELOPMENT AGENCY

Acknowledgement

We hereby extend our gratitude to the institutions and organisation that cooperated with İZKA within the framework of 2014-2023 İzmir Regional Plan preparations, and everybody who contributed with their recommendations and evaluations through participating in surveys, face to face interviews, focus group meetings and workshops within the framework of these analyses, all who thought about İzmir.

Analysis	Relevant Institution	Projectteam
İzmir Region Input-Output Analysis	Ege University Faculty of Economic and Administrative Sciences	Prof Dr Osman AYDOĞUŞ Asst. Prof Dr Çağaçan DEĞER Elif TUNALI ÇALIŞKAN Gülçin GÜREL
Determination of Functional Region, Sub-Regions and Interregional Relations in İzmir Province	Dokuz Eylül University Department of Urban and Regional Planning	Prof Dr Sezai GÖKSU Prof Dr A. Emel GÖKSU Assoc. Prof Dr Ebru ÇUBUKÇU Assoc. Prof Dr K. Mert ÇUBUKÇU Lect. Dr Levent ÜNVERDİ
İzmir Civil Society Research	Ege University Faculty of Communication	Prof Dr Gülgün TOSUN Asst. Prof Dr Hanifi KURT Dr Gökçen BAŞARAN İNCE
İzmir Province Potential Investment Titles Research	Development Bank of Turkey	Dr Faruk Cengiz TEKİNDAG Dr Oktay KÜÇÜKKİREMİTÇİ Ömür GENÇ Fulya BAYRAKTAR Faruk SEKMEN
Strategy for Development of İzmir Entrepreneurship Ecosystem	Turkey Economy Policies Research Foundation (TEPAV)	Ussal ŞAHBAZ Damla ÖZDEMİR Beril BENLİ Nihan SIRIKLIOĞLU Selin KIRAL
İzmir Cultural Economy Inventory and Development Strategy	Dokuz Eylül University Department of Urban and Regional Planning	DOKUZ EYLÜL UNIVERSITY Assoc. Prof Dr Şebnem G. DÜNDAR Asst. Prof Dr Zehra ERSOY Res. Asst. H. İbrahim ALPASLAN T. Deniz COŞKUN SATIRCI Gökçe SANUL EGE UNIVERSITY Prof Dr Neşe KUMRAL Asst. Prof Dr Mehmet GÜÇLÜ Res. Asst. Dr Burcu TÜRKCAN Res. Asst. Gülçin GÜREL
İzmir Tourism Current State Report	Yaşar University Faculty of Economic and Administrative Sciences	Prof Dr İge PIRNAR Assoc. Prof Dr Çağrı BULUT Asst. Prof Dr Ferika ÖZER SARI Res. Asst. Duygu SEÇKİN HALAÇ

Analysis	Relevant Institution	Projectteam
İzmir Clustering Statistics and Field Analysis Studies	Tangram Danışmanlık Zobu Danışmanlık	Zeynep TURA Mustafa Hakan ZOBU Fevzi DOĞU Emre ERDİL
Knowledge Society Based Development Strategy for İzmir	İzmir Institute of Technology Faculty of Engineering	Asst. Prof Dr Tuğkan TUĞLULAR Asst. Prof Dr Koray VELİBEYOĞLU Dr Selma TEKİR
Aquaculture Sector Strategy for İzmir	İzmir Katip Çelebi University Faculty of Aquaculture	Prof Dr Ahmet Adem TEKİNAY Asst. Prof Dr Hakkı DERELİ Oya KUDRET
İzmir Regional Innovation Strategy	EBİLTEM TurkSTAT	EBİLTEM Dr Serdal TEMEL Prof Dr Fazilet VARDAR SUKAN Tutku ASARKAYA Aykut GÜLALANLAR Prof Dr R. Cengiz AKDENİZ Assoc. Prof Dr Ünal RIZA YAMAN TurkSTAT Rıdvan YAKA Basri YALVAÇ Murat TOPAL Kismet AKÇASOY Barış PEKEL Fatih YALABUK
Strategy Study for Universalisation of Clean Production (Eco-Efficiency) Applications in İzmir	TTGV	TTGV Ferda ULUTAŞ Emrah ALKAYA Merve BÖGÜRCÜ Ayşe KAYA DÜNDAR Kemal İŞİTAN ODTU Prof Dr Göksel DEMİRER
İzmir Urban Marketing Strategy	Art Grup Wolff Olins American World Service TNS Global Kita Design	
MDA Map Making	İzmir Institute of Technology	Hamidreza Yazdani and Ezgi Ceren Karataş
Up To Date Data Procurement	TurkSTAT İzmir Regional Directorate	

Contents

INTRODUCTION.....	4-5
ACKNOWLEDGEMENT.....	6-7
CONTENTS.....	8-9
TABLES.....	11-12
FIGURES.....	12-13
MAPS.....	13
ABBREVIATIONS.....	14-15
DEFINITIONS and CONCEPTS.....	16-17
METHODOLOGY.....	18-23

1. OVERVIEW OF THE REGION	24
1.a. The Standing of İzmir within Region and Country	26
1.b. Global Position of İzmir Province.....	30
1.c. Important Developments that Will Guide İzmir.....	32

2. SOCIAL STRUCTURE.....	34
2.a. Population Structure.....	36
2.a.1. Increasing and Dense Population	
2.a.2. Urbanising Population	
2.a.3. Aging Population – Changing Family Structure	
2.a.4. Migrating Population	
2.a.5. Assessment	
2.b. Education.....	42
2.b.1. Formal Education	
2.b.1.a. Preschool Education	
2.b.1.b. Primary Education	
2.b.1.c. Secondary Education	
2.b.1.d. Vocational Education	
2.b.1.e. Higher Education	
2.b.2. Informal Education	
2.b.3. Assessment	
2.c. Culture	54
2.c.1. Historical Culture Heritage	
2.c.2. Archaeological Culture Heritage	
2.c.3. Intangible Culture Heritage	
2.c.4. Cultural Infrastructure	
2.c.4.a. Museums and Open Archaeological Sites	
2.c.4.b. Libraries	
2.c.4.c. Cultural Centres in İzmir	
2.c.4.d. Theatres in İzmir	
2.c.4.e. Cinemas in İzmir	
2.c.4.f. Fair Culture in İzmir	
2.c.5. Culture Economy	
2.c.6. Protection Zones in İzmir	
2.c.7. Assessment	
2.d. Health.....	64
2.d.1. Base Indicators in Health	
2.d.2. Access to Healthcare Services	
2.d.3. Assessment	
2.e. Governance and Social Capital	70
2.e.1. Governance	
2.e.1.a. Coordination Structures	
2.e.1.b. Regional Planning and Regional Governance	
2.e.1.c. Non-Governmental Organisations in İzmir	
2.e.2. Social Capital	
2.e.3. Assessment	
2.f. Employment Situation	78
2.f.1. Workforce	
2.f.2. Employment	
2.f.3. Unemployment	
2.f.4. Assessment	
2.g. Income Distribution and Poverty	86
2.g.1. Income Distribution	
2.g.2. Poverty and Social Inclusion	
2.g.3. Assessment	

3. ECONOMIC STRUCTURE	96
3.a. General Economic Structure.....	98
3.a.1. Gross Domestic Product and Value Added	
3.a.1.a. GDP and GVA Per Capita	
3.a.1.b. Competitiveness	
3.a.2. Employment	
3.a.3. Public Investments in İzmir	
3.a.4. Technology and Innovation Capacity of İzmir	
3.a.5. Intersectoral Relations	
3.a.6. Clustering	
3.a.6.a. İzmir Clustering Analysis	
3.a.6.b. Clusters in İzmir	
3.a.6.c. İzmir Clustering Strategy	
3.a.7. Investment Environment in İzmir	
3.a.8. Region's Development Potential and Proposed Fields of Investment	
3.a.9. Entrepreneurship	
3.a.10. Assessment	
3.b. Agriculture Sector	140
3.b.1. Plant Based Production	
3.b.2. Animal Based Production	
3.b.3. Aquaculture	
3.b.4. Forestry	
3.b.5. Organic Agriculture and Good Agricultural Practices	
3.b.6. Assessment	
3.c. Industry Sector.....	156
3.c.1. Manufacturing Industry	
3.c.1.a. Manufacturing Industry throughout the Province	
3.c.1.b. Manufacturing Industry by Districts	
3.c.1.c. Organised Industrial Zones, Small Industrial Sites, Free Zones, Technology Development Zones	
3.c.2. Energy Sector and Renewable Energy	
3.c.3. Mining Sector	
3.c.4. Assessment	
3.d. Services Sector	
3.d.1. Logistics	182
3.d.1.a. Logistics Sector in Turkey and throughout the World	
3.d.1.b. Logistics Sector in İzmir	
3.d.2. Trade	
3.d.2.a. Foreign Trade	
3.d.3. Tourism Sector	
3.d.3.a. Global Tourism Sector	
3.d.3.b. Touristic Demand Profile in İzmir Province	
3.d.3.c. Tourism Supply and Tourism Types in İzmir	
3.d.4. Finance Sector	
3.d.5. Assessment	

4. ENVIRONMENT.....	214
4.a. Water and Wastewater.....	216
4.b. Solid Waste Management	219
4.c. Air Quality.....	220
4.d. Industrial Pollution and Pollution Control	221
4.e. Eco-Efficiency Applications.....	223
4.f. Marine and Coastal Areas.....	224
4.g. Basin Areas	225
4.h. Biological Diversity and Sensitive Ecosystems	227
4.i. Assessment	228
5. INFRASTRUCTURE AND ACCESSIBILITY.....	232
5.a. Transportation Infrastructure	234
5.a.1. National and International Connections of İzmir	
5.a.1.a. Highways	
5.a.1.b. Railways	
5.a.1.c. Airways	
5.a.1.d. Maritime	
5.a.2. Intracity Transportation	
5.a.2.a. Highway	
5.a.2.b. Rail Systems	
5.a.2.c. Maritime	
5.a.2.d. Pedestrian and Bicycle Transportation	
5.b. Energy Infrastructure.....	243
5.c. Technological Infrastructure	244
5.c.1. Information and Communication Technologies	
5.c.2. Telecommunication	
5.c.3. Internet	
5.d. Location	246
5.e. Urban Quality of Living and Houses.....	247
5.f. Assessment	250

ANNEX AND REFERENCES:.....	252
ANNEX-1:Nomenclature of Units for Territorial Statistics (NUTS) Level 2 Regions	254
ANNEX-2: Gross Regional Product (NUTS Level 2 Regions, Thousand Dollars)olar)	255
REFERENCES	256

TABLES

Table 1: Economic and Social State Profile of İzmir	28	Table 52: GVA Values and Increase Rates of Regions at NUTS 2 Level, 2004-2010	100
Table 2: Global Metropolis Settlements with the Highest Economic Performances	30	Table 53: Sectoral GVA and the Share of İzmir	101
Table 3: Information on Population, 2010-2012	36	Table 54: GDP Per Capita (Dollar)	102
Table 4: Urban Population Ratios by Periods (%)	37	Table 55: First Five Provinces in the Interprovincial Competitiveness Index	104
Table 5: Age Dependency Ratios, 2012	28	Table 56: Number and Ratio of Employment by Economic Activity , (age 15+), (NACE Rev. 2)	105
Table 6: Average Household Size, 2000, 2011	38	Table 57: Top 20 Universities in the Entrepreneurship and Innovation Index 2013	108
Table 7: Migration Amount and Net Migration Rate, 2000, 2012	39	Table 58: Population per University, 2012	108
Table 8: Provinces İzmir Receives Immigrants from and Their Listing, 2011-2012 Period	39	Table 59: Information on İzmir Universities *, 2011	109
Table 9: Provinces İzmir Gives Emigrants to and Their Listing, 2011-2012 Period	40	Table 60: Number of Papers in İzmir and Turkey, 2007-2010	110
Table 10: Average Education Time in Turkey and Some Other Countries	43	Table 61: Umbrella Organisations Interviewed within the context of İzmir Regional Innovation Strategy Study and Number of Their Members, 2011	111
Table 11: Schooling Ratios, 2011-2012 Education Year	43	Table 62: R&D and Innovation Indicators of Enterprises	115
Table 12: Population Ratios According to Literacy and Last Graduated Education Institution, 2011	44	Table 63: R&D and Innovation Indicators of İzmir, Ankara and İstanbul	116
Table 13: Data on Preschool Education Indicators, 2011-2012 Education Year	44	Table 64: Basic Indicators of R&D and Innovation in İzmir	117
Table 14: Numbers of Schools, Students and Teachers in Primary Education, 2011-2012 Education Year	45	Table 65: Production Shares of Sectors within İzmir Region, 2008	118
Table 15: Numbers of Schools, Students and Teachers in Secondary Education, 2011-2012 Education Year	47	Table 66: Sectoral GVA Shares within İzmir Region, 2008	119
Table 16: Information on Vocational and Technical Secondary Education, 2011-2012	49	Table 67: Share of Sectors Regarding Payments Made to Employees within İzmir Region, 2008	119
Table 17: Basic Information on the Universities of İzmir, 2011-2012 Education Year	50	Table 68: Net Operating Surplus Shares of Sectors within İzmir Region, 2008	119
Table 18: Number of University Lecturers and Students, 2011-2012	51	Table 69: Net Sales Made from İzmir Region to Turkey, 2008	119
Table 19: Basic Information on Informal Education in İzmir (2011-2012)	52	Table 70: Five Sectors with the Highest Overall Forward Connection Effect in İzmir, 2008	120
Table 20: Ancient Cities and Ruins in İzmir and Its Surrounding Region	55	Table 71: Sectoral Overall Reverse Connection Effects in İzmir	120
Table 21: Distribution of Museums in İzmir, 2011	56	Table 72: Sectors with the Highest Production Multiplier in İzmir Region, 2008	121
Table 22: Information on the Museums Functioning Under the Ministry of Culture and Tourism, 2012	57	Table 73: Sectors with the Highest Income (Workforce Income) Multiplier in İzmir Region, 2008	121
Table 23: Distribution of Libraries in İzmir, 2011	57	Table 74: Sectors with the Highest Employment Multiplier in İzmir Region, 2008	121
Table 24: Number of Public Libraries, Books and Beneficiaries by Province, 2011	57	Table 75: Sectors with the Highest Tax Multiplier in İzmir Region, 2008	122
Table 25: Culture and Art Centres in İzmir, 2007, 2012	58	Table 76: Sectors with the Highest Import Multiplier in İzmir Region, 2008	121
Table 26: Theatre, Play and Audience Information for İzmir by Period, 2001-2011	58	Table 77: 14 Sectors Received 3 Stars in Statistical Analysis and Relevant Indicators	124
Table 27: Theatre, Play and Audience Information by Province, 2010-2011	58	Table 78: Sectors Assessed Within the - Field Survey	125
Table 28: Intended Purpose of Theatre Halls, 2010-2011	58	Table 79: Prioritised Cluster Categories	126
Table 29: Information on Cinema by Province, 2011	59	Table 80: Prioritisation of Areas of Improvement Required by Special Investment Zones for Their Physical and Social Infrastructures	129
Table 30: Information on the Fair Organisations Held Within İzmir International Fair Area, 2007-2011	59	Table 81: Most Suitable Investment Fields for İzmir Based on Establishment Location Factors	132
Table 31: Culture Economy Sectors	60	Table 82: İzmir -Agricultural Production Values by Years, 2006-2011, (TL)	142
Table 32: Distribution of İzmir Provincial Healthcare Institutions	65	Table 83: Distribution of Agricultural Lands by Land Use (hectare)	145
Table 33: Healthcare Personnel Distribution in İzmir Province	66	Table 84: Development of Organic Agriculture in İzmir, Aegean Region and Turkey, 2007-2011	153
Table 34: Number of Family Practice Diagnoses	67	Table 85: Development of İzmir Industry Sector GVA and Its Share throughout Turkey, 2004-2010 (Current Prices, million TL)	156
Table 35: Utilisation of Healthcare Informatics Systems in Hospitals	67	Table 86: Distribution of Manufacture Industry Establishments in İzmir by Their Respective Sub-Sectors, 2009	157
Table 36: Distribution of NGOs Founded in İzmir Since 1860 by Type	73	Table 87: Classification of Manufacturing Industry Sub-Sectors in İzmir	158
Table 37: Open and Closed NGOs in İzmir	73	Table 88: Information on the Commissioned OIzs	166
Table 38: Distribution of NGOs in İzmir by Establishment Purpose	74	Table 89: Small Industrial Sites Active in İzmir	166
Table 39: Problems of NGOs and Their Level of Importance, %	74	Table 90: Distribution of Free Zones in Turkey by Geographical Region	167
Table 40: Social Capital Index Values by Region	75	Table 91: Wind Energy Power Plants Functioning in İzmir	173
Table 41: Employment Levels and Employment Ratios by Gender, 2004-2012	81	Table 92: Wind Energy Power Plants Undergoing Construction in İzmir	173
Table 42: Employed People According to SGK Registration (Formal Employment), 15+ age, 2004-2012	81	Table 93: Information on the Top 20 Seaports Operated with the Highest Volume throughout the World	183
Table 43: State of Workforce for the Non-Institutional Population in İzmir, 2004-2012 (15+ age, thousand people)	82	Table 94: Logistics Performances of Upper-Middle Income Level Countries, 2007-2010-2012	183
Table 44: Change of Unemployment Level by Gender, 2004-2012	83	Table 95: Freight and Container Traffic at Ports Operated by TCDD, 2007-2011	184
Table 45: Gini Coefficients According to Equivalent Household Disposable Income, 2006-2011	87	Table 96: Freight and Container Traffic at Aliğa-Nemrut Docks, 2010-2012	185
Table 46: Distribution of Annual Equivalent Household Disposable Income Among Groups of 20% Sorted as per Equivalent Household Disposable Income, 2011 (İBBS, Düzey 1)	88	Table 97: Freight and Passenger Traffic at Dikili Port, 2010-2012	185
Table 47: Income Distribution, Migration and Population Indicators for NUTS Level 2 Regions	88	Table 98: 6 Provinces with Highest Trade Dynamism According to the Commercial Sales of Companies, 2010, (%)	187
Table 48: Services Towards Those Directed to İŞKUR as per ASPB-İŞKUR Protocol	91	Table 99: GDP and Merchandise Trade Change throughout the World by Region, 2009-2011, (%)	188
Table 49: Global Metro Monitor Economic Performance Indicators	98	Table 100: Foreign Trade Volumes of Certain Economies and Turkey and Their Shares within Worldwide Foreign Trade 2001-2011, (%), (billion Dollars)	189
Table 50: Change of İzmir GDP, Its Share within the Region and Turkey (With Current Prices, billion TL)	99	Table 101: İzmir Foreign Trade Potential	189
Table 51: Change of İzmir GVA, Its Share within the Region and Turkey, 2004-2010 (Million TL)	100		

Table 102: Foreign Trade Volume and Foreign Trade Balance, 2002-2012, million Dollar	191
Table 103: Export Import Coverage Ratio of Prominent Sectors in İzmir, 2005-2011	191
Table 104: Development of Export and İzmir's Share in Overall Export 2002-2012, million Dollar	192
Table 105: Sectoral Distribution of İzmir Export, 2005-2011, %, thousand Dollars	192
Table 106: Distribution of İzmir Export by Countries, 2009-2012, thousand Dollars	192
Table 107: Development of Import for Turkey, Aegean Region and İzmir, 2002-2012, million Dollars	193
Table 108: Sectoral Distribution of İzmir Import, 2005-2011, thousand Dollars	193
Table 109: Distribution of İzmir Import by Countries, 2009-2012, thousand Dollars	194
Table 110: Development of İzmir Manufacturing Industry Export by Technology Level	194
Table 111: Development of İzmir Manufacturing Industry Import by Technology Level	194
Table 112: Development of International Tourism Movements throughout the Years, 1950-2011	195
Table 113: Number of Tourists throughout the World, million people	195
Table 114: Countries with the Highest Tourism Income in the Year 2011	195
Table 115: Cities Attracting the Highest Number of Visitors, 2011, million people	196
Table 116: Distribution of Foreign Tourists within Major Touristic Destinations of Turkey, 2011-2012	196
Table 117: Distribution of Foreign Tourists Visiting İzmir by Their Countries, 2010-2012	197
Table 118: Distribution of Foreign Tourists Visiting İzmir by Mode of Arrival and Months, 2010-2012	199
Table 119: Number of Cruise Ships Visiting İzmir, 2003-2012	199
Table 120: Number of Accommodation Facilities with Establishment and Investment Certificates and Their Capacities by Years, 2012	200
Table 121: Top 10 Provinces That Attract the Highest Number of Foreign Health Tourists by Years, 2008-2010	205
Table 122: Number of Beaches with Blue Flag by Provinces, 2012	205
Table 123: Distribution of Blue Flagged Beaches by Districts, 2012	206
Table 124: Distribution of Deposit in İzmir by Type, 2004-2012, million TL	206
Table 125: Distribution of Loans by Years, thousand TL, İzmir	207
Table 126: Loan/Deposit Ratio, 2003-2012, (%)	208
Table 127: Data on Bank Branches in İzmir, 2005-2012	208
Table 128: Distribution of Bank Branches by Type, İzmir	208
Table 129: Bank Branches by Districts, 2008-2012	209
Table 130: PM10 and SO2 Existing and Limit Values	220
Table 131: The State of Wastewater Treatment Plants (WTP) in the OIZs of İzmir	221
Table 132: Distribution of Environmental Demands by Districts	231
Table 133: Road Lengths of İzmir, Aegean Region and Turkey	235
Table 134: Railways in the Region and throughout Turkey, 2007-2011, (km)	236
Table 135: Railroad Lines in İzmir, 2010	236
Table 136: Number of Foreign Airports with Direct Flights from Adnan Menderes Airport	237
Table 137: ESHOT and İZULAŞ Total Numbers of Buses, Lines and Passengers	239
Table 138: Number of Mini-Buses, Taxies, Taxi-Buses and Shuttles Operating at City Centre	239
Table 139: Number of Runs and Passengers in İzmir Subway System, 2009-2012	240
Table 140: Number of Runs and Passengers in İZBAN, 2010-2012	240
Table 141: Numbers of Passengers and Vehicles Transported via Maritime Lines, 2008-2012	241
Table 142: Change of Electricity Production Installed Power, 2008-2012, (MWh)	243
Table 143: Change of Electricity Consumption Values, 2008-2010, (GWh)	243
Table 144: Electricity Consumption of İzmir Province by Subscribers (MWh), 2010-2012	243
Table 145: Undergraduate and Postgraduate Education Programmes on Information and Communication Field in İzmir	244
Table 146: Fixed Telephone Access Lines, Cable TV and GSM Subscribers in Turkey and İzmir	245
Table 147: Statistics on Internet Subscribers	245
Table 148: Distribution of Households by Building Construction Year, 2011	247
Table 149: Distribution of Households by Their Residential Ownership Status, 2011	248
Table 150: Residential Building Construction Permits and Building Use Permits Received in İzmir, 2003-2011	248

FIGURES

Figure 1: Share of Global Cities within National GDP per capita, 2002	30
Figure 2: Share of Global Cities within National Workforce Efficiencies, 2002	31
Figure 3: The Ratio of İzmir's Population to Overall Turkey Population by Year (per mille), 1927-2012	37
Figure 4: Urbanisation Ratios, by Year (%), 2007-2012	37
Figure 5: İzmir and Turkey Population Pyramids, 2012	38
Figure 6: Gross Schooling Ratios in the Districts of İzmir (%), 2011-2012 Education Year	44
Figure 7: The Engineering Departments Found Most Commonly in İzmir	51
Figure 8: Distribution of SIT Areas in İzmir by Type, 2012	60
Figure 9: Life Expectancy at Birth in Turkey by Gender	65
Figure 10: Infant Death Rates (per thousand live births) and Maternal Death Rates (per hundred thousand births) by Years	65
Figure 11: Change of Number of Doctors per Hundred Thousand People in Turkey and İzmir by Years, 2006-2012	67
Figure 12: Change of Number of Nurses per Hundred Thousand People in Turkey and İzmir by Years, 2006-2012	71
Figure 13: Distribution of İZKA Development Board Members, 2013	79
Figure 14: Workforce Participation Ratios for Turkey, İstanbul, Ankara and İzmir by Gender (%), 2008-2012	79
Figure 15: Workforce Indicators According to Education Levels by Gender (%), 2008-2012	80
Figure 16: Employment Ratios in İzmir, Ankara, İstanbul and Turkey (%), 2004-2012	80
Figure 17: Unemployment ratios in İzmir, Ankara, İstanbul and Throughout Turkey (%), 2004-2012	82
Figure 18: Base Workforce Data on NUTS 2 Regions with High Unemployment Ratios (%), 2011	83
Figure 19: Unemployment Ratio in İzmir Based on Gender and Age Groups, (%), 2004-2012	83
Figure 20: Poverty Ratios in Turkey by the Sector the Household Members are Employed In, 2002-2009	90
Figure 21: Poverty Ratios by Income Based Poverty Thresholds, 2006-2011, (Poverty Risk 60%)	90
Figure 22: Long Term Unemployment Ratio, 2004-2012	91
Figure 23: Proportional Distribution by Handicap Type	92
Figure 24: Number of People Benefitting from Homecare Services for Handicapped People, 2007-2011	92
Figure 25: İzmir GDP Change (by Fixed Prices of 1987)	99
Figure 26: GVA Sectoral and Regional Contributions, (%), 2004-2010, İzmir	101
Figure 27: Change of Regional GVA Industry Share, 2004-2010 (%)	102
Figure 28: Change of GDP Per Capita, 1987-2001, (Dollar)	102
Figure 29: Change of GVA Per Capita (with Current Prices)	103
Figure 30: Change of GVA Per Capita (Dollar)	103
Figure 31: GVA Per Capita at NUTS 2 Level Regions, TL	103
Figure 32: Classification of NUTS 2 Regions by Income Groups Regarding Middle Income Trap Risk	104
Figure 33: Sectoral Distribution of Employment in İzmir, 2004-2012	105
Figure 34: Sectoral Distribution of Employment, 2004-2012, (%)	106
Figure 35: University, Lecturer and Researcher Ratios, 2010	119
Figure 36: Number of Applications Made from İzmir to T+BITAK and Number of Approvals, 2007-2010	110
Figure 37: Number of Applications Made from İzmir to SAN-TEZ Programme and Number of Approvals, 2007-2010	110
Figure 38: Regional Distribution of Applications of Patents and Utility Models Produced at Universities, 2007-2010	110
Figure 39: Obstacles against Universities Getting Patents, (%)	111
Figure 40: İzmir Innovation Ecosystem Map	112
Figure 41: Regional Distribution of Patent Applications, 2007-2010	115
Figure 42: Shares of Sectors within the Overall Production and Gross Value Added within İzmir and Turkey, 2008 (%)	117
Figure 43: Milestones of Clustering Experiences in Turkey	122
Figure 44: Clustering Experiences in İzmir	123
Figure 45: Stages of İzmir Clustering Analysis	123
Figure 46: Distribution of İzmir Clustering Committee Members	124
Figure 47: Underlying Reasons Behind Selection of the Province Set for New Investment	129
Figure 48: General Distribution of Land in İzmir and Turkey, 2011, (%)	141
Figure 49: Change of İzmir -Agricultural Production Values, 2006-2011,(TL)	142
Figure 50: Distribution of İzmir and Turkey Farmlands by Type of Land Use, 2011,(%)	144

Figure 51: The Share of Fruits Cultivated in İzmir within the Overall Fruit Production Value, 2011, (%)	146
Figure 52: Production Amounts of Most Commonly Cultivated Fruits in İzmir and Share of İzmir within Turkey Overall Production, 1991-2011	146
Figure 53: The Shares of Most Commonly Cultivated Vegetables in İzmir within Overall Vegetables Production Value, 2011, (%)	147
Figure 54: The Shares of Most Commonly Cultivated Field Crops in İzmir within Overall Field Crops Production Value, 2011, (%)	147
Figure 55: The Share of the Production Amounts of Certain Plant Based Products of İzmir within Overall Turkey Production Amount, 2011, (%)	148
Figure 56: The Shares of Most Commonly Produced Animal Based Products in İzmir within the Total Animal Based Production, 2011, (%)	149
Figure 57: Production Amounts of İzmir Aquaculture Products, 2005-2011, (tonnes)	150
Figure 58: Shares of Three Major Cities within Turkey Overall Industry GVA, 2004-2010	156
Figure 59: Concentration Coefficients of Manufacturing Industry Sub-Sectors in İzmir	158
Figure 60: Employment Distribution in Free Zones	167
Figure 61: Change of Trade Volumes in ESBAŞ and İZBAŞ by Years	167
Figure 62: Number of Technology Development Zones by Province *	168
Figure 63: Characteristics of Technology Development Zones by Province	168
Figure 64: Number of Employees in İZTEKGEB, 2008-2012	168
Figure 65: Sectoral Distribution of İZTEKGEB Companies, 2012	169
Figure 66: Worldwide Merchandise Trade Volume, 2005-2013	188
Figure 67: Shares Received by Different Groups of Countries and Turkey within Worldwide Overall Foreign Trade, 2001-2011, (%)	188
Figure 68: Provinces by Export Commonness and Diversity, 2009	190
Figure 69: Development of Foreign Trade Volume and the Share of İzmir, 2002-2012, (%), million Dollars	190
Figure 70: Development of Export Import Coverage Ratio, 2002-2012	191
Figure 71: Development of Export and İzmir's Contribution in Export, 2002-2012, (%), million Dollar	192
Figure 72: Development of Export and İzmir's Contribution in Import, 2002-2012, (%), million Dollar	194
Figure 73: Distribution of Foreign Tourists Visiting İzmir by Their Country of Origin, 2012	196
Figure 74: Change of the Number of Tourists Visiting İzmir throughout the Years, 2010-2012	196
Figure 75: SWOT Analysis of İzmir from the Perception of Tourists	198
Figure 76: İzmir's Contribution within Overall Deposit, 2002-2012	207
Figure 77: The Share of Loans in İzmir within the Total Loans, 2004-2012, (%)	207
Figure 78: Distribution of Banking Sector Employees by Regions (%)	209
Figure 79: DE Trading Volume (TL)	210
Figure 80: Distribution of Water Utilisation by Activity	217
Figure 81: Distribution of Annual Groundwater and Surface Water Utilisation by Activity Type	217
Figure 82: Distribution of Year 2011 Water Production by Sources	217
Figure 83: Water consumption per Capita within Metropolitan Municipality Service Area,2007-2011, L/person-day	217
Figure 84: Daily Water Consumptions Drawn per Capita by Municipalities, 1998-2010, L/person-day	218
Figure 85: Ratio of Population Served with Wastewater Treatment Plant within the Overall Municipality Population (%), 2001-2010	218
Figure 86: Sectoral Distribution of Water Consumption of Manufacturing Industry within İzmir	221
Figure 87: Distribution of Electricity Consumption by Areas of Use as of the Year 2010	221
Figure 88: Sectoral Distribution of Energy Consumption within the Manufacturing Industry of İzmir	222
Figure 89: Sectoral Distribution of Hazardous Wastes within the Manufacturing Industry of İzmir	223
Figure 90: Adnan Menderes Airport, Number of Arriving-Departing Passengers, 2008-2012	237
Figure 91: Adnan Menderes Airport Cargo Transport Data*, 2010-2012, (tonnes)	237
Figure 92: Comparison of Number of Automobiles per One Hundred Thousand People, 2009-2012	239
Figure 93: Comparison of Number of Motorcycles per One Hundred Thousand People, 2009-2012	239
Figure 94: House Sales in İzmir, 2008-2011	248

MAPS

Map 1: Number of Students per Branch in Primary Education within the Districts of İzmir, 2012-2013 Education Year	46
Map 2: Number of Students per Branch in Secondary Education within the Districts of İzmir, 2012-2013 Education Year	46
Map 3: Number of Students per Branch in General Purpose Secondary Education within the Districts of İzmir, 2012-2013 Education Year	48
Map 4: Number of Students per Branch in Vocational and Technical Secondary Education within the Districts of İzmir, 2012-2013 Education Year	49
Map 5: Distribution of SIT Areas in İzmir by Districts, 2012	61
Map 6: Distribution of Hospitals by Districts	66
Map 7: Social Capital Index Groups by NUTS 2 Regions	75
Map 8: Total (hectares) Size of Farmlands and Percentage (%) of Agricultural Land in the Districts of İzmir	144
Map 9: Manufacture of Food Products and Beverages	161
Map 10: Company Concentration in Manufacture of Food Products and Beverages Sub-Sector and Display of 3 Stars Results	161
Map 11: Manufacture of Wearing Apparel and Furs	162
Map 12: Company Concentration in Manufacture of Wearing Apparel and Furs Sub-Sector and Display of 3 Stars Results	162
Map 13: Manufacture of Chemicals and Chemical Products	163
Map 14: Company Concentration in Manufacture of Chemicals and Chemical Products Sub-Sectors and Display of 3 Stars Results	163
Map 15: Manufacture of Machinery and Equipment n.e.c.	164
Map 16: Company Concentration in Manufacture of Machinery and Equipment Sub-Sectors and Display of 3 Stars Results	164
Map 17: Manufacture of Motor Vehicles	165
Map 18: Company Concentration in Manufacture of Motor Vehicles Sub-Sectors and Display of 3 Stars Results	165
Map 19: Wind Velocity Distribution *-50 m.	171
Map 20: Wind Capacity Factor *-50 m.	171
Map 21: Areas Suitable for Wind Energy Power Plant Installation*	172
Map 22: Distribution of WEPPs by Districts	172
Map 23: Turkey Solar Energy Potential Atlas	174
Map 24: İzmir Solar Energy Potential Atlas	174
Map 25: Turkey Map for Forest-Based Biomass Potential	175
Map 26: Nano-tectonic - Volcanic Activity and Geothermal Sites in Turkey	176
Map 27: Geothermal Resources, Current Utilisation States and Potentials in İzmir	177
Map 28: İzmir Province Minerals Map	179
Map 29: Tourism Types by Districts	203
Map 30: Current Environmental State of İzmir	228
Map 31: Highways and Motorways Map of İzmir and Vicinity	235
Map 32: İzmir Rail System Transit Plan	240
Map 33: İzmir Maritime Transit Lines	241
Map 34: Countries by Flight Distance (Time) to İzmir	246

Abbreviations

3PL	Third Party Logistics
WTP	Wastewater Treatment Plant
EU	European Union
USA	United States of America
ABİGEM	European Turkish Business Development Centre
MCHFPC	Maternal and Child Health and Family Planning Centre
ABPRS	Address Based Population Registration System
R&D	Research and Development
ARBİS	Researcher Information System
ASPB	Ministry of Family and Social Policies
UAE	United Arab Emirates
BRSA	Banking Regulation and Supervision Agency
BGUS	Regional Development National Strategy
BSTB	BSTBMinistry of Science, Industry and Technology
HBM	HBMHot Bituminous Mixture
HCLQ	Human Capital and Living Quality
BÜGEM	General Directorate of Plant Based Production
NEC	Not Elsewhere Classified
EIA	Environmental Impact Assessment
ÇEVKO	Foundation for Protection of Environmental and Utilisation of Packaging Wastes
FRS	Farmer Registry System
ÇSGB	Ministry of Labour and Social Security
DEU	Dokuz Eylül University
DHİMİ	State Airports Administration
SPO	State Planning Organisation
DSİ	State Water Affairs Administration
UFT	Undersecretariat of Foreign Trade
WTO	World Trade Organisation
EARN	European Academic and Research Network
EBİLTEM	Ege University Science Technology Implementation and Research Centre
EBSO	Aegean Region Chamber of Industry
ÉE	Electrical Power Resources Survey and Development Administration
ICPM	Integrated and Controlled Product Management
EMRA	Energy Market Regulation Agency
ERG	Education Reform Initiative
ESBAŞ	Aegean Free Zone Development and Operating Company
ESHOT	Electric, Water, Gas, Bus and TrolleybusAdministration
ETKB	Ministry of Energy and Natural Resources
EUROSTAT	European Union Statistical Office
EU	Ege University
FAO	Food and Agriculture Organization of the United Nations
FEE	Foundation for Environmental Education
GEM	Global Entrepreneurship Monitor
GPC	General Population Census

GRP	Gross Regional Product
GVA	Gross Value Added
GNP	Gross National
GDP	Gross Domestic Product
GTHB	Ministry of Food, Agriculture and Livestock
GU	Gediz University
GWh	Gigawatt-hour
GYODER	Real Estate Investment Partnership Association
IEA	International Energy Agency
IMF	International MEBtary Fund
İAOSB	İzmir Atatürk Organised Industrial Zone
İBB	İzmir Metropolitan Municipality
NUTS	Nomenclature of Territorial Units for Statistics
İEU	İzmir University of Economics
İİBF	Faculty of Economic and Administrative Sciences
İİ GTHM	Provincial Directorate of Food, Agriculture and Livestock
İİBF	Faculty of Economic and Administrative Sciences
İKÇU	İzmir Katip Çelebi University
İKEE	İzmir Cultural Economy Inventory
İİ MEM	Provincial Directorate of National Education
ILO	International Labour Organization
İÖİ	İzmir Special Provincial Administration
İSO	İstanbul Chamber of Industry
İŞKUR	Turkish Labour Agency
İTOB	İzmir Chamber of Commerce Organised Industrial Zone
İTMP	İzmir Transportation Master Plan
İYTE	İzmir Institute of Technology
İZBAN	İzmir Suburban Rail System Administration
İZBAŞ	İzmir Free Zone Development and Operating Company A.S.
İZBP	İzmir Regional Plan
İZDENİZ	İzmir Deniz İşletmeciliği Nakliye ve Turizm Ticaret A.S.
İZFAŞ	İzmir Fuarçılık Hizmetleri A.S.
İZGEP	İzmir Metropolitan Municipality - Atik Toplama ve Geri Kazanım A.S.
İZKA	İzmir Development Agency
İZSU	General Directorate of İzmir Water and Sewage Affairs Administration
İZTEKGEB	İzmir TechnologyDevelopment Zone
İZTO	İzmir Chamber of Commerce
İÜ	İzmir University
KOGM	General Directorate of Cooperatives
SD	Statutory Decree
CUR	Capacity Utilisation Rate
RDİSP	Rural Development Investments Support Programme
SME	Small and Medium Scale Enterprises
KOSBİ	Kemalpaşa Organised Industrial Zone
KOSGEB	Small and Medium Enterprises Development Organisation

SIS	Small Industry Site
kWh	Kilowatt-hour
LPI	Logistics Performance Index
BSI	Branding Skill and Innovation
MDA	Situational Analysis
MEB	Ministry of National Education
Dir. NE	Directorate of National Education
MHRS	Central Hospital Appointment System
MÜSİAD	Independent Industrialists and Businessmen Association
MTA	General Directorate of Mineral Research and Exploration
MWh	Megawatt-hour
NACE	Statistical Classification of Economic Activities in The European Community
OAİB	Orta Anadolu Exporters Union
METU	Middle East Technical University
OECD	OECDOrganisation for Economic Co-operation and Development
OKS	OKSSecondary Education Institutions Examination
OİZ	OİZOrganised Industrial Zone
OYP	OYPSecondary Education Placement Score
SEPA	SEPASpecial Environment Protection Area
PHC	PHCPrivatisation High Council
PISA	PISAProgram for International Student Assessment
RCA	RCARevealed Comparative Advantages
WEPP	WEPPWind EnergyPower Plant
OJ	OJOfficial Journal
SAN-TEZ	SAN-TEZIndustry Theses Programme
SBS	SBSLevel Determination Examination
SCI	SCIScience Citation Index
SDP	SDPHealth Transformation Programme
SEGE	SEGESocioeconomic Development Index
SGK	SGKSocial Security Institution
SSE	SSESocial Capital Index
NGO	NGONon-Governmental Organisation
ŞU	ŞUŞifa University
TBB	TBBBanks Association of Turkey
TBD	TBDTurkey Informatics Association
TBMM	TBMMTurkish Grand National Assembly
TSPP	TSPPTrade Skill and Production Potential
TCDD	TCDD Turkish Republic State Railways Administration
TDİ	TDİ Turkey Maritime Organisation
TEİAŞ	TEİAŞTürkiye Elektrik İletim A.S.
TEKMER	TEKMERTechnologyDevelopment Zone
TEPAV	TEPAVEconomic Policy Research Foundation of Turkey
TESEV	TESEVEconomic and Social Surveys Foundation of Turkey

TEYDEB	Technologyand Innovation Support Programmes
THK	Turkish Aviation Agency
THSK	Turkish Public Health Institution
TKB	Ministry of Agriculture and Rural Affairs
TKHK	Turkish Public Hospitals Institution
TL	Turkish Lira
TMMOB	Union of Chambers of Turkish Engineers and Architects
TOBB	Union of Chambers and Commodity Exchanges of Turkey
TPI	Turkish Patent Institute
TRGM	General Directorate of Agriculture Reform
PHC	Public Health Centre
TTGV	Turkey Technology Development Foundation
TÜBİTAK	Scientific and Technological Research Council of Turkey
TürkSTAT	Turkish Statistical Institute
TÜRÇEV	Turkey Environmental Education Foundation
TÜREB	Turkey Wind Energy Union
TÜSİAD	Turkish Industrialists' and Businessmen's Association
TYD	Tourism Investors Association
TZOB	Union of Turkish Chambers of Agriculture
UBAK	Ministry of Transportation, Maritime Affairs and Communication
UFI	International Fair Industry Association
UITP	International Union of Public Transportation
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations International Children's Emergency Fund
UNWTO	United Nations World Tourism Organization
URAK	International Competitiveness Research Institute
USD	United States Dollar
PPI	Producer Price Index
DE	Futures and Options Exchange
WEF	World Economic Forum
WHO	World Health Organisation
YDTA	Investment Support and Promotion Agency
YU	Yaşar University
RE	Renewable Energy
YHGS	Wildlife Improvement Area
HST	High Speed Train
BOT	Build Operate Transfer
CQ	Concentration Coefficient
YÖK	Higher Education Institution
YU	Yaşar University

Agglomeration Economy:

Effects that emerge with the economic activities concentrating in a certain area and define a decrease in costs.

Maternal Death Rate:

Woman deaths arising due to non-coincidental reasons during pregnancy period and within the first six weeks following childbirth.

Archaeological Sit Areas:

Areas wherenatural assetsand human-built cultural assets merge, which are partially built, significant in terms of historical, archaeological, artistic, scientific, social or technical aspects, product of various civilisations extending from prehistoric eras up to contemporary times, embodying distinct and homogenous qualities sufficient for being defined topographically.

Infant Death Rate:

The ratio of the number of infants that are born and dies before the end of first year during one year to the overall number of infants born within the same time period.

Gross Regional Product:

The value found by subtracting the value of goods and services (intermediate consumption) used by economic units settled in a region for realising production from the value of goods and services (output) produced by the same units in result of their economic dealings in that region.

Multipliers:

Impact analyses that show how much of an increase would occur in the production, income, employment, tax and import of the region economy due to 1 unit increase occurred in the final demand of a sector.

Foreign Trade Balance:

The indicatorthat depicts the relationship between import and export, and takes negative value (foreign trade deficit) if import is higher than export, and positive value (foreign trade surplus) if export is higher than import.

Foreign Trade Volume: Sum of import and export values, in other words the overall foreign trade a region/country has realised

Natural Sit Areas: Rare areas and natural assets that have interesting features and beauty required to be protected.

Industrial Interdependence:

Mutual dependency arising from intermediate input exchange between sectors. It represents the examination of how strong the interaction between sectors are with the use of sectoral forward and reverse connection indicators in input-output model.

Equivalent Household Disposable Income:

Obtained by dividing the annual disposable income of the household to the equivalent household size. Equivalent household size shows how many adults (equivalent individual count) each household size corresponds to for the purpose of converting the income accumulated at household level to individual incomes.

EthnographicWork:

Tools and documents that illustrate the artwork and tangible culture of public.

Gross Value Added:

The gross value added of a sector is defined as the difference between the production value calculated over basic prices and the intermediate goods consumption value calculated over sale prices. In other words, the added value created in a sector is the difference between the value of the goods or services produced in the sector and the value of the intermediate inputs used in the sector.

Gross Domestic Product:

The value obtained by subtracting the sum of all inputs used for the production of goods and services produced by producer units inherent in an economy at a certain time interval due to domestic activities from the sum value of all these goods and services created in the same period.

Youth Dependency Ratio:

Number of people at “0-14” years age group for every 100 people within “15-64” years age group.

Reverse Connection effect:

Total reverse connection effects calculated for each i sector show the level of production increase that will occur within the whole economy (region) in case a final demand increase of 1 unit (for instance; 1 million TL) occurs regarding the sector. Reverse connection effect illustrates the overall revitalisation occurring in not only one sector but all sectors, and points out the importance of the sector for the whole economy (region).

Hirschman Categories:

Four fundamental categories that indicate the importance of sectors to the regional economy in accordance to forward and reverse connection effects (reverse connection as a priority).

Diversity of Export Goods:

A high diversity level means that a high number of products are produced and exported at a competitive level in a region or country.

Ordinariness of Export Goods:

Provinceswith high export sophistication export products that are included within the export package of many regions or countries are assumed as ordinary products. Regions or countries with low ordinariness value have competitive advantage for the export of special/rare products.

Export Sophistication:

Provinceswith high export sophistication export products that are included in the export packages of developed countries. A low sophistication value is the indicator that export products are devoid of complexity.

Forward Connection effect:

Total forward connection effects calculated for each i sector show the level of production increase that will occur within the i sector in case a final demand increase of 1 unit (for instance; 1 million TL) occurs within all sectors simultaneously. Forward connection effect is an indicator of what ratio of sectors overall outputs is used as intermediate goods, thus displaying how much important the overall output of the sector is for other sectors.

Urban Sit Areas:

Areas where there are structures, gardens, vegetation, settlement patterns and walls with architectural, local, historical, aesthetic and artistic features that have higher value due to being located together compared to their individual values.

Regional Gross Value Added Per Capita:

The value obtained in TL by dividing the regional gross value added calculated over current prices to the mid-year regional population estimate.

Establishment Location Factors:

Encompasses all locational features to be effective on the cost, sales revenue and capital structure of the production unit in the event the said production unit is established at a certain geographical location. Selection of the establishment location generally covers a process to determine the site where operating costs are at the lowest and operating incomes are at the highest levels.

Median Age:

This is the age of the person who is found at the middle when the ages of people constituting a community are listed from the youngest to oldest. Therefore, one half of the population are older and the other half of the population are younger than this age.

Motor Land Vehicle:

All vehicles that are required to get registration plates from traffic departments as per Highways Traffic Law.

Net Migration:

This is the difference found between the immigration/emigration to and from a province. In case the number of migrants taken in is higher than the number lost, net migration is positive; and in case the number of migrants taken in is lower than the number lost, net migration is negative.

Net Migration Rate:

Net migration value for every thousand people that may migrate.

Net Operating Surplus:

The difference between added value and the payments made to workforce. With the assumption that workforce, capital and intermediate goods are used in the production process, operating surplus is obtained through subtracting any intermediate goods costs and about force payments from the production value. If also capital depreciation (amortisement) is subtracted, net operating surplus is obtained.

Net Sales (madetoooutside of Region):

The difference between the total demand and total consumption in a region. In case the total demand is higher than the total consumption in the region, it means the difference was sold to outside of the region. In case total demand is lower than the total consumption in the region, it means the difference was purchased from other regions.

Qualified Leaping Capability:

Displays a region's or country's capability to export more qualified products with its existing industrial structure. Regions or countries with wide production capabilities will be able to easily transition to different and more qualified export products.

Population density:

This is the population amount per one square kilometre.

Middle Income Trap:

The situation where countries or regions that achieved middle income level in terms of GDP per capita get stuck at a certain income band and fail to pass to higher income levels.

Formal Education:

Regular education provided to individuals at certain age group and same level with purpose-oriented programmes within schools' organisational structures.

Ro-Ro:

(Roll On Roll Off): The term used for large merchant ships designed to carry and transport wheeled vehicles such as automobiles, trucks, trailers, lorries or wagons, and the transportation type realized in this fashion.

Historical Sit Areas:

Areas where important historical events unfolded in the past and thus required to be preserved.

Registered Structure:

Structures that are taken under protection due to their historical and cultural values.

TEU:

(Twenty Feet Equivalent Unit) Container unit used in international maritime transportation.

Total Demand:

Sum of a sector's production and import.

Total Fertility Rate:

The average number of live born infants that may be born, with the assumption that a woman will live throughout her fertile period (15-49 years age) and follow the same fertility rate specific to certain ages.

Total Age Dependency Ratio:

The number of people belonging in““0-14” and “65 and over” age groups for every 100 individuals belonging in the “15-64” age group.

Long Term Unemployment Ratio:

The share of those unemployed for one year or more within the overall number of unemployed people.

Third Party Logistics:

Realisation of the logistics services required by a company either partially or completely by another company.

Elderly Dependency Ratio:

The number of people belonging in “65 and over” age group for every 100 individuals belonging in the “15-64” age group.

Elderly Population Ratio:

The ratio of “65 years or over” age group within the overall population.

Innovation:

Realisation of a new or significantly enhanced product or process, new marketing method or new organisational method for enterprise internal applications, work place organisation or external relations

Concentration Coefficient:

Used for measuring a sector's concentration in a certain region with reference to the next upper scale region.

CQi

= (ei/et) / (Ei/Et)

CQ

= Concentration coefficient

ei

= Employment of i sector within district

et

= Overall employment within district

Ei

= Employment in i sector within İzmir

Et

= Overall employment within İzmir

Poverty Ratio:

The ratio of population with equivalent per capita income (individual equivalent income) that is lower than the poverty limit value.

Poverty Risk (60%):

60% of the equivalent household disposable median incomes is defined as poverty limit.

Methodology

Within the context of 2014-2023 İZBP preparation studies, social, economic, environmental and spatial analyses have been realised to enable determination of the region's structure and dynamics effectively. In the process of defining analyses and preparing their contents, Turkey's leading think tanks and universities have been contacted.

Opinions and suggestions have been received from different organisations such as İzmir Universities Platform, university rectorates, relevant faculties and departments, Development Bank, Turkey Technology Development Foundation (TTGV), Turkey Economy Policies Research Foundation (TEPAV) on situational analysis studies and planning process.

In conclusion of evaluating the obtained opinions and analysis proposals, and submitting to the approval of the Administrative Board, cooperation has been realised and regional analysis studies have been conducted with various institutions and organisations. Abovementioned analysis works, which were conducted simultaneously and in a coordinated manner within the context of 2014-2023 İZBP preparations, are as follows including their subsidiary analyses and the techniques implemented:

Analysis	Methods Implemented	Base Data Utilised
İzmir Region Input-Output Analysis	Mixed Method based on using superior data compiled from various sources for updating the regional table obtained from assumptions on national overview	TurkSTAT National Input-Output Table (2002)
	Secondary data obtainment and statistical analysis	TurkSTAT GDP Data by way of Production, Expenditures and Income
	RAS algorithm for obtaining intermediate input consumption for the year 2008	TurkSTAT Household Budget Survey Data Set (2008)
	LQ Method for estimating İzmir's direct input coefficients	TurkSTAT Business and Labour Statistics (2008)
	Face-to-face interviews with sector representatives for obtaining superior data	Ministry of Finance Budget Statistics
	Structural analysis, industrial interdependence and multiplier analyses using input-output model	TurkSTAT Sectoral Import and Export Data
		T.R. Central Bank Payments Balance Service Trade Statistics
		SGK Registered Workforce Data
Determination of Functional Region, Sub-Regions and Interregional Relations in İzmir Province	Cohort Components Population Projection Method	Spatial data such as administrative borders, land use, effective plan decrees, transportation and infrastructure investments
	Economic Basis Technique	TurkSTAT, 2011 Address Based Population Registration System
	Economic Base Multiplier	TurkSTAT news bulletin with issue no. 13140 and date 11.07.2012
	Local-Base Workforce Differentiation	TurkSTAT Year 2010 birth statistics
	Fixed Share / Fixed Growth / Variable Share Technique	World Health Organisation data
	Location selection (location coefficient, LQ) analysis	
	Central Trend and Distribution Based Spatial Analysis Methods	
	Spatial Autocorrelation Techniques	
İzmir Civil Society Research	Inventory study	Data from the Provincial Directorate of Associations
	Field survey	General Directorate of Foundations
	In-depth interview	
	Focus group studies	
İzmir Province Potential Investment Titles Research	Concentration and market analysis	TurkSTAT geographical and demographic indicators
	Clustering analysis	TurkSTAT education indicators
	SWOT	TurkSTAT employment indicators
	Establishment Location Factors Analysis	TurkSTAT social security indicators
	Face-to-face interviews	TurkSTAT health indicators
		TurkSTAT industry sector indicators
		TurkSTAT agriculture sector indicators
		TurkSTAT banking indicators
Strategy for Development of İzmir Entrepreneurship Ecosystem	Stakeholder analysis	TurkSTAT tourism sector indicators
	Focus group meetings	TurkSTAT foreign trade indicators
	One-on-one in-depth interviews	TurkSTAT business statistics
	Literature review	İzmir Regional Innovation Strategy
	Entrepreneurship ecosystem analysis	
	Comparison analyses	
İzmir Cultural Economy Inventory and Development Strategy	Workshop	TurkSTAT education data
	In-depth interviews	TPI patent data
	3 stars analysis	SGK company data
	GIS analyses	TurkSTAT sectoral data
	Secondary data obtainment and analysis	TÜBİTAK program data Programme data from the Ministry of Science, Industry and
	Literature review	Technology KOSGEB data
		International reports

Analysis	Methods Implemented	Base Data Utilised
İzmir Civil Society Research	Inventory study	Data from the Provincial Directorate of Associations
	Field survey	General Directorate of Foundations
	In-depth interview	
	Focus group studies	
İzmir Province Potential Investment Titles Research	Concentration and market analysis	TurkSTAT geographical and demographic indicators
	Clustering analysis	TurkSTAT education indicators
	SWOT	TurkSTAT employment indicators
	Establishment Location Factors Analysis	TurkSTAT social security indicators
	Face-to-face interviews	TurkSTAT health indicators
		TurkSTAT industry sector indicators
		TurkSTAT agriculture sector indicators
		TurkSTAT banking indicators
Strategy for Development of İzmir Entrepreneurship Ecosystem	Stakeholder analysis	TurkSTAT tourism sector indicators
	Focus group meetings	TurkSTAT foreign trade indicators
	One-on-one in-depth interviews	TurkSTAT business statistics
	Literature review	İzmir Regional Innovation Strategy
	Entrepreneurship ecosystem analysis	
	Comparison analyses	
İzmir Cultural Economy Inventory and Development Strategy	Workshop	TurkSTAT education data
	In-depth interviews	TPI patent data
	3 stars analysis	SGK company data
	GIS analyses	TurkSTAT sectoral data
	Secondary data obtainment and analysis	TÜBİTAK program data Programme data from the Ministry of Science, Industry and
	Literature review	Technology KOSGEB data
		International reports

Analysis	Methods Implemented	Base Data Utilised
İzmir Tourism Current State Report	Secondary data obtainment and analysis Literature review Interactive workshop SWOT analysis Interview and survey	International reports Ministry of Culture and Tourism data Tourismumbrella organisations data TurkSTAT data İzmir Provincial Directorate of Culture and Tourism data General Directorate of Maritime Trade data
İzmir Clustering Statistics and Field Analysis Studies	3 stars method Cluster business and demand analysis Clustering level analysis Cluster dynamics analysis Stakeholder analysis In-depth stakeholder meetings Workshop	SGK company and employee data TPI patent, brand, utility model and industrial design numbers Ministry of Finance data Aegean Exporters Union export data TOBB, İZTO, EBSO, district industry and commerce chambers data Ministry of Science, Industry and Technology company data
Knowledge Society Based Development Strategy for İzmir	Delphi survey Gapanalysis Scenariodevelopment methods Secondary data obtainment and analysis Workshop Spatial distribution data Core Concentration Analysis	TÜBİTAK program data TTGV programmedata İzmir Regional Innovation Strategy data TurkSTATinformation society data İZTO and EBSO data
Aquaculture Sector Strategy for İzmir	Literature review, Field survey Secondary data obtainment and analysis Workshop	World Food and Agriculture Organisation data EUROSTAT data Ministry of Food, Agriculture and Livestock Aquaculture Statistics İzmir Metropolitan Municipality data İzmir Provincial Directorate of Food, Agriculture and Livestock records TurkSTAT aquaculture statistics

Analysis	Methods Implemented	Base Data Utilised
İzmir Regional Innovation Strategy	Secondary data obtainment and analysis Field survey Ecosystemanalysis Workshop	ÖSYM and YÖK data TÜBİTAK data TTGV data Ministry of Science, Industry and Technology programme data TurkSTAT ABPRS data Turkish Patent Institute data İzmir Technology Development Zone data KOSGEB data İzmir Situational Analysis Ministry of Finance data Field analysis data Ecosystem analysis data
Strategy Study for Universalisation of Clean Production (Eco-Efficiency) Applications in İzmir	UNDP Capacity Assessment Method Multi-Aspect Decision Making Method Entropy Method Simple Sequencing Method Field meetings Workshop	TÜBİTAK reports UN Environment Programme reports Ministry of Environment and Forestry data İzmir Metropolitan Municipality data UNIDO reports TurkSTATenvironment statistics Ministry of Science, Industry and Technology data SGK reports İZKA reports
İzmir Urban Marketing Strategic Plan	Guidefish strategy planning model Perception research TNS “CATI” phone survey Omnibus face-to-face quantitative survey TNS face-to-face quantitative recognition and perception survey One-on-one video interview Online survey Face-to-facein-depth meetings YASED barometer online survey TurkSTAT face-to-face quantitative survey Value maps Comparison analyses Target group analysis SWOT Analyses	İZKA Investment Environment Assessment Study Ministry of Culture and Tourism data Perception research data Survey data Video interview data

In addition to determining the regional scale demands and priorities of İzmir, also more data were made rapidly accessible to various organisations and institutions via İZKA within the context of analysis studies. Also, synergy was crated between institutions by means of simultaneous exchange of data and research findings between analysis groups.

Participation and contribution from relevant groups were realised to many meetings/workshops held and analysis and strategy studies conducted. One-day workshops were organised for the purpose of determining strategy and action plan in the sectors of informatics, tourism, innovation, issues of clustering, eco-efficiency, culture economy and aquaculture field. By enabling information and experience exchange of relevant people, dominantly of sector representatives, issues were addressed together with their different aspects. On the 21st of September 2012, **İzmir Regional Plan Preparation Meeting** was held. With this meeting, analysis groups working on different fields were brought together, exchanging information/opinions on study fields, and opinions, suggestions and assessments were received from these groups on İZBP preparation process. The information on the meetings realised with the attendance of a total of 716 people are given at the table below.

Stakeholder Meetings and Workshops Within the Context of 2014-2023 İZBP Preparation Studies

Meeting Title/ Institution with which Meeting was Held	Analysis Title	Date	Discussed Issue	Number of Participants
Innovation Strategy Workshop	İzmir Regional Innovation Strategy	20 March 2012	Determining objectives and actions towards increasing R&D and innovation capacity in İzmir	50
Eco-Efficiency Workshop	Strategy for Universalisation of Eco-Efficiency Applications in İzmir	23 March 2012	Sharing situational report, defining actions that may be realised regarding clean production in the region	60
Clustering Workshop	İzmir Clustering Strategy	30 May 2012	Formation of İzmir Clustering Strategy through participation of all institutions and organisations working in this field in İzmir	25
Sectorexpert meetings	İzmir Regional Input-Output Table and Model Preparation and Analysis	June –August 2012	Holding approximately 30 meetings with people from various sectors comprising of company representatives, EBSO and İZTO sectorworkgroups; sectoral associations, umbrella organisations and universities, sharing the findings of analysis related to the sector, receiving opinions, suggestions and assessments.	129
Representatives of Institutions and Organisations related to Entrepreneurship (I)	Entrepreneurship Ecosystem Analysis	11 July 2012	Focus group meeting with a group comprising of entrepreneurs, investors, Embryonix, Ebiltem, İZTEKGEB representatives, media employees	15
Representatives of Institutions and Organisations related to Entrepreneurship (II)	Entrepreneurship Ecosystem Analysis	11 July 2012	Focus group meeting with representatives from businessmen associations, other relevant NGOs, municipalities, relevant public institutions and universities	25
İBB City Council	Civil Society Capacity	12 July 2012	Handicapped, Women and Youth Assembly focus group meeting within the context of Civil Society Capacity analysis	20
İBB City Council	Civil Society Capacity	17 July 2012	Handicapped, Women and Youth Assembly focus group meeting within the context of Civil Society Capacity analysis	17
Expert meetings	Civil Society Capacity	July - August 2012	In-depth interviews with experts of their fields	10
Plan Preparation meeting	All Analyses	21 September 2012	Exchange of analyses and workshop session with support of İlhan Tekeli	65
İzmir Information Society Strategy Workshop	İzmir Information Society Based Development Strategy	4 October 2012	Determination of objectives and actions for İzmir Information Society Strategy together with participants from relevant public institutions, private sector companies, NGOs, and universities	50

Meeting Title/ Institution with which Meeting was Held	Analysis Title	Date	Discussed Issue	Number of Participants
İzmir Information and Communication Technologies Sector Workshop	İzmir Information Society Based Development Strategy	12 October 2012	Determination of objectives and actions for İzmir Information Society Strategy together with participants from relevant public institutions, private sector companies, NGOs, and universities	35
Land Classification Project Information Meeting	All Analyses	15 November 2012	Presenting information to regional plan analysis groups and experts from various institutions on the Land Classification Project conducted by the Special Provincial Administration	50
Tourism Strategy Workshop	İzmir Tourism Strategy	20 December 2012	Determination of sectoral priorities, objectives and actions together with participants comprising of representatives from companies, hotels, associations, chambers, public institutions, universities relevant to İzmir's tourism sector, along with representatives of the Ministry of Culture and Tourism	50
Aquaculture Sector Workshop	İzmir Aquaculture Sector Strategy	25 December 2012	Receiving contributions from sector representatives on the sectoral demands, priorities, objectives and actions	60
Cultural Economy Strategy Workshop	İzmir Cultural Economy Inventory and Development Strategy	3 January 2013	Receiving contributions on the objectives and actions to be carried out towards actualising a cultural economy in İzmir in the light of Situational Analysis	55
TOTAL				716

The technique to be implemented at the workshops was defined and facilitator, assistant facilitator duties were undertaken. For the purpose of realising a common application in workshops of different themes, a “Principles for Workshops” document was prepared. Facilitator trainings were given to agency unit assistants and university representatives to be assigned as facilitator. Within the context of one-day workshops, initially the regional analysis findings were exchanged and the opinions and suggestions of participants were received, followed by sessions where objectives and actions were defined by participants.

An e-mail group was set up for realising the coordination of teams working on plan analysis and necessary announcements and information were realised over this group. Also, an FTP folder was submitted for shared use for the exchange of various data, reports and cases. A spelling standards document that defines the standards of analysis reports was prepared and distributed, realising its use in the reports.

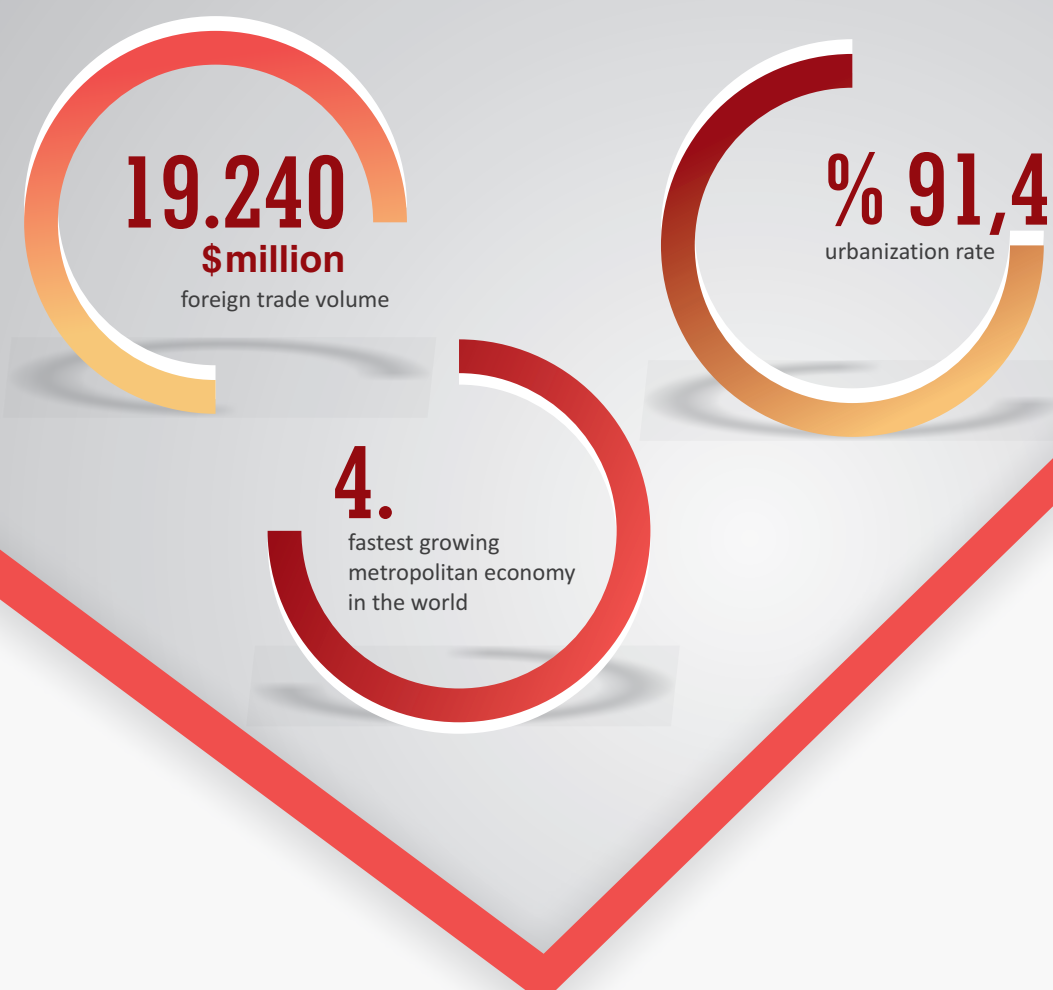
Technical analyses that were conducted within the framework of 2013 MDA have provided the scientific foundation necessary for formation of plan objectives and have been guiding towards determination of 2023 İzmir vision. With the development workshop and citizen meetings, of which larger scale follow-ups shall be organised in the coming period, wider segments were reached to have a voice in the decision making process regarding the future of İzmir.

Within the context of 2013 MDA studies, public sector, private sector, civil society and university segments were brought together, producing shared opinions regarding the future of İzmir, and priorities were determined through a shared mind during the sectoral and thematic workshops. The most important gain obtained from this process is the shared working culture created in this manner.

It is hoped that this study, which is foreseen to constitute a scientific foundation for determination of strategic priorities and objectives for 2014-2023 İZBP and support the technical studies to be conducted towards directing the future of İzmir, is hoped to be used as reference document by İzmir's public segment, local administrations, academic platforms and non-governmental organisations.

Overview of the Region





19.240
\$million
foreign trade volume

% 91,4
urbanization rate

4.
fastest growing
metropolitan economy
in the world

1.a. The Standing of İzmir within Region and Country

With a population size of 4,005,459 people as of the year 2012, İzmir constitutes 5.3% of overall Turkey population and 41% of Aegean Region population. The province ranks at the third place among 81 provinces regarding both population size and socioeconomic development.

According to the “The Study on Socioeconomic Development Gradation of Provinces and Regions” (SEGE) published by the Ministry of Development in the year 2011, İzmir was graded at the third place throughout Turkey. This gradation study in which İstanbul ranked at the first and Ankara at the second place was prepared by using 61 variables under 8 subcategories, namely demography, education, health, employment, competitive and innovative capacity, financial capacity, accessibility and quality of living.

According to the Inter-Provincial Competitiveness Index 2009-2010 prepared by the International Competitiveness Research Institute (URAK), İzmir ranked at the third place throughout the world in line with its population and socioeconomic development ranking. In this study where İzmir had an index value of 42.72, İstanbul had 86.01 and Ankara had 49.73 index value. In terms of sub-indexes, İzmir ranked at the fourth place regarding human capital and quality of life sub-index, sixth place regarding branding capability and innovation sub-index, third place regarding trade skill and production potential sub-index and second place regarding accessibility sub-index.

As of year 2012, population density was measured to be 98 person /km² throughout Turkey and 333 person/km² for İzmir. With this population density over Turkey average, İzmir displays a more elderly view compared to Turkey in terms of population age pyramid, and is significantly over Turkey overall values (77.3%) with an urbanisation ratio of 91.4%. While the province had received high levels of migration in the past periods, the net migration rate declined in the recent periods and occurred to be 39.88 per mille and 2.26 per mille respectively for years 2000 and 2011.

Literacy and schooling ratios are over the Turkey average values. The province is 2 points over Turkey average in terms of literate population ratio and 3 points over Turkey average in terms of higher education and over graduates ratio.

İzmir has a total of nine universities, comprising of four public universities and five foundation universities.

In regards to healthcare services, İzmir fares better than Turkey average. As of the year 2011, the province had a total of 54 hospitals, comprising of 32 public and 22 private hospitals. Number of hospital beds per hundred thousand people (2011) occurred to be 274, which is over the Turkey average value of 252. The number of patients per doctor occurred to be 448 (2011), while Turkey average was measured to be 593 people.

In line with the general situation dominant in the Turkey workforce market, a decline was observed also in the İzmir workforce market due to the impact of the global economic crisis in year 2009 but this went under recovery in the following years. Workforce participation ratio that was observed to be 53.2% in İzmir as of the year 2012 is over that of Turkey (50%) and other metropolitan cities. The employment that declined in a limited manner in the year 2009 increased significantly in the following years to reach 1,424,000 in the year 2012. According to this, İzmir employs 5.7% of all employees throughout Turkey and 38.2% of the employees within the Aegean Region. Due to the increase of employment failing to meet the increase in workforce sufficiently, the decline in unemployment occurred at a limited level during the 2009-2012 period. Unemployment rate in İzmir (14.8%) occurred to be significantly over Turkey average (9.2%). As of the year 2012, one per eight unemployed women throughout the country is located in İzmir.

More than half of the employment in İzmir is provided by the services sector. As of the year 2012, the share of agriculture within overall employment is 10.1%, share of industry is 31.6% and share of services is 58.4% in terms of sectoral distribution. The shares received by the industry and the services sectors are higher than the respective average Turkey values of 26% and 49.4%, while the employment share of the agriculture sector corresponds to less than half of the Turkey agricultural employment ratio of 24.6%.

In line with its employment ratio, services is the sector with the largest Gross Value Added (GVA) share within İzmir economy. As of the year 2010, the share received by the services sector from GVA occurred to be 68.4% within İzmir, 61.8% within Aegean Region and 64.3% throughout Turkey. İzmir services sector GVA has a share of 53.3% within Aegean Region services sector GVA and 6.9% within Turkey services sector GVA.

İzmir is one of the regions with the highest industrial development. As of the year 2010, İzmir province industry sector GVA had a share of 25.8% within İzmir overall GVA, 47.3% within Aegean Region industry GVA, and 6.3% within Turkey industry GVA. Among 26 NUTS 2 regions, İzmir ranked at the fifth place with its share received from Turkey industry GVA.

In terms of employment values, particularly manufacture of food products (15.60%), manufacture of clothing (15.39%), manufacture of fabricated metal goods (9.65%), manufacture of furniture (7.54%), and manufacture of motor land vehicles, trailers and semi-trailers (6.77%) sectors come prominent within İzmir province manufacture industry. According to TurkSTAT Annual Industry and Services Statistics (2009), the number of local enterprises within İzmir's manufacture industry sector occurred to be 20,372, corresponding to 5.9% of enterprises dealing in Turkey, and the number of people employed in this field occurred to be 176,534 people, corresponding to 6.8% of people employed throughout Turkey. Also, 32 out of 500 largest scale industrial establishments throughout Turkey are located in İzmir. In this sense, İzmir occurs to be the second most prominent region following İstanbul (33 companies) (İSO, 2012).

The share of agriculture sector within İzmir economy is relatively low, and the share of agriculture within Gross Domestic Product (GDP) is also on a declining trend throughout the years. The share of agriculture sector within İzmir GVA that was 6% as of the year 2004 occurred to be 5.9% as of the year 2010. The share of agriculture sector within Aegean Region agriculture GVA is 22.3%, while the same within Turkey agriculture GVA occurs to be 4%. In terms of sector size, İzmir ranks at the 11th place among 26 NUTS 2 regions.

In terms of plant based production value, İzmir ranked at the fourth place in the year 2009 and third in the year 2010 among all provinces, and rested at the fifth place in the year 2011 following Antalya, Mersin, Konya and Şanlıurfa. The share İzmir have within Turkey's overall plant based production value is 4.1%. The province's share within Turkey overall fruit production occurred to be 3.7% as of the year 2011.

İzmir is one of the important livestock centres of Turkey and Aegean Region. The share of animal based production value within the overall agricultural production value rose from 31.3% in 2006 to 42.4% in 2011. Ranked at the second place in the years 2009 and 2010 regarding the animal based products value, the province then declined to the fourth place in the year 2011, following Konya, Balıkesir and Sivas. The province's share within overall animal based production value is 1.23%. According to year 2010 data, İzmir ranks at the third place following Balıkesir and Konya regarding overall milk production, and at the second place following Balıkesir regarding cow milk production. The amount of meat produced in İzmir constitutes 9.5% of overall Turkey meat production and 44.1% of Aegean Region meat production.

Located at the Mediterranean-Black Sea crossing with opportunities to open up to Balkans, Europe and Middle East –over Anatolia- regarding its geopolitical position, İzmir has significant advantages in terms of logistics. Logistics sector, which rapidly grew over the world and started receiving important shares within national income due to globalisation, defines a considerably wide field of service. Existence of five active seaports and an international airport, close proximity to centres with high agriculture, industrial production and mineral processing capacity such as Manisa, Denizli, Aydın, Muğla, Bursa, Uşak and Kütahya, and the presence of approximately 1,700 international-capital companies render İzmir even more important in terms of logistics sector.

With its geographical position, diversity of historical and cultural assets, geographical features and tourism-oriented infrastructure, İzmir has a wide and dynamic tourism potential. As of the year 2011, the share of İzmir within Aegean Region in terms of facilities with tourism establishment certificate occurred to be 21.3% regarding number of facilities and 18.2% regarding number of rooms and beds, while these same ratios occurred to be 5.1% and 4.1% respectively throughout Turkey. Occupancy ratio of facilities with tourism operation license as of the year 2011 is 51.5% throughout Turkey while this ratio occurred to be 49% for İzmir.

In İzmir, 27 banks are active with a total of 736 branch offices as of the end of year 2012. The province is the sixth province where the average population per branch office is lowest.

İzmir ranked at the third place among all provinces regarding total bank deposit amounts and saving deposits ratio (61.2%) as of the year 2012, and the deposit amount per capita in the province (10,388 TL) is over Turkey average (9,576 TL). İzmir ranks at the third place among provinces in terms of use of loans. With a loan amount per capita of 10,362 TL, the province has a value over Turkey average (9,532 TL) as of the year 2012; ranking at the fourth place among all provinces.

The presence of transportation opportunities and particularly İzmir Port make way for the region and Turkey production to open up to abroad from the province of İzmir. The province's share within Aegean Region export occurred to be 50.7% and the same value occurred to be 5.7% within Turkey's overall export as of the year 2012. Import shares occurred to be respectively 61.3% and 4.5% in that same year.

The foreign trade volume in İzmir displayed an increase of 2.7 times throughout the 2002-2011 period, while the foreign trade volume of Aegean Region increased by 3.8 and overall Turkey foreign trade volume increased by 3.3 times. As of the year 2012, export per capita occurred to be over the Turkey average of 2,017 USD with a local value of 2,162 USD¹, while import per capita occurred to be below the Turkey average of 2,641 USD with a local value of 3,128 USD. Year 2012 export import coverage ratio of 82% was higher than the Turkey average (64%) but lower than Aegean Region average (99%).

Some Economic and social indicators related to İzmir are listed in the following table (Table 1) .

Table 1:
Economic and Social State Profile of İzmir

Indicator	Turkey	Aegean Region	İzmir
GEOGRAPHY AND DEMOGRAPHY			
Acreage (excluding lakes) (km ²)	783.562	89.997	12.015
Population (According to Address Based Population Registry System 2012 Data)	75.627.384	9.779.502	4.005.459
Annual Average Population Increase Rate (2011-2012) (per mille)	12,01	9,43	10,09
Population Density (2012) (person/km ²)	98	109	333
Urbanisation Ratio (2012) (percent)	77,3	73,7	91,4
Net Migration Rate (2010-2011) (per mille)	-	0,13	2,26
EDUCATION			
Literate Population Ratio (2011) (percent)	95,13	96,85	97,68
Elementary Education Net Schooling Ratio (2011) (percent)	98,67	99,07	99,30
Male (percent)	98,77	99,11	99,31
Female (percent)	98,56	99,04	99,29
Secondary Education Net Schooling Ratio (2011) (percent)	67,37	73,82	75,52
Male (percent)	68,53	73,08	73,64
Female (percent)	66,14	74,60	77,51

¹ Expressed in "Dollars" throughout the text.

Indicator	Turkey	Aegean Region	İzmir
EMPLOYMENT (15+ age)			
Workforce Participation Ratio (2012) (percent)	50	54,6	53,2
Employment Ratio (2012) (percent)	45,4	49,4	45,3
Unemployment Ratio (2012) (percent)	9,2	9,6	14,8
Ratio of People Employed in Agriculture Sector (2012) (percent)	24,6	30,5	10,1
Ratio of People Employed in Industry Sector (2012) (percent)	26	24,2	31,6
Ratio of People Employed in Services Sector (2012) (percent)	49,4	45,3	58,4
SOCIAL SECURITY			
Ratio of Population Under Social Security Coverage within Overall Population (June 2012) (percent)	85,7	88,5	89,2
Active Insurants / Population (June 2012) (percent)	24,8	26,9	27,9
Passive Insurants / Population (June 2012) (percent)	13,7	17,9	19,8
Active Insurants / Passive Insurants (Case) (June 2012)	1,95	1,58	1,48
HEALTH			
Number of Hospitals (2011) (Item)	1.410	187	54
Number of Beds per Hundred Thousand Patients (2011) (Item)	252	264	274
Number of Patients per Doctor (2011) (Person)	593	557	448
INDUSTRY SECTOR			
Share of Industry within GVA (with Current Prices) (2010) (percent)	26,4	26,9	25,8
Share of Industrial Establishments throughout Turkey (2009) (percent)	-	13,8	5,9
Share of Industrial Revenue Value throughout Turkey (2009) (percent)	-	13,7	8,0
Share of Industrial Gross Investments throughout Turkey (2009) (percent)	-	10,9	6,1
AGRICULTURE SECTOR			
Ratio of Agricultural Lands within Overall Lands (2011) (percent)	30,2	30,8	28,2
Share of Agriculture within GVA (with Current Prices) (2010) (percent)	9,5	12,4	5,9
Average Establishment Size (2001) (decare)	61	44	37
Number of Ovine Animals per Agricultural Establishment (2001) (Item)	9	7,7	10,6
Number of Bovine Animals per Agricultural Establishment (2001) (Item)	3,6	3,5	4,6
Land per Tractor (2010) (ha)	21	12	10
Chemical Fertilizer per Hectare (2011) (kg)	78	88	153
BANKING			
Bank Deposits (2012) (Billion TL)	770	74,1	41,6
Bank Loans (2012) (Billion TL)	764,2	79	42,6
Loan Deposit Ratio (2012) (percent)	99,2	106,7	102,4
Saving Deposit Ratio (2011) (percent)	38,1	60,7	61,2
TOURISM SECTOR			
Number of Accommodation Facilities with Tourism Establishment Certificate (2011) (Item)	2.783	662	141
Ratio of Number of Facilities within Turkey (2011) (percent)	-	23,8	5,1
Bed Capacity of Facilities with Tourism Establishment Certificate (2011) (Item)	668.829	150.292	27.283
Ratio of Number of Beds within Turkey (2011) (percent)	-	22,5	4,1
Occupancy Rate of Facilities with Tourism Establishment Certificate (2011) (percent)	51,5	44,2	49,0
Number of Accommodation Facilities with Municipality Certificate (2011)	8.893	2.962	525
Bed Capacity of Facilities with Municipality Certificate (2011)	504.877	162.163	20.209
Occupancy Rate of Facilities with Municipality Certificate (2011) (percent)	31,4	14,8	33,9
FOREIGN TRADE			
Foreign Trade Volume (2012) (Million Dollar)	389.098	34.323	19.240
Foreign Trade Balance (2012) (Million Dollar)	-83.976	-165	-1.914
Export (2012) (Million Dollar)	152.561	17.079	8.663
Export per capita (2012) (Dollar)	2.017	1.746	2.162
Import (2012) (Million Dollar)	236.537	17.244	10.577
Import per capita (2012) (Dollar)	3.128	1.763	2.641
Export Import Coverage Ratio (2012) (percent)	64	99	82

1.b. Global Position of İzmir Province

The importance of metropolitan settlements such as İzmir within the global economy constantly increases. According to the 2011 Global Metro Monitor Report prepared by the independent USA research organisation BrookingsInstitute that studies the 200 largest metropolis economies, İzmir is the fourth metropolis economies with the highest growth rate throughout the world (Tablo 2). While the 10 cities with the fastest growth throughout the world are concentrated in China, Turkey and Saudi Arabia, 95% of the slowest growing metropolis economies are located in the USA, West Europe and Japan (that experienced an earthquake disaster). The fastest growing city of the world is Shanghai city of China. Other important metropolitan settlements of Turkey, namely Ankara and İstanbul ranked at the sixth and seventh places respectively. In terms of income amount, İzmir is at the 181th place among 200 metropolis economies with 8,560 Dollars per capita (Brookings, 2011).

Table 2:
Global Metropolis Settlements with the Highest Economic Performances

Rank No	Metropolis	Country	2010-2011 Change (%)	
			Income ²	Employment
01	Shanghai	China	9,8	5,8
02	Riyadh	Saudi Arabia	7,8	6,3
03	Jeddah	Saudi Arabia	7,0	5,5
04	İzmir	Türkiye	5,5	5,6
05	Hangzhou	China	5,8	5,5
06	Ankara	Turkey	5,4	5,7
07	İstanbul	Turkey	5,3	5,6
08	Shenzhen	China	6,5	4,9
09	Santiago	Chile	5,7	4,9
10	Shenyang	China	11,6	1,7

Source: Brookings, 2011

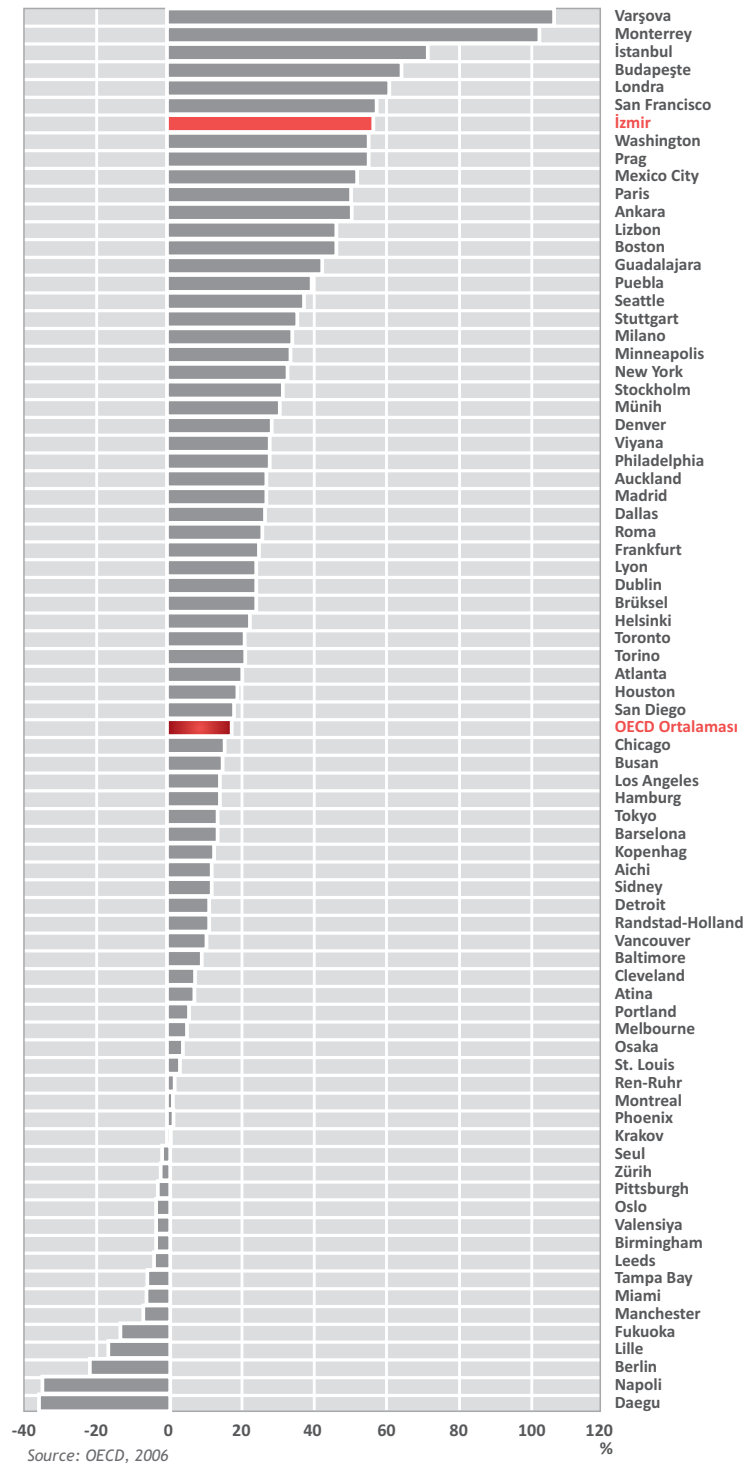
In Brookings Institute Year 2012 report, İzmir ranked at the 45th place among 300 metropolises due to the decline in the employment creation performance, similar to other metropolises representing Turkey. Although a relative decrease was measured in the economic performance of İzmir, Ankara and İstanbul in the 2012-2011 period compared to the previous period, these provinces were determined to completed their exodus from a serious recession.

According to the year 2006 study of Organisation for Economic Cooperation and Development (OECD) that studies the competitive regions of global economy, GDP per capita and workforce efficiency are over national average in most of the metropolis settlements; 66 out of 78 metropolis settlements and 65 out of 78 metropolis settlements respectively. Furthermore, most of these cities have higher growth rates compared to their overall country values.

² The term "Income" was used in place of GDP per capita in the study.

According to OECD's abovementioned study, İzmir constitutes approximately 50% of the Aegean Region GDP and approximately 7% of overall Turkey GDP by itself. At the sixth place in the GDP per capita listing, İzmir is observed to have an average population increase rate considerable over OECD average. İzmir is the third province in terms of contributing to Turkey GDP, following İstanbul and Ankara.

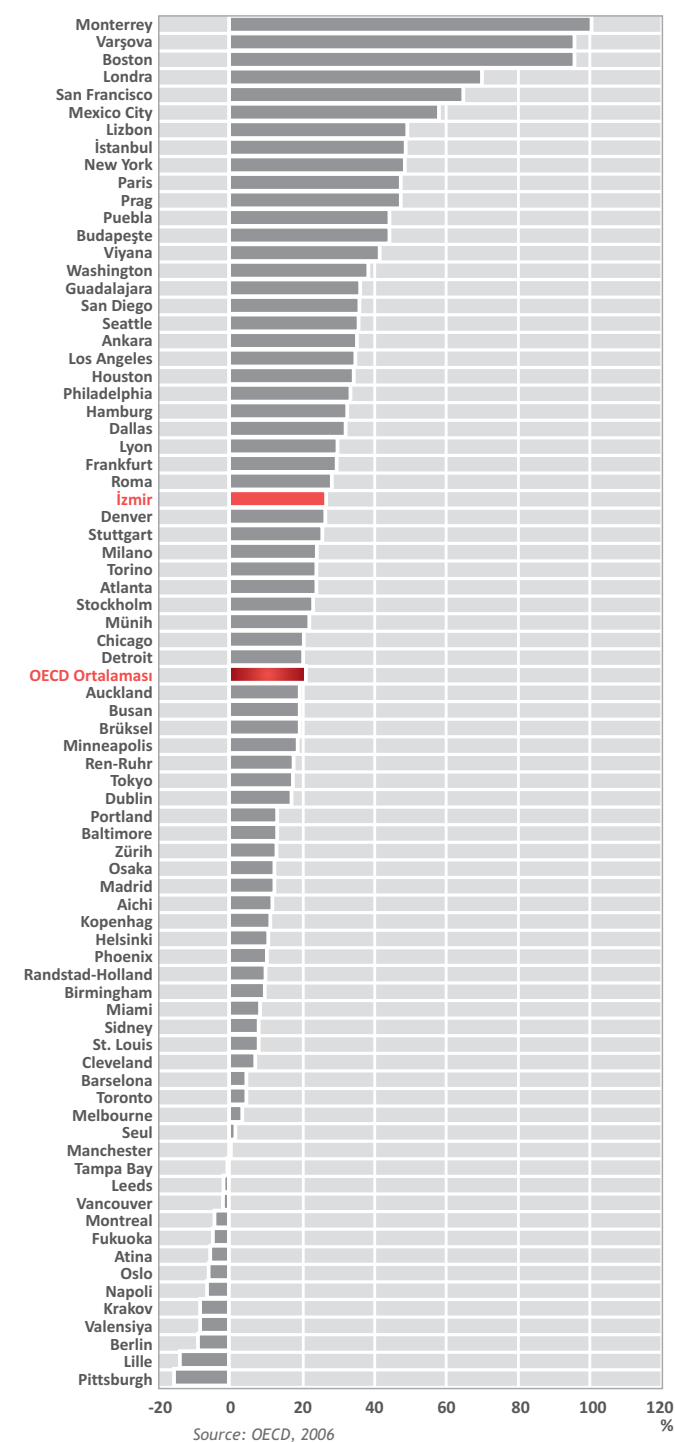
Figure 1:
Share of Global Cities within National GDP per capita, 2002



In terms of GDP per capita, İzmir and İstanbul are observed to exceed 60% of country overall value (OECD, 2006).

According to the same study and based on workforce efficiency, the labour efficiency ratio of İzmir province occurs to be approximately 25%, while the same ratio is observed to be around 50% in İstanbul.

Figure 2:
Share of Global Cities within National Workforce Efficiencies, 2002



In conclusion, İzmir bears a potential in providing human and physical capital opportunities, equipments, building stock and infrastructure opportunities, better transportation and telecommunication opportunities and creating source alternatives due to its agglomeration economy similar to other global cities. However, again similar to other global cities, İzmir also has socioeconomic strong and weak points and provincial opportunities and threats at local, regional, national and international scales.

1.c. IMPORTANT DEVELOPMENTS THAT WILL GUIDE İZMİR

İzmir-İstanbul Highway, İzmir-Ankara High Speed Train Project, Northern Aegean (Çandarlı) Seaport Project, railroad system investments relevant to intra-regional transportation and works aimed towards coastal design may be listed as important developments that will affect İzmir. Studying the impacts of said projects on the region and assessing them with an integrated approach is important for maximising the benefits to be provided to the region.

In the largest scale highway project of Turkey that will reduce the travel time between İstanbul and İzmir to 3.5 hours, namely İzmir-İstanbul Highway Project; the Gebze-Orhangazi-Bursa section is planned to be completed within 3.5 years. Foundations were laid and constructions were started on the İzmit Bay Crossing and Bursa-Balıkesir-İzmir sections that are to be completed with the use of Build-Operate-Transfer (BOT) method, and works are still underway at the İstanbul side. Such facilitation of access to İstanbul, the centre of Turkish economy, will be a significant development source for İzmir.

With the İzmir-Ankara High Speed Train Project aimed to facilitate the transportation between Ankara and İzmir, the travel time between Ankara and İzmir is planned to be reduced to 3.5 hours and carry approximately 6 million passengers per year.

This project that will reach Ankara over Uşak and Afyonkarahisar shall provide fast transportation also to/from these cities. Construction site delivery was realised and construction between Ankara-Afyon was started.

Northern Aegean (Çandarlı) Seaport is being actualised for the purposes of supporting İzmir Alsancak Seaport, satisfying the future harbour demand of Turkey and Aegean Region, and rendering services to transit freight transportation and third generation ships. Northern Aegean Seaport shall not only act as an alternative to İzmir Seaport but also as a major transshipping port that will be able to answer the freight demand constantly growing both nationally and internationally. It has the potential to become the centre of transit freight transportation in the Mediterranean area due to its position, capacity and transportation opportunities. The aim is to complete all seaport infrastructure works until the end of the year 2013, and allowing ships to berth within the year 2017 after the completion of all superstructure works and services. The seaport is envisioned to allow berthing of 1,100 ships over 200,000 tonnes annually when initialised at full capacity.

With the protocol signed between TCDD and İzmir Metropolitan Municipality (İBB), the railroad infrastructure from Aliğa to Cumaovası was developed and a high capacity intra-city rail system with 80 km length and 31 stations was established. A protocol was signed for extending this line from Cumaovası to Torbalı (Tepeköy), and the construction works of 6 stations (Tekeli, Pancar, Torbalı, Tepeköy, Develi, Kuşçuburun), 8 vehicle level crossings and 1 pedestrian overpass on the 30 km additional line were started. It is planned to extend the route to Selçuk in addition to the Cumaovası - Tepeköy line continuing at the south (further 26 km from Tepeköy) and construct additional lines from Aliğa to Bergama (52 km.) at the north.

With the completion of the abovementioned lines, the region's North-South connection shall be strengthened and the connections of Selçuk and Bergama, two important tourism centres, with each other and with the city centre shall be improved.

For the purpose of realising intra-city transportation with modern, high capacity and energy-friendly vehicles, tramway projects are being implemented. The projects prepared by İBB for Konak and Karşıyaka districts have been tendered. Subway construction is underway on Üçyol-Fahrettin Altay line. Also, application was made to the Ministry of Transportation and Maritime Affairs for taking into investment programme the subway lines planned for Fahrettin Altay-Narlıdere, Otogar-Halkapınar and Üçyol-Dokuz Eylül University routes.

Design Strategy for the Project of Strengthening the Connection between Citizens of İzmir and the Sea, which will have important impacts on urban life, is being implemented by İBB, and aiming to improve the visual and spatial quality of the coastal region with the design projects made for the approximately 40 km coastal line between Mavişehir and İnciraltı City Forest.

Other works that are of importance in terms of urban life and economy although being point-oriented may be listed as New Fair Area and Zübeyde Hanım Opera Hall construction, and Agora, Kadifekale and Kemeraltı excavation and arrangement projects.



Social Structure



4.005.459

The population density of İzmir according to the ABPRS results

% 0,53

population growth rate

333

The population of İzmir according to the ABPRS results

2.a. POPULATION STRUCTURE

In the year 1927, with a population of 531,579 İzmir was the second province with the highest population following İstanbul. According to Address Based Population Registry System (ABPRS) Year 2012 results, the population of İzmir rose to 4,005,459, taking the third place following İstanbul and Ankara among 81 provinces. Fundamental aspects such as population density, urbanisation ratio, population increase rate and dependency ratios that would illustrate the population structure of İzmir are examined below.

2.a.1. Increasing and Dense Population

The first point of interest regarding the population structure of İzmir is that the population density is significantly over that of Turkey average. According to Year 2000 General Census (GC) data, the population density of Turkey was found to be 88, while the population density of Aegean Region was found to be 99, and the population density of İzmir was found to be 281. According to this, İzmir took the third place following İstanbul (1,928) and Kocaeli (334) among the provinces with highest population density.

According to Year 2012 ABPRS data, population density was found out to be 98 for Turkey, 109 for Aegean Region and 333 for İzmir province (Table 3). İzmir is thus observed again to have the third place following İstanbul (2.666) and Kocaeli (453) among the provinces with highest population density.

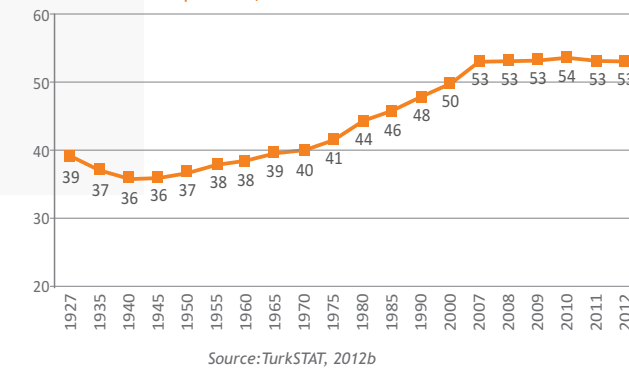
Table 3:
Information on Population, 2010-2012

Level (NUTS)	Population (2012)	Urban Population Ratio (%) (2012)	Population Density (person/km ²)	Annual Population Increase Rate (per mille) (2011-2012)	Median Age (2012)	Net Migration Rate (per mille) (2010-2011)	Overall Age Dependency Ratio (2012)
Turkey (TR)	75.627.384	77,3	98	12,01	30,1	-	48,03
Aegean (TR3)	9.779.502	73,7	109	9,43	33,8	0,13	42,8
İzmir (TR31)	4.005.459	91,4	333	10,09	34,1	2,26	39,97

Source: TurkSTAT, 2012a

The average population density for European Union (EU) member states³ published by EUROSTAT regarding NUTS 2 regions, which is specifically 116.6, falls considerably below that of İzmir (EUROSTAT, 2012a). The second point of interest regarding the population structure of İzmir is the population increase rate that has been observed to be over Turkey average since a long time ago. Actually, Turkey's population increase rate is similarly higher than most EU states. According to year 2011 data, EU average population increase rate occurred to be 0.25%, while the same value was observed as 0.36% for Euro Region average, and 1.30% for Turkey (2011) (IMF, 2012). The ratio of İzmir population within overall Turkey population that was 39 per mille as of the year 1927 displayed a decreasing trend until 1950s, and then employed an increasing trend to rise up to 53 per mille as of the year 2007. No significant change was observed during 2007-2012 period (Figure 3).

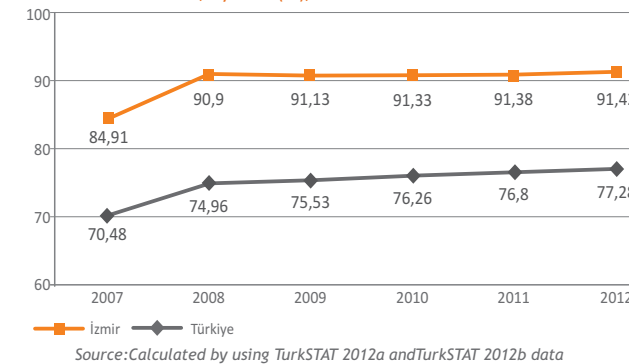
Figure 3:
Information on Population, 2010-2012



2.a.2. Urbanising Population

Another one of the important aspects of the population structure of İzmir is that the ratio of urban population within overall population is considerable higher than Turkey average. Urban population ratios were observed to be 64.9% for Turkey and 81% for İzmir in the year 2000, which were found out to be 80.5% and 84.9% respectively as of the year 2007 (TurkSTAT, 2008). According to ABPRS Year 2012 data, this same value reached 91.4% for İzmir and 77.3% for Turkey (Figure 4).

Figure 4:
Urbanisation Ratios, by Year (%), 2007-2012



³ EU consisted of 27 countries as of the year 2012.

⁴ This subject is examined in detail in the "Migration" section.

Without any doubt, legal arrangements related to administrative structure also had a role to play in the increase of urban population, similar to many other region of Turkey. With a population density and urban population ratio considerably higher than that of Turkey, İzmir is revealed to be a region that is in need of comprehensive policies regarding healthy urbanisation.

An increase in the favour of urban population is observed through time regarding the distribution of urban and rural populations throughout Turkey and in İzmir. According to year 1965 GC data, 34.4% of the population lived in cities and 65.6% of the population lived in villages and counties throughout Turkey, while these ratios were observed to be 77.3% and 22.7% respectively in the year 2012. The distribution of urban and rural populations in İzmir shared a similar trend by years (Table 4). The urban population ratio that happened to be 50.3% as of the year 1965 increased to 91.4%, while the population living in villages and counties decreased to 8.6% in the year 2012.

Table 4:
Urban Population Ratios by Periods (%)

Level (NUTS)	1965	1980	1990	2000	2012
Ankara	65,1	78,4	87,6	88,3	97,5
İstanbul	78,1	61,3	92,4	90,7	99,0
İzmir	50,3	53,6	79,2	81,1	91,4
Turkey	34,4	43,9	59,0	64,9	77,3

Source: Calculated by using TurkSTAT 2012a and TurkSTAT 2012b data

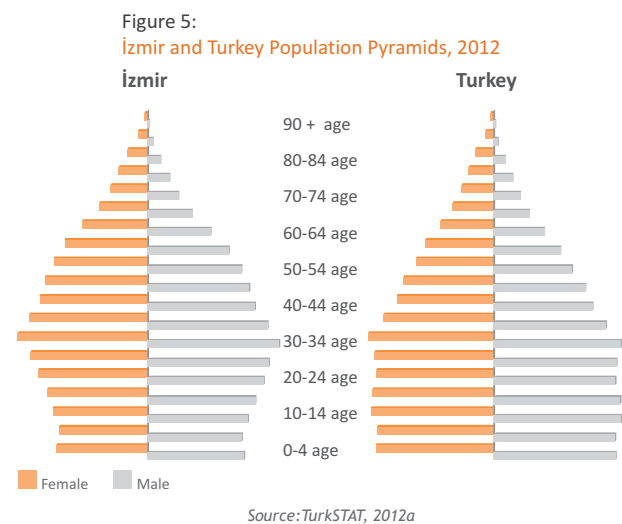
This development observed in the urban and rural distribution of population is a clear indication of an immigration phenomenon from rural to urban areas. This immigration did not remain limited to a movement from rural areas to city centres but also caused the population to concentrate in western provinces such as İzmir with a more developed industry. As a result of that, western provinces of Turkey became areas prone to receiving immigrants and the provinces in other regions became areas prone to losing emigrants. İzmir also got affected from these developments, and received many immigrants from both Aegean Region provinces and other provinces throughout Turkey, with the contribution of also other phenomena such as increasing mechanisation in agriculture, scattering of land due to inheritance issues and unemployment in rural areas.⁴

2.a.3. Aging Population – Changing Family Structure

In order to better understand the population dynamics of İzmir, which has a trend higher than that of Turkey in regards to population density, population increase rate and urban population; median age, elderly population ratio, fertility rate and other data on migration have to be taken into assessment.

In the last 50 years, fertility rate in Turkey declined from 6.9 children to 2.03 children and the life expectancy at birth rose from 43.6 years to 74.5 years. Demographic changes caused the population to get older. As of the year 2000, the median age value was found out to be 24.8 for Turkey, 28.3 for Aegean Region and 28.8 for İzmir province. With a value of 34.1, İzmir has a median age higher than the Turkey average of 30.1 and Aegean Region average of 33.8. (TurkSTAT, 2012a). In other words, the age average of İzmir occurred to be approximately 0.3 years higher than Aegean Region average and 4 years higher than Turkey according to population data belonging to the year 2000 and later. On the other hand, considering the age average is 41.2 in EU-27 and 42.2 in EU-15 countries, it is observed that the province has a relatively low value compared to EU members states.

In the industrialised countries that have faced population aging since a long time ago, significant advances were made regarding determination and resolution of the health, social and economic needs of this population segment. On the other hand, it is estimated that the population will age faster in the developing countries group that also includes our country, and this situation will cause important problems. Therefore, it is necessary to review healthcare services and social policies aimed towards aging in order to be ready and resistant against any potential problems. Population age groups pyramid illustrates that the issue is of significance also for İzmir (Figure 5).



The ratio of young population (0-14 years age) within overall population in İzmir that was calculated to be 19.5% as of year 2012 is below the Turkey average of 24.9%.

⁵ Total Age Dependency Ratio: The number of people in the "0-14 years" and "65 years and over" age groups for every 100 people within the "15-64 years" age group.

⁶ Young Dependency Ratio: The number of people in the "0-14 years" age group for every 100 people within the "15-64 years" age group.

⁷ Elderly Dependency Ratio: The number of people in the "65 years and above" age group for every 100 people within the "15-64 years" age group.

However, the ratio of 65 years and over age group population within overall population in İzmir (9.1%) exceeds that of the Turkey average (7.5%) by approximately 1.5 points.

Total age dependency ratio⁵, another indicator in this regard, remained below Turkey average (48%) with a value measured to be 40% according to year 2012 data (Table 5). The high value found for the total age dependency ratio is caused significantly due to the high value of young dependency ratio⁶, in line with overall Turkey values.

Table 5:
Age Dependency Ratios, 2012

Level	Total Age Dependency Ratio	Elderly Dependency Ratio (65+) ⁷	Young Dependency Ratio (0-14)
İzmir	39,97	12,69	27,28
Turkey	48,03	11,12	36,91

Source: Calculated by use of TurkSTAT, 2012a data.

Young dependency ratio is approximately 10 points below the Turkey average (36.9%) with a provincial value of 27.3%. The distribution of total age dependency ratio by young and elderly population segments is of significance regarding public policy design and public resource allocation. For instance, the relatively high value found for 65 years and over age segment may be related to issues such as formation of policies for elderly care and realisation of investments aimed at this social segment.

Data on family structure also reveals that the population structure of İzmir clearly shows difference compared to country general. According to 2000 GC data, average household size is 4.5 for Turkey, 3.8 for Aegean Region and 3.6 for İzmir province. According to 2011 ABPRS data, average household size decreased at all three of these levels, meaning a change in family structure and formation of households consisting of fewer individuals. According to the abovementioned data, the average household size that is 3.2 for İzmir province is lower than the average values of both Aegean Region (3.24) and Turkey (3.8) Table 6).

Table 6:
Age Dependency Ratios, 2012

Level	2000	2011
İzmir	3,58	3,20
Aegean	3,81	3,24
Turkey	4,50	3,76

Source: TurkSTAT, 2012c

2.a.4. Migrating Population

One of the most important components of a qualified demographic analysis is the phenomenon of migration. In developing countries such as Turkey, many aspects such as rapid industrialisation, emergence of an urban middle class, social modernisation, resolution of the traditional economic organisation and political stability pursuits carry the migration phenomenon to the top of the agenda.

Table 7:
Migration Amount and Net Migration Rate, 2000, 2012

Level	Year 2000 Net Migration Rate (per mille)	2012 Year Population	Immigration	Emigration	Net Migration	2012 Net Migration Rate (per mille)
İzmir	39,88	4.005.459	105.804	95.954	9.850	2,46
Aegean Region	22,66	9.779.502	195.844	170.489	25.355	2,6

Source: TurkSTAT, 2012b; TurkSTAT, 2012d

During the recent periods, significant declines are observed in the net migration rate of İzmir, which used to come at the top of the provinces that received high number of immigrant citizens throughout the years (Table 7). The net migration rate that was observed to be 40 per mille according to year 2000 GC data declined to around 2.5 per mille as of the year 2012. At the same period, the migration rate lost significant acceleration throughout the Aegean Region, decreasing from 22.7 per mille to around 2.6 per mille. It is estimated that the recession in the immigration receiving capacity of İzmir played a certain role in the emergence of this situation.

For the 2011-2012 period, the provinces from which İzmir receives the highest emigration are listed respectively as İstanbul, Manisa and Ankara. When an assessment is made based on a comparison of previous years, it is seen that these three provinces similarly existed in the list.

Table 8:
Provinces İzmir Receives Immigrants from and Their Listing, 2011-2012 Period

Listing of Provinces that İzmir Receive Immigration from by Number of People, and the Share of İzmir in the Emigration (Top 10 Provinces)					Listing of Provinces that İzmir Receive Immigration from by the Share of Immigration Given Off to İzmir (Top 10 Provinces)			
Ranking	Provinces	Overall Turkey Migration (A)	Emigration to İzmir (B)	Share of İzmir within Emigration (%) (B/A)	Provinces	Overall Turkey Migration (A)	Emigration to İzmir (B)	Share of İzmir within Overall Emigration Given Off by the Province (%) (B/A)
01	İstanbul	354.074	11.179	3,2	Manisa	34.054	8.512	25,0
02	Manisa	34.054	8.512	25,0	Aydın	29.623	5.493	18,5
03	Ankara	137.834	6.474	4,7	Uşak	9.435	1.266	13,4
04	Aydın	29.623	5.493	18,5	Muğla	28.301	3.462	12,2
05	Balıkesir	35.315	4.102	11,6	Balıkesir	35.315	4.102	11,6
06	Muğla	28.301	3.462	12,2	Kütahya	16.702	1.924	11,5
07	Diyarbakır	47.575	3.243	6,8	Mardin	30.299	3.034	10,0
08	Mardin	30.299	3.034	10,0	Denizli	21.992	2.176	9,9
09	Antalya	62.893	3.018	4,8	Afyonkarahisar	21.738	2.116	9,7
10	Bursa	61.520	2.815	4,6	Çanakkale	14.374	1.136	7,9
	Turkey	2.317.814	105.804	-	Turkey	2.317.814	105.804	-

Source: Calculated by use of TurkSTAT, 2012d data.

However, it strikes attention that Van –not included in the list of top ten provinces of immigrants in the previous period- made the list at sixth place and Diyarbakır made the list at ninth place during the 2010-2011 period and, Diyarbakır rose to seventh place during the 2011-2012 period (Table 8). For this assessment to be made in a healthier manner, the share of İzmir within the overall emigration given by the provinces that gave emigration to İzmir was analysed.

At the top of the list of provinces where the share of İzmir within overall emigration is observed to be highest come the neighbouring provinces of Manisa, Aydın and Uşak. Although Uşak is not included within the listing of top ten provinces that give off emigration to İzmir numbers, it is striking that the share of İzmir is significantly high within its overall emigration. In a similar fashion, it is observed that provinces such as Van and Diyarbakır are not included at the top ten in terms of İzmir's share within the overall emigration given off to other provinces. Thus, it is revealed that it is more correct to say these provinces give off emigration to many other provinces rather than saying İzmir receives high amounts of immigration from these provinces.

In the listing of provinces that İzmir gave off emigration during the 2011-2012 period, İstanbul, Manisa and Aydın comes at the top respectively, similar to the listing of

provinces that gave off emigration to İzmir. The province with the highest share of İzmir within the emigration received by the provinces that İzmir also gave off migration is observed to be Manisa with 26%, followed by Aydın with 19% and Uşak with 15%.

Table 9:
Provinces İzmir Gives Emigrants to and Their Listing, 2011-2012 Period

Listing of Provinces that İzmir Give Emigration to by Number of People (Top 10 Provinces)					Listing of Provinces that İzmir Give Emigration to by the Share of Emigration Received from İzmir (Top 10 Provinces)			
Ranking	Provinces	Overall Turkey Migration (A)	Immigration from İzmir (B)	Share of Immigration from İzmir (%) (B/A)	Provinces	Overall Turkey Migration (A)	Immigration from İzmir (B)	Share of İzmir within Received Immigration (%)
01	İstanbul	384.535	13.903	3,6	Manisa	32.211	8.385	26,0
02	Manisa	32.211	8.385	26,0	Aydın	32.412	6.138	18,9
03	Aydın	32.412	6.138	18,9	Uşak	10.351	1.527	14,8
04	Ankara	160.235	5.879	3,7	Afyonkarahisar	24.167	2.829	11,7
05	Muğla	33.213	3.471	10,5	Muğla	33.213	3.471	10,5
06	Balıkesir	34.922	3.439	9,8	Denizli	24.446	2.462	10,1
07	Antalya	83.596	3.149	3,8	Balıkesir	34.922	3.439	9,8
08	Konya	51.981	2.859	5,5	Kütahya	20.550	1.901	9,3
09	Afyonkarahisar	24.167	2.829	11,7	Mardin	21.676	1.962	9,1
10	Van	50.003	2.560	5,1	Çanakkale	23.252	1.467	6,3
Turkey		2.317.814	95.954	-	Turkey	2.317.814	95.954	-

Source: Calculated by use of TurkSTAT, 2012d data.

It is striking that the share of İzmir within the overall emigration received by Mardin –within the top ten provinces- is 9.1%. It is also seen that Van, which was not included in the listing of provinces that İzmir received immigration from in the previous years, included only during 2010-2011 period among the top ten provinces and excluded again in the 2011-2012 period, was included among the top ten provinces to which İzmir gave off emigration.

This situation may be explained through a temporary migration of those living in Van to other big cities after the violent earthquake disaster in year 2011, and their return during the 2011-2012 period (Table 9).

2.a.5. Assessment

Population dynamics such as population sizes, age structures, and distribution and density of population are directly related to problems faced by the development agenda at regional, national and global scales and their solutions. Global developments such as decrease of death rates, increase of life expectancy at birth and aging of population have made the issue of population an important policy topic today as it was in the past. Population-related data of İzmir province reveal some distinct trends. First of all, both population density and population increase rate are observed to be considerable high compared to country general. Compounded by the similar character of the urban population ratio, it is possible to express concerns on significant threats related to urbanisation in the region.



In this framework, there is need for rapid and effective policies in İzmir towards fields such as healthy urbanisation, emergency and disaster management, transportation and environment.

On the other hand, population pyramid analyses reveal that İzmir has a more elderly population compared to Turkey. Projections that take into account different variables such as population increase rate, fertility rates, death rates etc. also estimate that the elderly population will increase throughout Turkey, and naturally in İzmir. Taking special measures related to elderly population, inclusion of elderly people into economic/social life, making them productive, providing them with effective access to health and care services, and taking into account these factors in the making of spatial designs and residential projects are of importance. Analyses based on districts also reveal that old age emerges not in metropolitan districts as previously considered but rather in remote, rural districts. Therefore, it is necessary that the abovementioned policies are developed not only for metropolitan districts but also in the rural districts that accommodate dense elderly populations.

Young population is relatively low compared to other regions. Youth-oriented policies have to particularly aim for İzmir to be made into a centre of attraction. Considering the density of student population in line with the number of universities in the city, it is observed to be important to take measures towards keeping this population within İzmir. Policies to be developed towards increasing the ratio of young population in İzmir should be handled in an effective manner at all fronts, particularly on fields such as education, employment, health, social life and culture.

Net migration and net migration rate data show that İzmir, which came at the top of the provinces that received high immigration throughout the years, faces a great decline in the net migration rate. Although the immigration received by İzmir especially from eastern provinces (such as Mardin, Van, Diyarbakır) seems to be high, it is seen that the share of İzmir within the overall emigration given off by these provinces ranks at lower places. In other words, these provinces may be mentioned to be provinces that give off immigration to all provinces. According to this finding, it would not be incorrect to say that the conclusion of İzmir receiving immigration from eastern provinces of Turkey since long years ago became to change. Furthermore, various findings on migration show that the immigration from eastern provinces almost turned opposite. For instance, the fact of the share of İzmir within the immigration received by Mardin province being considerably high is in support of this conclusion. However, it is obvious that there is further need for more in-depth analyses and long-term observations on this subject. Problems that may be caused due to the immigration from neighbouring provinces and the intra-regional migration from rural districts to metropolitan districts have to be studied. Policies to support social integration over education, health, employment, urbanisation, urban awareness have to be included.

8.6 yıl
average period of study

% 59,6
net schooling ratio
in preschool
education

109.593
Number of students
continuing vocational
education

2.b. EDUCATION

Accessible and high-quality education is without doubt one of the fundamental tools of development. Up-to-date upper scale plans and strategy documents on education define objectives towards improvement of access to education and increase of education quality. In the 9th Development Plan, strengthening the effectiveness, accessibility and equal opportunities aspect of education and handling the issue with an integrated approach on lifelong education have been determined as objectives (SPO, 2006). 2023 Turkey education vision was defined as “employing an education system that rendered itself free from time and space constraints, created its own genuine learning technologies, which develops the creativity and imagination of the individual; allows each individual to develop himself/herself at the utmost level in line with his/her qualities through heeding and assessing individual differences; capable of renewing itself with a flexibility to change and focused on learning and human-orientation” (TÜBİTAK, 2004).

A general overview of the Turkish education system reveals that it bears significant problems such as;

- The interest and demand towards education not being able to be met in time and at the desired level,
- The desired level in education accessibility not being able to be achieved and the quality of services offered at different schools not being at the same level,
- Education planning being made for short term and prone to frequent changes,
- Regional population increases due to migration causing lack of classrooms at certain areas,
- Children and young people at mandatory education age not being able to benefit from education services due to being employed as seasonal travelling or temporary agriculture workers,
- Vocational education-employment balance not being established at desired level,
- Guidance and orientation suited to people's interests and talents not being made at the desired level and lack of steering towards vocational education,
- Education and sector cooperation not being realised at the desired level,
- Insufficient lifelong learning activities (MEB, 2009).

Although there are positive developments in Turkey in regards to participation to education, education expenditures, lifelong learning, adult literacy and education level aspects, it is observed that there are important steps to take when compared to developed countries. Turkey ranks at the 83rd place within the Human Development Index, while ranking only at the 109th place regarding the field of education (TÜSİAD, 2011). As of year 2011, average education time in Turkey is 6.5 years, falling behind world average, Europe-Middle Asia average and developed countries (Table 10).

Table 10:
Average Education Time in Turkey and Some Other Countries

Country	Average Education Time (year)*
Turkey	6,5
Greece	10,1
Italy	10,1
Israel	11,9
USA	12,4
Norway	12,6
Europe-Middle Asia countries	9,7
World	7,4

Source: UNDP, 2011
* Data belongs to year 2011 or the last updated year.

According to another study, the average education time in Turkey reached 7.2 years as of the year 2011, compared to its 2.1 years value in 1960 and 6.1 years value in 2008. In İzmir, the average education time rose from its 2008 value of 6.8 years to 7.9 years as of the year 2011. In this aspect, İzmir region ranks at the second place among NUTS 2 regions following TR51 Ankara Region that employs a value of 8.6 years. As a province, İzmir ranks at the third place following Ankara and Eskişehir (TÜRKONFED, 2012).

Since year 2000, an International Student Performance Assessment Program (PISA) has been implemented by OECD in three-year intervals to assess how much the students obtained at the end of their basic education process the fundamental skills they will require during adulthood. PISA also allows for an evaluation of the qualitative outputs of the education system. When PISA 2009 application results are compared with 2006 application results, it is observed that the scores received by Turkey increased in all tests applied within the context of the program. Also, the country that achieved the highest score increase regarding sciences literacy among OECD countries occurred to be Turkey. On the other hand, the average scores of Turkey are still below OECD

average in all tests. According to PISA 2009 results, Turkey ranks at the 32nd place among 34 OECD countries, only over Chile and Mexico. Among all countries (65 countries), the country ranks at the 43rd place in science and mathematics fields, and at 41st place in reading proficiency. In other words, the place of Turkey among both OECD countries and other countries assessed within the context of PISA could not be improved sufficiently despite the score increases observed. When the PISA results and schooling ratios are assessed together, it is seen that half of the children under 15 years of age in Turkey failed to receive the basic skills required (ERG, 2011).

Schooling ratio and literacy status are among important indicators in regards to accessibility of education. According to MEB and TurkSTATdata, İzmir ranks over Turkey average in terms of literacy and schooling ratios.

Especially in terms of secondary education schooling ratio, İzmir has a higher value than that of Turkey average. An assessment based on gender reveals; although the schooling ratio of women falls behind that of men throughout Turkey, the schooling ratio of women in İzmir is better (in secondary education) than that of men (Table 11).

Table 11:
Schooling Ratios, 2011-2012 Education Year

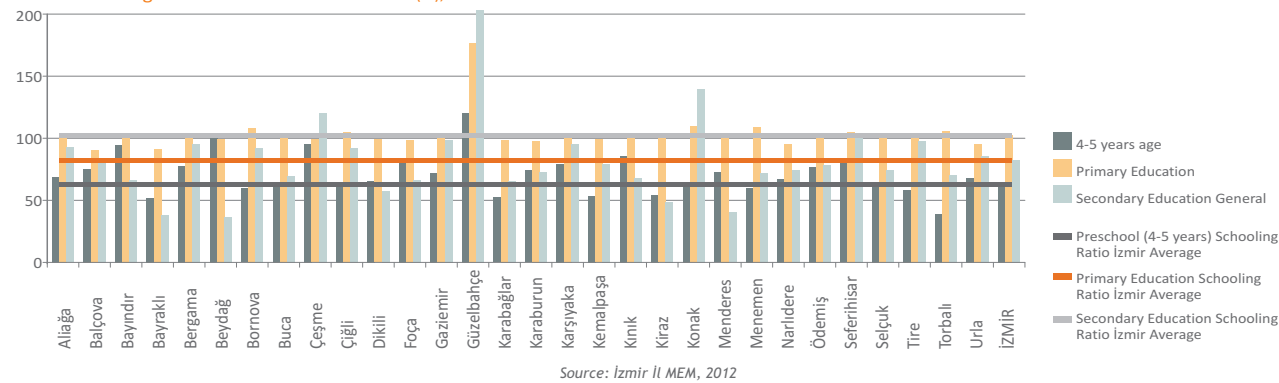
Schooling Ratios (%)	Turkey	Aegean Region	İzmir
Primary Edu. Net Schooling Ratio ⁸	98,67	99,07	99,30
Male	98,77	99,11	99,31
Female	98,56	99,04	99,29
Secondary Edu. Net Schooling Ratio	67,37	73,82	75,52
Male	68,53	73,08	73,64
Female	66,14	74,60	77,51

Source: MEB, 2012

When district-based schooling ratios are examined, it is seen that ratios are close to each other at primary education level, while there are significant differences in regards to preschool and secondary education levels between districts. Districts with the lowest schooling ratios at preschool 4-5 years age group are Torbalı, Bayraklı, Kemalpaşa, Karabağlar and Kiraz. At secondary education level this listing occurs to be as Beydağ, Bayraklı, Menderes and Kiraz (Figure 6).

⁸ Obtained by dividing the number of students at the theoretical age group of the relevant education type to the overall population at the theoretical age group of the relevant education type.

Figure 6:
Gross Schooling Ratios in the Districts of İzmir (%), 2011-2012 Education Year



In terms of education indicators, İzmir may be mentioned to be one of the pioneer and exemplary cities of Turkey. It is the third province with the highest literacy ratio following Antalya and Tekirdağ. Ranking at the 15th place in terms of high school and equivalent school graduates ratio, İzmir takes the third place regarding college-faculty graduates ratio following Ankara and Eskişehir, fourth place regarding post-graduate ratio and sixth place regarding doctorate ratio.

Districts with the highest ratio of illiterate population at 15 years and over age are Kiraz, Bayındır, Selçuk and Torbalı. This value is observed to be at its lowest in Çeşme, Urla and Karşıyaka districts. Districts that have the highest ratio of college and over school graduates are Karşıyaka, Narlıdere and Güzelbahçe, while the districts with the lowest ratio in this regard occur to be Kiraz, Knık and Beydağ. In terms of the education index calculated by the Development Bank by use of adult literacy ratio and

Table 12:
Population Ratios According to Literacy and Last Graduated Education Institution, 2011

Education Status (%)	Turkey	İzmir
Literate Population Ratio 6+ Years	95,13	97,68
Illiterate Population Ratio 15+ Years	5,89	2,67
Male 15+ Years	2,10	1,00
Female 15+ Years	9,70	4,30
Literate, No School Graduation	6,51	5,44
Primary Education Graduate	28,57	30,11
Primary-Secondary Education Graduate	25,67	23,43
High School Graduate	22,14	24,05
Higher Education and Over Graduate	11,22	14,29
College-Faculty Graduate	10,24	13,11
Post-Graduate	0,75	0,87
Doctorate	0,23	0,31

Source: Calculated over TurkSTAT data

combined primary, secondary and high school registration ratios, TR31 İzmir Region ranks at the second place among all NUTS 2 regions of Turkey (İZKA and Development Bank, 2012).

2.b.1. Formal Education

2.b.1.a. Preschool Education

As of the 2011-2012 period, 3,810 schools are located in the Aegean Region and 1,219 schools are located in İzmir province out of the overall number of 28,625 schools providing preschool education services throughout Turkey. 7,040 teachers are employed in the Aegean Region and 2,759 teachers are employed in İzmir province out of the 55,883 teachers providing preschool education services throughout Turkey (Table 13). There are 923 public schools out of the total number of 1,219 schools in İzmir; and the remaining 296 have the status of private preschool education institutions comprising of 229 registered under the Ministry of National Education and 67 registered under the Ministry of Family and Social Policies (ASPB) – General Directorate of Children Services⁹ (MEB, 2012).

Table 13:
Data on Preschool Education Indicators, 2011–2012 Education Year

Indicator	Türkiye	Ege Bölgesi	İzmir
Number of Schools	28.625	3.810	1.219
Number of Students	1.169.556	152.022	65.736
Number of Teachers	55.883	7.040	2.759
Number of Students per School	44	40	54
Number of Students per Teacher	21	22	24
Number of Students per Classroom	30	24	30
Net Schooling Ratio (3-5 years)(%)	30,87		41,75
Net Schooling Ratio (4-5 years)(%)	44,04		59,61
Net Schooling Ratio (5 years)(%)	65,69		85,30

Source: MEB, 2012

As of the 2011-2012 period, the number of students per classroom occurred to be 30 students for İzmir, in line with the Turkey average, while this value was found out to be 24 for Aegean Region.

İzmir was included among the provinces where 100% schooling for 60-72 months age group was promoted by the MEB in the 2011-2012 education year.

The net schooling ratio achieved for 4-5 years age group preschool education during the 2011-2012 education year occurred to be 59.6% for İzmir, and 44% throughout Turkey. 5 years age schooling ratio rose to 85.3% in İzmir and 65.7% in Turkey (Table 13). Compared to the data belonging to the 2008-2009 period, significant advances were made in both İzmir and Turkey in regards to schooling ratio at preschool education. Also, data belonging to İzmir displayed a higher increase rate compared to that of country average. Despite the development İzmir displayed for preschool education and the schooling ratio the province had over that of Turkey averages, more advances should be made considering the 100% schooling ratio objective. In spite of the values İzmir display over that of Turkey average, the schooling ratios of İstanbul and Ankara remain below Turkey average for both 4-5 years and 5 years age groups.

According to the 2011 Turkey National Report submitted to the European Commission, the 4-5 years age schooling ratio was aimed to be increased to 50% as of the year 2013. The values reported in the year 2012 illustrate that this aim was already approached to a large extent. However, it is obvious that Turkey needs further advances in this field when compared to developed countries. According OECD year 2010 data, the country with the lowest preschool education registration ratio at 4 years age group among OECD countries is Turkey. The OECD average regarding this parameter is 83%, while this ratio is over 95% in countries such as Belgium, France and Germany, while Turkey's ratio is under 20%. Considering that the year 2005 value of Turkey was under 10%, an increase over two times can be observed. According to the same report, the ratio of people at 15 years of age who have received preschool education at any age in our country is under 30% (OECD, 2012).

2.b.1.b. Primary Education

With the transition to 12 years mandatory education system¹⁰ in the 2012 – 2013 education period, primary education schools were separated, as much as physical conditions allowed, into primary schools and secondary schools. As of the 2012-2013 period, İzmir housed a total of 783 primary schools consisting of 740 public and 43 private schools, and 454 secondary schools consisting of 450 public and 4 private schools. The number of students in primary school was found out to be 233,839, and the number of students in secondary school was found out to be 192,634 (İzmir İl MEM, 2012). According to İl MEM data of 2012-2013 education period, a total of 17,429 students used mobile education for receiving education from 1,144 settlements or schools to 222 schools.

The number of schools that provide primary education services throughout Turkey within the 2011-2012 education year is 32,108. There are a total of 963 primary education schools in İzmir, consisting of 909 public and 54 private schools. 24,386 teachers serving in these schools provide education to 462,486 primary education students (including 38,231 open primary education students) (Table 14).

The number of students per teacher in primary education was found out to be 17 for Aegean Region and İzmir and 20 throughout Turkey as of the 2011-2012 period. For the same period, the number of students per classroom in primary education occurred to be 30 for Turkey and İzmir (Table 14). Both indicators show a positive change compared to 2008-2009 education year.

Table 14:
Numbers of Schools, Students and Teachers in Primary Education, 2011–2012 Education Year

Indicators	Turkey	Aegean Region	İzmir
Number of Schools	32.108	3.590	963
Number of Students	10.979.301	1.170.563	462.486
Number of Teachers	515.852	65.329	24.386
Number of Students per School	323	305	441
Number of Students per Teacher	20	17	17
Number of Students per Classroom	30	24	30

Source: MEB, 2012

However, considering that the OECD average is 21 and EU-21 average is 19.8 for this field, it is seen that the number of students per classroom parameter is still high compared to abroad examples (OECD, 2012). In terms of net schooling ratio, İzmir (99.3%) is ahead of Aegean Region (98.1%) and Turkey average (98.7%), ranking at the 15th place among all provinces (Table 11).

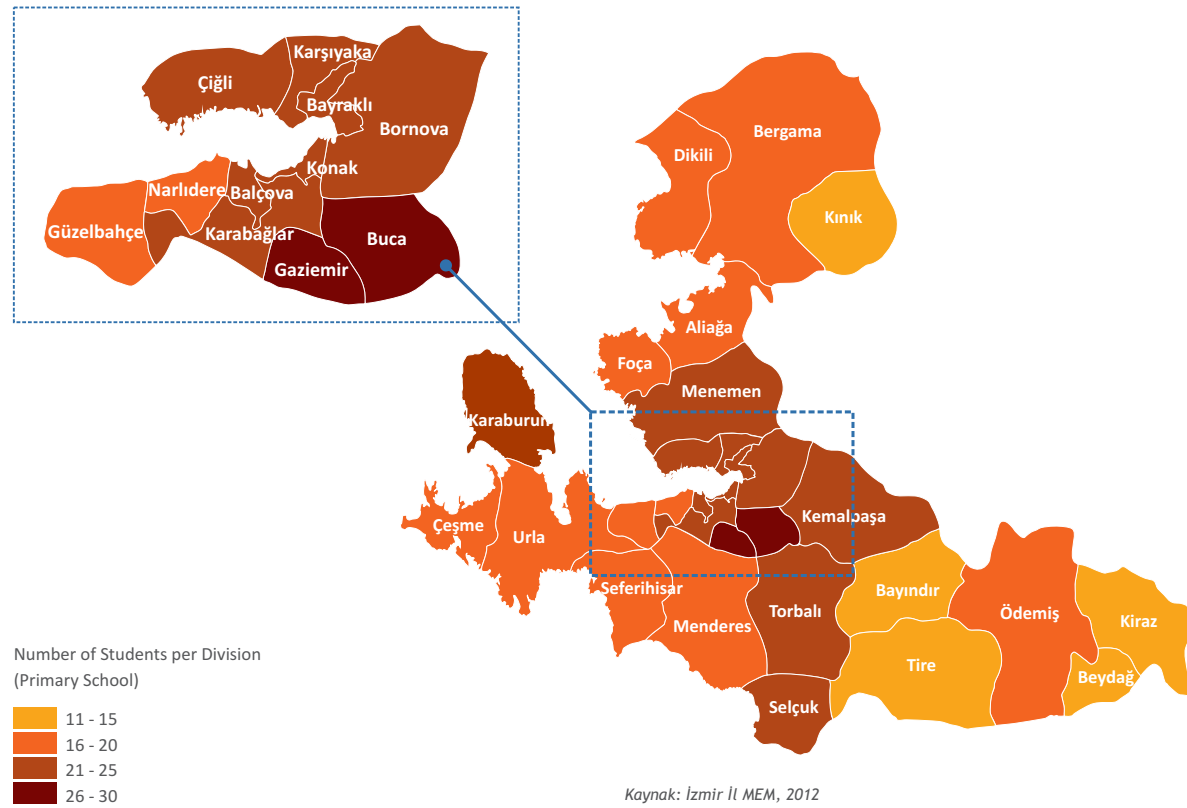
The number of students per classroom found out for İzmir during the 2012-2013 period was 28 for public primary schools and 11 for private primary schools. Similarly in secondary schools, the number of students per classroom is 49 for public secondary schools and 22 for private secondary schools (İzmir İl MEM, 2012). The fact that the number of students per classroom in public primary schools is found out to be slightly more than twice that of private primary schools, and the same value is found out to be twice in public secondary schools compared to private secondary schools display a negative situation in regards to equal opportunities in education. The number of students per classroom in İzmir for the same period occurred to be 22 for primary schools and 26 for secondary schools.

It is observed that the number of students per classroom parameter occurred to be high especially in Buca, Karabağlar, Torbalı, Bayraklı and Gaziemir districts following the transition to 12 years mandatory education system and separation of primary education school buildings into primary and secondary schools during the 2012-2013 period.

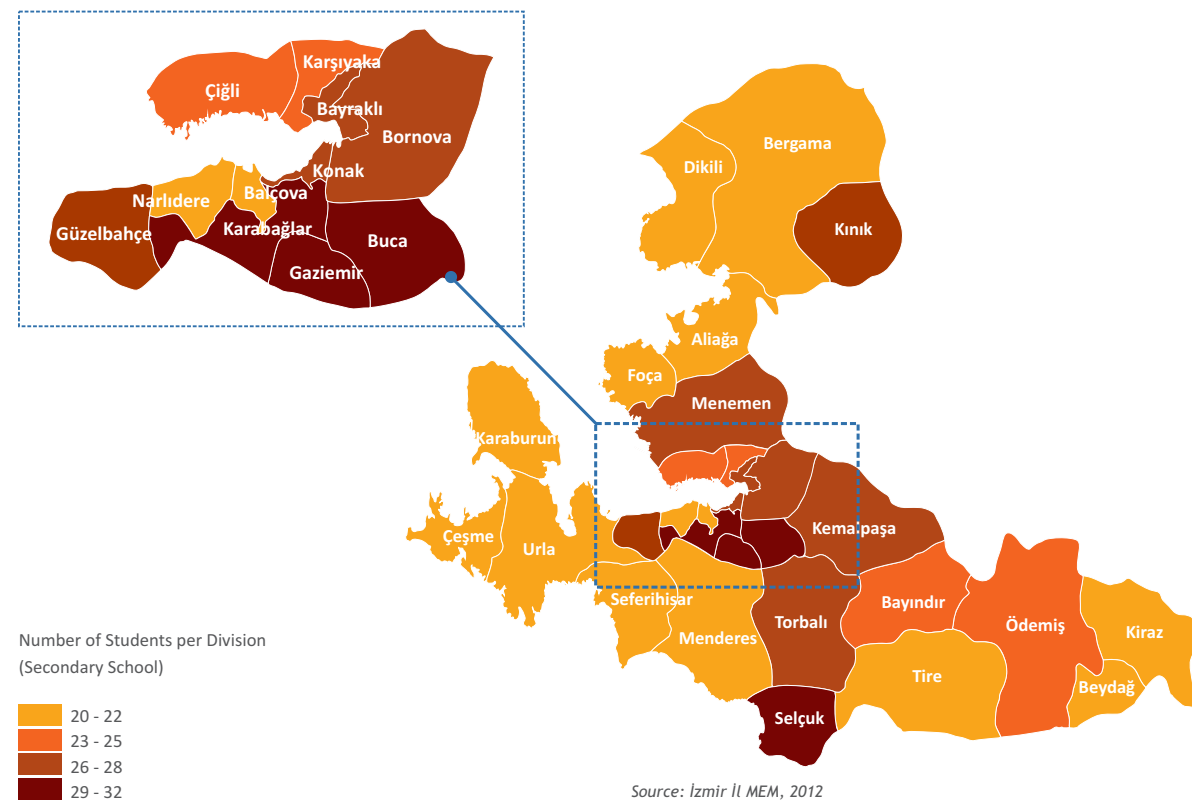
⁹ According to the data of İzmir Provincial Directorate of National Education (İl MEM), 788 public and 36 private kindergarten classrooms provide services under the body of primary schools in İzmir as of the 2012-2013 education year. When 49 public and 226 private kindergarten schools that exclusively provide preschool education services are added to this value, it is observed that a total of 1,099 preschool education institutions in İzmir (İzmir İl MEM, 2012). MEB data were used due to being comparable to Turkey and Aegean Region data.

¹⁰ Within the 2012-2013 education period, 8 years mandatory primary education system was amended to a 12 years (4+4+4) mandatory education system.

Map 1: Number of Students per Branch in Primary Education within the Districts of İzmir, 2012-2013 Education Year



Map 2: Number of Students per Branch in Secondary Education within the Districts of İzmir, 2012-2013 Education Year



On the other hand, rural districts such as Urla, Tire, Bayındır and Kınık are observed to have the lowest number of students per classroom. In addition to the number of students per classroom, the number of students per branch is also an important indicator. When the numbers of students per branch are examined at districts level, significant differences are observed to exist. The highest values for the 2012-2013 period are observed in central districts such as Buca, Gaziemir, Karabağlar, Bayraklı, Bornova and (Map 1).

The number of students per classroom for secondary schools is significantly high in the districts of Bornova, Karabağlar, Menemen, Çiğli, Bayraklı, Konak, Kemalpaşa and Buca districts (İzmir İl MEM, 2012). In terms of the number of students per branch, the districts of Buca, Selçuk, Karabağlar, Gaziemir, Bayraklı, Torbalı and Kemalpaşa districts have values over that of İzmir average (Map 2). Conducting actions towards decreasing these values in the districts where the mentioned indicators are adverse is of importance for increasing the education accessibility quality.

According to year 2010 data, the ratio of people without primary education diploma at 15-19 years age group is 10.3% throughout Turkey, and 4.8% for İzmir.

The ratio of women without diploma is higher compared to men both in İzmir and throughout Turkey (ERG, 2012).

According to İl MEM data, when the SBS-OKS results are examined in terms of provincial success, İzmir is observed to rise from its 24th place in 2008-OKS to 7th place in the year 2011. When this data is considered, it is seen that the success level of İzmir is on the rise.

2.b.1.c. Secondary Education

As of the 2011-2012 period there are a total of 459 secondary schools in İzmir, consisting of 267 vocational and technical secondary schools and 192 general secondary schools. 50 schools out of these are private schools, consisting of 49 general secondary schools and 1 vocational and technical secondary school. The number of students subject to mobile education in İzmir within secondary education system during the 2011-2012 period is 2,374. The number of students per teacher in general purpose high schools during the 2011-2012 period is observed to be 16 throughout Turkey, while 14 for Aegean Region and İzmir.

A partial decrease is observed in this parameter that was observed to be 16 for Turkey, Aegean Region and İzmir during the 2007-2008 period. The number of students per classroom was defined to be 28 throughout Turkey, 24 for Aegean Region and 27 for İzmir (Table 15). It is observed that the number of students per classroom decreased for Turkey, Aegean Region and İzmir compared to the 2005-2006 period. On the other hand, there are 48,188 children at secondary education age (14-17 years age) who are not registered to any secondary education institution in İzmir province within the 2010-2011 education year (ERG, 2012). It is estimated that this value will decline in the coming years due to the transition to 12 years mandatory education.

Table 15:
Numbers of Schools, Students and Teachers in Secondary Education, 2011-2012 Education Year

Total (Including vocational and technical secondary schools)	Turkey	Aegean Region	İzmir
Number of Schools	9.672	1.353	459
Number of Students	4.756.286	556.382	233.576
Number of Teachers	235.814	32.336	12.686
Number of Students per School	395	341	407
Number of Students per Teacher	16	14	15
Number of Students per Classroom	31	28	33
General Purpose Secondary Education (excluding vocational and technical secondary schools)			
Number of Schools	4.171	533	192
Number of Students	2.666.066	283.821	123.983
Number of Teachers	122.716	15.895	6.635
Number of Students per School	476	403	479
Number of Students per Teacher	16	14	14
Number of Students per Classroom	28	24	27

Source: MEB, 2012

The ratio of people with secondary and above education within 25 years and over age group in Turkey (for the year 2010) is 27.1% for women and 46.7% for men. With these ratios that are indicators of gender inequality in education, Turkey falls behind not only worldwide average but also the neighbouring countries such as Iran and Bulgaria. Europe and Middle Asia average for women and men in this regard occurs to be 78% and 83.3% respectively, and world average occurs to be 50.8% and 61.7% respectively (UNDP, 2011). The 12-year mandatory education system that was initiated within the 2012-2013 education period is estimated to increase this ratio in Turkey.

¹¹ OKS (Orta Öğretim Kurumları Sınavı – Secondary Education Institutions Examination): This is the examination realised by the MEB at the end of primary education for the stage of transition into secondary education, put into implementation in the 2004-2005 education year instead of LGS.

SBS (Seviye Belirleme Sınavı – Level Assignment Examination): This is the examination realised by the MEB for students at the 6th, 7th and 8th grade students of primary education, put into implementation in the 2008-2009 education year instead of OKS.

¹² According to İl MEM data, there are a total of 189 general purpose high schools, consisting of 139 public and 50 private schools in İzmir as of the 2012-2013 period, where a total of 89,251 students are served, consisting of 80,856 in public high schools and 8,665 in private high schools. When the sum of those within the general purpose high schools and vocational high schools of the same period are examined, it is seen that a total of 195,486 students are served within 349 schools in İzmir. The number of students being educated in open education system is not included in these findings (İzmir İl MEM, 2012). MEB data were used due to being comparable to Turkey and Aegean Region data.

The number of students per teacher for the entirety of general purpose high schools and vocational and technical high schools within the 2011-2012 education year occurred to be 15 for İzmir and 16 throughout Turkey. The number of students per classroom at the same time period occurred to be 31 throughout Turkey, while İzmir exceeded this with a value of 33 students. The number of students per classroom in general purpose high schools throughout Turkey occurred to be 29 throughout Turkey, 24 for Aegean Region and 27 for İzmir (Table 15). Considering that these values were 33 for Turkey, 28 for Aegean Region and 31 for İzmir during the 2005-2006 education year, an improvement trend attracts attention.

According to İİ MEMdata, the number of students per classroom in general purpose public high schools occurs to be 30, while this same value is observed to be 15 for public high schools. This situation reveals adverse conditions in terms of equal opportunities in education. Although there are differences regarding the number of students per classroom between districts, it is also observed that there are improvements compared to the 2008-2009 period. A district-based study conducted for the 2012-2013 education year reveals that the number of students per classroom exceeded 40 only in Torbalı district, while it varies between 30 and 40 in 9 districts, particularly in Bornova, Bayraklı, Karabağlar and Gazimirdistricts. The districts that have the highest number of students per branch are observed to be Menderes, Aliğa, Güzelbahçe, Bornova, Bayraklı, Çiğli and Karaburun (İzmir İİ MEM, 2012) (Map 3).

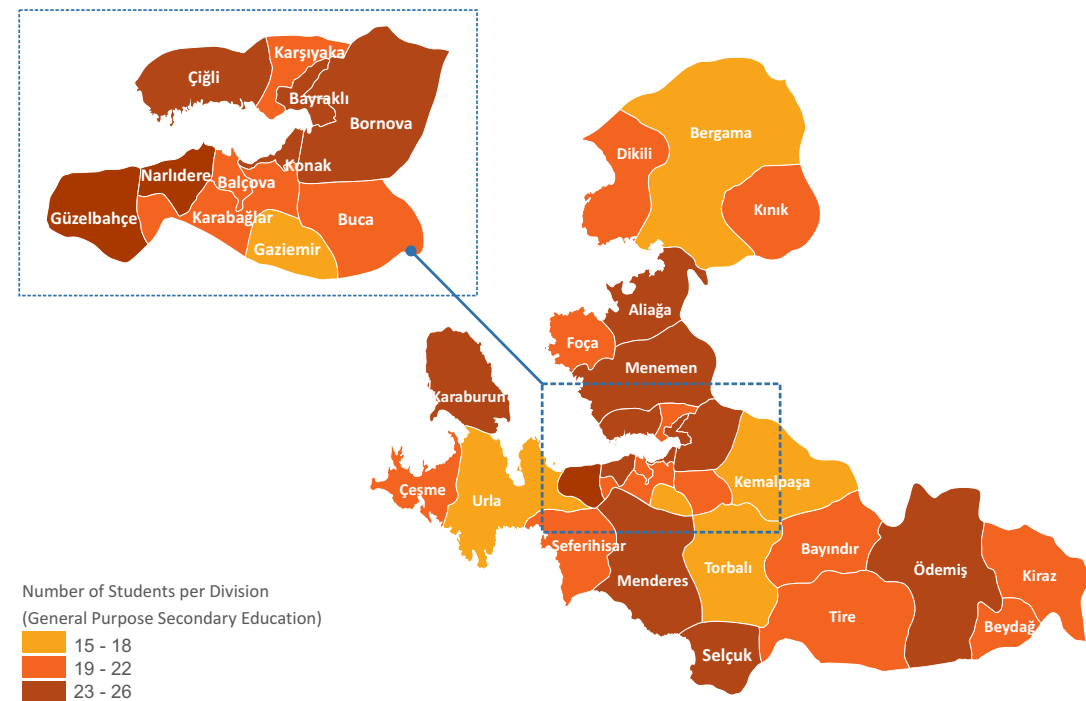
When the entirety of general purpose and vocational high schools are taken into consideration together, it is

observed that the net schooling ratio, which was 68.2% in İzmir during the 2008-2009 education year, rose and occurred to be 75.5% as of the 2011-2012 education year. In this sense, İzmir ranks over Turkey average of 67.4% and at the 29th place among all provinces (Table 11). Within the coext of OECD, Turkey's status is significantly behind. The average ratio of population between 15-19 years age who are within the education system in OECD countries was found out to be 86% as of the year 2010. This value rises over 90% in countries such as Germany, Finland and Czech Republic, while remains under 61% in our country (OECD, 2012).

According to year 2011 data, the ratio of people between 18-24 years of age without secondary education diploma is observed to be 43% for Turkey and 39% for İzmir. The 12-year mandatory education system is estimated to reduce these values in the coming years.

In terms of the percentage of students placed into university at undergraduate level, an improvement is observed in the success level of İzmir. The province ranked at the 23rd, 14th, 10th and 8th places respectively among all provinces regarding success in university exam between years 2008 and 2011. Regarding leaving formal education in general purpose secondary education (dropout) ratios, İİ MEMdata reveal that the last three years did not display much change, and were observed as 0.7% for Anatolian high schools and 4.5% for normal high schools. Main reasons behind dropouts were observed to be unsatisfactory performance and absence (İzmir İİ MEM, 2012).

Map 3: Number of Students per Branch in General Purpose Secondary Education within the Districts of İzmir, 2012-2013 Education Year



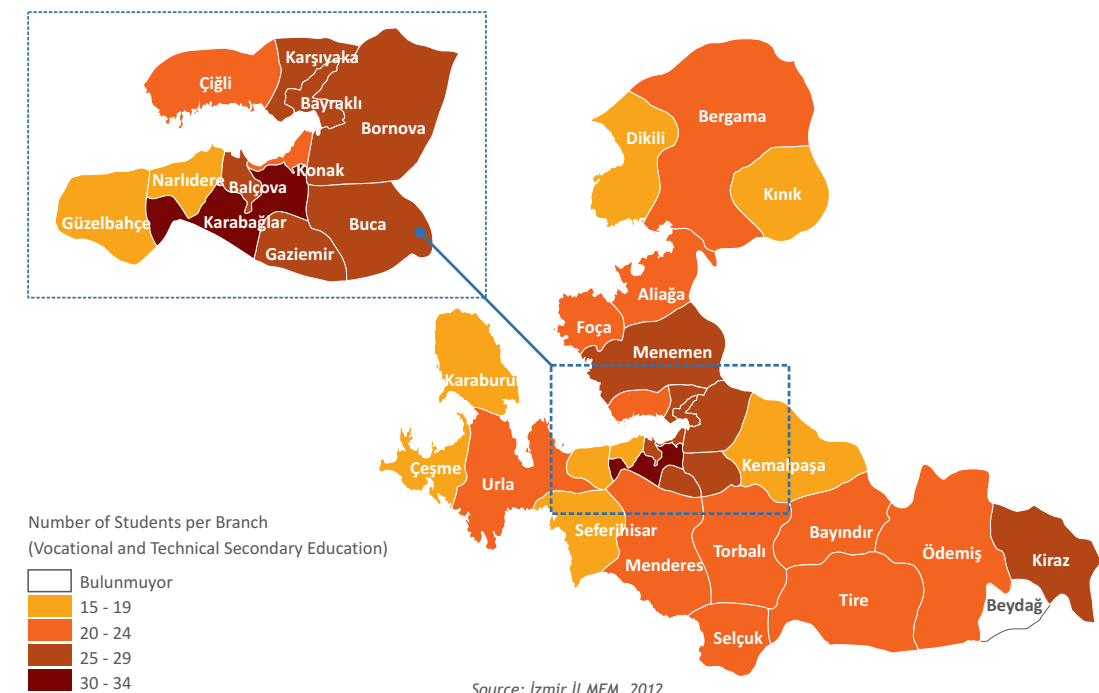
2.b.1.d. Vocational Education

The weight of vocational and technical education within secondary education constantly rises. The ratio of vocational and technical high schools within all of secondary education rose from its 2005-2006 value of 36.3% to 43.9% in the 2011-2012 period, which occurred to change from 37.7% to 46.9% in İzmir within the same period (ERG, 2012).

With the amendment in the coefficient application at university entrance, the interest towards vocational and technical secondary education is estimated to increase further. The increased demand raised the number of students per classroom parameter even more. As of the 2005-2006 education year, number of students per classroom parameter increased for all three regions. The reason behind this increase is the increasing interest towards vocational and technical education, as mentioned above. While the number of students in general purpose high schools increased by 9% in İzmir within the 2011-2012 period compared to 2005-2006 period, the increase regarding the vocational and technical high schools occurred at a significantly higher rate (60%)¹³ (TurkSTAT, 2011a).

Measures should be taken in order to prevent the education and learning processes from being affected adversely by this situation.

Map 4: Number of Students per Branch in Vocational and Technical Secondary Education within the Districts of İzmir, 2012-2013 Education Year



The priority of vocational and technical education should rather be towards ensuring the employment of people who received vocational and technical education in the workforce market rather than merely increasing the number of students in these institutions. Vocational and technical education not being able to produce graduates at the qualification required for satisfying the demand of workforce market comes up as a significant problem especially for enterprises that use new production technologies and require qualified personnel in that regard (Köseleci, 2012).

According to the 2011-2012 period data, there are a total of 267 vocational and technical high schools that consist of 266 public and 1 private schools in İzmir, which serve 109,593 students with 6,051 teachers. As of the same period, the number of students per classroom occurred to be 35 throughout Turkey, 34 for Aegean Region and 41 for İzmir (Table 16).

Table 16:
Information on Vocational and Technical Secondary Education, 2011-2012

Indicators	Turkey	Aegean Region	İzmir
Number of Schools	5.501	820	267
Number of Students	2.090.220	272.561	109.593
Number of Teachers	113.098	16.441	6.051
Number of Students per School	333	301	356
Number of Students per Teacher	16	15	16
Number of Students per Classroom	35	34	41

Source: MEB, 2012

¹³ Calculated over the data from Turkish Statistics Institute's İzmir by Select Indicators 2011 study.

¹⁴ According to İİ MEM data, there are a total of 160 vocational and technical high schools in İzmir, (4 of them private schools and 38 of them religious education) serving 91,199 students as of the 2012-2013 education year. The number of students studying in open vocational and technical secondary education system is not included in this result. The reason behind the difference in the number of schools is that departments that provide different diplomas within vocational and technical high school system being considered different schools by MEB. (İzmir İİ MEM, 2012). MEB data were used due to being comparable to Turkey and Aegean Region data.

The number of students per classroom in İzmir as of the 2012-2013 education year occurred to be 40 for public high schools and 17 for private schools. From a district based perspective, Bornova, Buca, Torbalı and Ödemiş strikes attention as the districts with the highest number of students per classroom. Karabağlar, Karşıyaka, Menemen, Bayraklı, Balçova, Buca and Gaziemir come up as the districts with the highest number of students per branch (İzmir İl MEM, 2012) (Map 4).

Formal education dropout ratios in vocational and technical secondary education did not display much change in the last three years. This ratio occurred to be 1.7% in Anatolian vocational and technical high schools and 8% in other vocational and technical high schools within the 2011-2012 period. Dropout ratios observed in vocational and technical education are approximately twice that of general purpose high schools (4.5%). As is the case with general purpose secondary education, unsatisfactory performance and absence are the main reasons behind dropouts in vocational and technical secondary education (İzmir İl MEM, 2012). Actions towards realisation of a detailed study of school dropouts, follow up of these students and reduction of dropouts should be carried out.

Lack of cultural lessons in curriculum, inconsistency between vocational lessons' contents and market demands, insufficient internships are the main problems mentioned in vocational and technical high schools of Turkey (ERG, 2012).

In İzmir, there are certain lacking aspects in regards to vocational education, especially regarding on-the-job practice experiences, and problems emerge in some work branches (manufacture of clothing, metal processing and machinery sectors) towards providing qualified workforce (İZKA and the Development Bank, 2012). Significant match-up problems were determined to exist within the context of İzmir Workforce Market Study in terms of vacant and unfilled positions regarding work branches such as machinery operators and assemblers, other craftsmen and employees in relevant works along with craftsmen to be employed in metal processing and machinery related works. Companies experience problems in finding personnel with professional skills and unfilled positions remain vacant due to lack of professional/vocational information and skills. Also within the context of this study, the interest of vocational high school graduates towards their own fields was found to be low.

Table 17:
Basic Information on the Universities of İzmir, 2011-2012 Education Year

Name of University	Year of Foundation	Number of Faculties *	Colleges *	Number of Students	Graduates
Ege University	1955	12	13	48.215	6.002
Dokuz Eylül University	1982	13	11	47.808	6.676
İYTE	1992	3	1	2.248	256
Ekonomi University	2001	6	3	6.215	842
Yaşar University	2001	7	2	4.505	540
Gediz University	2007	4	1	2.459	-
İzmir University	2008	6	2	2.269	78
İzmir Katip Çelebi University	2010	12	2	210	-
Şifa University	2011	3	0	246	-
Total		66	35	114.175	14.394

Source: ÖSYM, 2012; Internet Sites of Universities
*Year 2013 data

It strikes attention that only 11% of unemployed people willing to be employed in craftsmanship-related works and only 7.5% of unemployed people willing to be employed in facility and machinery operation and assembly works are graduates from vocational and technical high schools. The ratio of vocational and high school graduates willing to work in office and customer services, professional and semi-professional positions is higher than that of those willing to work in their own fields (İEÜ, 2011). This situation reveals the fact that guidance services for school selection process should be improved.

It is necessary to universalise vocational education that already has a significantly wide distribution in in line with the local demands of the economy in İzmir, along with providing further professional development of teachers and establishing school-industry cooperation.

Bilateral cooperation has to be established between vocational high schools and industry. Fields that the workforce market of İzmir has/will have demand for have to be determined and establishing new programmes in such fields at the universities has to be planned. An effective field and vision study has to be planned towards determining these programmes (İZKA, EBİLTEM and TurkSTAT, 2012).

2.b.1.e. Higher Education

As of the year 2010, 44% of the young population of 20-24 years age group was included in the education system within OECD countries, while the same ratio occurred to be 25% in Turkey. This ratio is over 60% in Luxemburgand Slovenia (OECD, 2012).

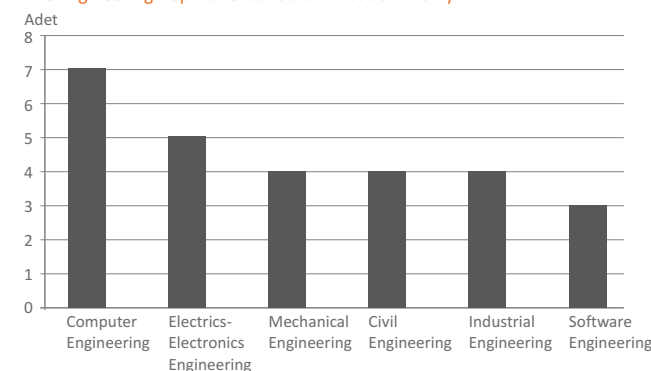
There are approximately 20,000 universities in the world. Turkey houses a total of 174 universities as of the year 2013, consisting of 107 public universities, 66 foundation universities and 7 foundation vocational colleges. Together with the 41 universities that were founded between years 2006 and 2008, there have been at least one university in every province of Turkey since 2008.

There are a total of nine universities in İzmir as of the year 2012, consisting of four public universities and five foundationuniversities. İzmir Katip Çelebi University (İKÇÜ) was founded in 2010 as the fourth public university of İzmir. Şifa University (ŞÜ) is a foundation university founded in 2011 for healthcare field. There are a total of 66 faculties and 35 colleges (18 vocational colleges) in the universities of İzmir (Table 17). Ege University (EÜ) and Dokuz Eylül University (DEÜ) are rich in the number of faculties due to being the oldest universities. Also the Faculty of Air Transportation and Aviation Vocational College in Selçuk were founded by the University of Turkish Aeronautical Association in Ankara.

Despite the high number of faculties, İzmir universities generally show similarity with each other in terms of faculty types. There are the same types of engineering faculties, economic and administrative sciences faculties, education and science faculties in the universities. An examination of the engineering departments show that the province has seven computer, five electrics-electronics, four mechanical, four civil, four industrial and three software engineering departments within 20 different engineering departments (Figure 7).

Also, one of the only two leather engineering departments in Turkey has been located in İzmir and bioengineering

Figure 7:
The Engineering Departments Found Most Commonly in İzmir



Source: İZKA and EBİLTEM, 2012

Table 18:
Number of University Lecturers and Students, 2011-2012

Indicators	Türkiye	Aegean Region	İzmir	Ankara	İstanbul
Associate and Undergraduate					
New Registration	813.580	86.588	27.597	44.245	87.001
Students	4.112.687	312.389	116.326	188.673	332.975
Graduates (2010-2011)	496.794	54.677	15.512	29.793	48.378
Lecturers					
Professor	16.783	2.160	1.550	4.060	4.141
Associate Professor	9.257	1.294	697	1.763	1.667
Assistant Professor	24.759	3.163	1.450	2.648	4.776
Other	68.040	8.656	4.767	11.163	12.244
Total	118.839	15.273	8.464	19.634	22.858

Kaynak: TÜİK verilerinden hesaplanmıştır.

department has been established in İzmir for the first time ever in Turkey.

İzmir houses 7% of the lecturers, 5% of the universities and 3% of the university students throughout Turkey. (Table 18). It is observed that the number of students and number of lecturers in Ankara and İstanbul are higher than those of İzmir.

Eight rating systems have been formed by METU Institute of Informatics URAP (University Ranking by Academic Performance) Laboratory that ranks the universities of the world based on different criteria. Ten universities in Turkey made it within the top 500 universities according to at least one of these systems. EÜ in İzmir is one of these ten universities. On the other hand, DEÜ in İzmir is one of the 16 universities of Turkey that made it within the top 1000 universities. According to the rating system established by URAP based on the criteria such as total number of articles, number of articles per academician, total number of references and number of references per academician, total number of doctorate students and number and ratio of doctorate students per academician, EÜ ranked at the fourth place, İzmir Institute of Technology (İYTE) ranked at the ninth place and DEÜ ranked at the nineteenth place among public universities. Among foundation universities; İzmir University of Economics (İEÜ) ranked at the 11th, Yaşar University (YÜ) ranked at the 21 stand İzmir University (İÜ) ranked at the 26th place (URAP, 2013).

İzmir is the city that has the aspect of centre of attraction for higher education investments and the highest potential to become a city of universities throughout Turkey with its nine universities. Students, academicians, their families and close social spheres constitute a significant portion of the city's population. Presence of a high sensitivity towards culture and arts due to the large educated population in İzmir support this attraction and identity of the city. One of the most important services rendered for higher education students in İzmir is dormitories.

According to the data belonging to end of year 2011, a total of 9,838 students are accommodated in 8 dormitories

registered under Higher Education Loans and Dormitories Agency. Their occupancy ratios are about 91% (MEB, 2012).

New dormitory opportunities should be provided, also taking into consideration the students studying with scholarships in foundation universities.

On the other hand, there are a total of 9,612 students accommodated in 188 dormitories with 18,952 people capacity in terms of private higher education dormitories, which have an occupancy ratio of 51% (İzmir İl MEM, 2012).

2.b.2. Informal Education

Informal education¹⁵, covers the entirety of educational activities organised besides or outside of formal education. Informal education that encompasses a wide range of variability such as teaching reading and writing to illiterate adults, providing them with basic knowledge, developing previously obtained information and skills, increasing employability and strengthening individuals' social inclusion is a field that constantly gains importance in today's education policies.

A total of 13,615 courses were organised by the İl MEM within the context of informal education, from which a total of 255,753 people benefitted. It may be mentioned that attendance to informal education is significantly high in İzmir (Table 19). Continuation of this trend, which is especially of importance to disadvantaged groups, has to be ensured.

Table 19:
Basic Information on Informal Education in İzmir (2011-2012)

Type of Course	Number of Courses Held	Number of Trainees Attended
Vocational Technical Courses	3.613	63.644
Social Cultural Courses	7.132	141.298
Reading-Writing Courses	2.870	50.811
Total	13.615	255.753

Source:İzmir İl MEM, 2012

Vocational and technical skill acquisition takes place at the core of combatting poverty, economic growth, employment and social inclusion policies and is seen as the key aspect of lifelong learning strategies. During the 2011-2012 period, a total of 3,613 vocational and technical courses were held at 19 branches and 186 different fields in İzmir province, and 63,644 people attended these courses as trainees (İzmir İl MEM, 2012). A significant increase was noted in the number of courses compared to 2008-2009 period, while a partial decline was observed in the number of trainees.

In terms of social and cultural field, a total of 7,132 courses were held by İl MEM in İzmir within the 2011-2012 period at 362 different branches and 34 fields, and 141,298 people attended these courses as trainees. The number of courses increased by approximately twice compared to the 2008-2009 period, while the number of trainees attended to the courses increased by approximately 1.5 times.

¹⁵ The concept of informal education, also known as lifelong learning, encompasses different stages of formal education, courses, private lessons and seminars held by organisations such as businesses, non-governmental organisations, labour unions and chambers, along with non-structured learning activities within the context of daily activities.

The ratio of 14 years and above aged illiterate population within İzmir (2.67%) is under the Turkey average (5.89%) as of the year 2011 (Table 12).

The number of women within illiterate people is almost 4 times that of men. A total of 50,811 people benefitted from 13,165 reading-writing courses that were held during 2011-2012 period, of which 47,412 received literacy certificate. Considering that only 639 reading-writing courses were held with 7,688 graduates during the 2006-2007 period, it is obvious that a significant advance has been made in this field.

Within the context of special education, a total of 1,432 mentally and physically handicapped students were provided with educational services at nursery class, kindergarten and elementary education levels; comprising of 1,102 students in 22 state schools and 430 students in 23 private schools during 2011-2012 semester in İzmir. 1,139 students benefitted from educational services in special sub-classes at elementary education level, and 15,484 students benefitted from educational services in 119 special care and rehabilitation centres. There are also two Science and Arts Centre providing services to gifted or specially-talented students in İzmir, where a total of 721 students benefitted from educational services in year 2012 (İzmir İl MEM, 2012). These services that are very beneficial especially for disadvantaged groups should be increased and their qualities should be improved. In this context, the cooperation between İl MEM and universities should be developed.

2.b.3. Assessment

The province of İzmir has a higher grade than Turkey average in almost all of the education indicators. Advances were made compared to previous years in terms of schooling ratios, and number of students per teacher and per classroom. However, there are significant steps to be taken according to international comparisons. The fact that the number of students per classroom is increasing in vocational education, which has a declining trend in all other education types in contrast to this, is quite an important problem. In addition, significantly high students per classroom values are observed at district basis especially in secondary schools and vocational and technical high schools.



Actions towards opening more schools and classrooms in these districts are thus of significance.

Free or low cost education opportunities have to be provided to improve the access of low income families especially to preschool education. There are important differences also between districts in terms of preschool education schooling ratios. Actions should be taken towards development of physical capacity and raising awareness on the early childhood education. Society based preschool education services and actions should be supported and the qualification of teachers and other personnel should be increased.

Vocational and technical education in Turkey is aimed to have the quality required for contributing to the individuals to achieve their potentials, qualified employee demands of all sectors to be satisfied and the country's competitiveness to be increased. It is necessary to renew education programmes, improve education spaces, strengthen school-business collaborations and increase the efficiency and effectiveness of internship processes in order to achieve this objective. Development of the programmes and applications of vocational and technical education with a cooperation approach that provides coordination with the demands of businesses in the relevant sector will gain more and more importance in the coming period. In this context, school-business collaborations should be established and developed. Actions of private sector and industry-related organisations towards satisfying qualified workforce demand and opening new vocational high schools and technical high schools focused on certain sectors or fields should be supported. It is also of great importance to make workshops suitable to up-to-date technology, arrange the curriculum of vocational lessons in line with the market demands, and improve the time and quality of internship implementations in terms of increasing the educational quality of vocational high schools and technical high schools.

Bilateral cooperation should be formed between vocational high schools and industry in İzmir. Fields that the workforce market of İzmir has/will have vacant demands should be determined and opening new programmes in the universities on such fields should be planned.

It is necessary to realise diversification of the faculties and departments of the universities of İzmir, opening new generation departments and ensuring specialisation. These steps will play certain roles in creating the innovation future of İzmir, and be directly effective in cultivating human resource and realising sectoral development. The new-generation departments to be opened will not only accelerate the information production in different fields but also encourage industries producing high value added products to develop in İzmir and new investments to arrive in İzmir in these fields.

Merely establishing new departments at universities will not be sufficient by itself for increasing the innovation capacity of İzmir and bringing İzmir to a leading position in this regard. At the same time, research project-based cooperation between both existing and new departments should be created. This cooperation should be in the form of education, learning and certificate programmes at student level and in the form of joint research projects. Innovative methods should be developed in education and already developed innovative methods should be implemented.

Although significant advances were made in terms of number of courses, diversity of fields and number of participants, informal education activities should be further increased and maintained. Special education services organised for handicapped groups should be universalised and their quality should be improved.

3.255.689

The number of people visited İzmir museums in 2012

% 66

The share of multi-purpose halls among theatre halls

546

The total number of all sites

2.c. CULTURE

All Tangible and Intangible values that belong to a society that were carried down through generations to reach us today such as traditions, customs, beliefs, knowledge, ethics, folk music, holidays, celebrations, folk dance, folk sports, theatre plays, children's games, architecture, literature and paintings are included in the concept of culture.¹⁶

The cultural richness İzmir bears is possible to reflect in the city's prosperity level and living quality as development with the use of effective policy measures. In this context, the information on the region's cultural infrastructure and culture economy have been analysed under this section, in a comparative manner when required.

2.c.1. Historical Culture Heritage

Examples of the historical culture heritage that exist in İzmir vary among districts in quality and quantity. Especially in the central district of Konak, there are significant amounts of administrative, commercial and religious structures here due to this region having been the administrative and commercial centre during the Late Ottoman Era. In spite of the great damage caused by the 1922 fire disaster, still there are significant late era houses in this region. Furthermore, the railroads and maritime lines that had begun developing especially towards the end of the 19th century gave suburbs such as Bornova, Buca and Karşıyaka ample opportunities to enable Levantines, who wished to leave the crowds inside the city centre but did not want to abandon their trade relations, build mansions with wide gardens. Therefore, these districts house late era Levantine houses and some religious structures belonging to them. The late era Ottoman texture that fade as one gets away from the centre emerge again the Ödemiş, Birgi, Tire region in significant amounts. The main reason behind this is that these areas had been considerably developed centres that left İzmir in their shadow back in the early Ottoman Era.

¹⁶ Culture is defined as the manner of living and thinking that continues by changing through the past, keeping each society distinct from others, and constitutes genuine arts, beliefs, traditions and customs, understandings and actions along with its identity.

2.c.2. Archaeological Culture Heritage

Although İzmir and its surrounding area house ruins from every historical age, it accommodated significant quality and quantity of settlements especially in the Antique Age. The reason behind this should have been the natural conditions of the region, which Herodotus defined as "the place under the most beautiful sky with the most beautiful climate that we have known of on this earth". Contemporary İzmir province covers a significant portion of the region known as Ionia in the Antique Age. So much so that, 7 out of the total 12 Ionian cities remains within the provincial borders of İzmir today.¹⁷ In addition to that, 11 out of 12 cities of the Aiol Union located at the north of Ionia fall again within the provincial borders of İzmir (Table 20).

Table 20:

Ancient Cities and Ruins in İzmir and Its Surrounding Region

District	Ancient City and Ruin Site
Bayraklı	Smyrna (Tepekule)
Bergama	Pergamon Ancient City; Asklepion, Akropol, Kızıl Avlu north of Bergama city
Dikili	Çandarlı Castle and vicinity; Pitane (Çandarlı)
Çeşme	Çeşme City Centre; Alaçatı City Centre; Erytra (İldırı)
Selçuk	Ephesus Ancient City; Isa Bey Mosque, St. Jean Church, Ayasuluk hill, Meryemana House, Şirince Village
Aliağa	Gryneian; Kyme (Nemrut); Myrina; Gryneia; Aigaia (Hacıömerli Village)
Bornova	Yeşilova Barrow, Tepebağ Barrow (Pınarbaşı)
Foça	Phokaia, Foça City Centre, Yeni Foça City Centre
Konak	Agora; Kadifekale (Pagos), Namazgah, Tilki Site
Kemalpaşa	Ulucak Barrow; Nemrut Barrow; Yenmiş Barrow; Hittite Relief (Karabel Monument); Nymphaion; Aigiroessa (Kavaklıdere Village)
Menderes	Klaros (Ahmetbeyli) Kolophon (Değirmendere) Notion (Ahmetbeyli) Baklatepe
Menemen	Larissa (Buruncuk Village) Panaztepe (Kesik Village) Temnos- Neotikhos – Nionithon; Myrina
Seferihisar	Teos (Sığacık); Airai; Lebedos(Ürkmez) Karaköse Ruins (Doğanbey Village)
Torbalı	Metropolis Ancient City
Urla	City Centre Klazomenai; Limantepe Barrow

Source: İZKA and DEÜ, 2012

2.c.3. Intangible Culture Heritage

Intangible Culture Heritage is defined by UNESCO as applications, stage plays, expressions, knowledge, skills and tools and cultural spaces related to such that are defined by societies, groups and in some instances individuals as part of their cultural heritage.

This heritage that is carried down through generations is constantly recreated depending on these societies' and groups' interactions with their surroundings, nature and histories and this gives them a sense of identity and continuity; thus, it makes contribution to the respect felt towards cultural diversity and human creativity.

In the 32nd General Conference held in Paris on the 17th of October 2003, UNESCO accepted the Convention for the Safeguarding of the Intangible Cultural Heritage. Turkey was included into this process with the Law on the Approval of the Convention for the Safeguarding of the Intangible Cultural Heritage with date 19th of January 2006 and no. 5448 and became an official signatory as of the 27th of March 2006. General Directorate of Research and Education carries on its executing unit duties according to Article 13 of the Law no. 4848 on Organisation and Duties issued by the Ministry of Culture and Tourism.

Representative List of Humanity's Intangible Cultural Heritage

For the purposes of increasing the visibility of intangible cultural heritage, raising awareness on its importance, and support dialogue with respectful approach to cultural diversity, a representative list of humanity's intangible heritage is prepared, updated and published. Intangible cultural heritage inventory studies are conducted under the coordination of the relevant Provincial Directorate of Culture and Tourism in provinces. There are two types of inventory studies in Turkey.

Living Human Treasures National Inventory Living Human Treasures defines people that possess abundance of information and skills required for recreating and reinterpreting certain aspects of Intangible Cultural Heritage.

Living Human Treasures are defined as per the following parameters

- Having been carrying on his master craftsmanship works for at least 10 years,
- Having learned his art via master-apprentice relation,
- Superiority of implementing his information and skills,

¹⁷ These cities are Ephesus, Colophon, Lebedos, Teos, Klazomenai, Phocaea and Erythrai.

- Bearing rare knowledge in his field,
- Being committed to the art performed by individual or group,
- Individual's or group's ability to develop existing information and skills (the art includes innovations necessary for being recognised with the public),
- Individual's or group's ability to transfer information and skills to apprentice (having trained at least one apprentice).

In the Living Human Treasures List with code no. 02.00020, Evil Eye Talisman Master Mahmut SÜR from İzmir is also listed.

Intangible Cultural Heritage National Inventory

The following parameters are taken into account for preparation of the Intangible Cultural Heritage National Inventory:

- Its value as an evidence of human creativity,
- Its roots within cultural and social traditions,
- Its ability to represent defined society or group,
- Its risk of extinction.

Fields that include İzmir and their inventory codes in the Intangible Cultural Heritage National Inventory are as follows:

Minstrel Tradition (01.0003),
Nevruz Natı (01.0005),
Traditional Communion Meetings (01.0006),
Spring Holiday (Hidrellez/ St. George Day (01.0012),
Evil Eye Talisman Tradition (01.0014),
Musical Instrument Making (01.0028),
Charity Tradition (01.0037),
Felt Making Craft (01.0041),
Embroidery Art (01.0051),
Basket Weaving Craft (01.0052),
Zeibek Tradition (01.0060).

Intangible Cultural Heritage National Inventory (İzmir) Designation Studies

In representatives from academic organisations, local result of the studies of a commission comprised of

administrations and non-governmental organisations under the coordination of İzmir Provincial Directorate of Culture and Tourism, a province based list was prepared on certain fields. Bergama Charity Sale, Dowry and Dowry Arrangement, Circumcision Bed, Karatabakçılık, Basket Weaving, Telkırma Embroidery, ClarinetPerforming,Dough Dessert, Karambol Game, Yanar Night, Armola Tradition and Beyler Village Hidrellez Feasts, Goat Shearing Ceremonies, Camel Wrestling, Mahya (Köy Hayrı, Dede Hayrı, Ağa Hayrı), Young Man Rooms, İzmir Minstrels and Minstrel Tradition, Gourd Fiddle Making, Hidrellez Tradition, Beledi Weaving, Point Lace, Felt Making, Goat Shearing Ceremonies, Evil Eye Talisman Tradition, Sultan Nevruz and Zeibek Tradition were registered under this list.

2.c.4. Cultural Infrastructure

2.c.4.a. Museums and Open Archaeological Sites

İzmir houses various museums belonging to the Ministry of Culture and Tourism, State Railroads, Ministry of National Education, municipalities, organisations and individuals. As of the year 2012, there are 38 active museums in İzmir.¹⁸ 37% of the museums function under public institutions, while 63% comprises of private museums (Table 21).

Table 21:
Distribution of Museums in İzmir, 2011

Museums	Number of Museums	Percentage
Museums under the Ministry of Culture and Tourism ¹⁹	10	26
Museums under Other Public Institutions	4	11
Private Museum	24	63
Total	38	100

Source:İzmir Provincial Directorate of Culture and Tourism, 2012

In addition to the museums, there are 19 open air museums/archaeological sites still under excavation. Revealed though excavations that have continued since 1932, Agora Excavation and Archaeological Site, Ephesus, Metropolis, Smyrna, St. Jean Church and Ayasuluk Hill, Teos, Urla Limantepe, Yeşilova Barrow, Bağlararası and Clazomenae constitute main open air museums of the province.

The museums located in İzmir have been inspected as per their opportunities and problems within the context of “İzmir Culture Economy Inventory and Development Strategy”study. According to this, it was observed that visitors could not be served through a modern museum

operation approach that should provide also various recreation opportunities, heat, moisture and light etc. aspects' control should be developed for better preservation of cultural assets, special themed museums are insufficient in numbers, and an inspection process is not implemented in the majority of these museums. Museums function generally not in specifically planned and designed spaces but areas obtained through certain arrangements done to existing historical structures. This situation leads to the result of failure to meet some certain spatial requirements.

İzmir accommodates 11% of museum visitors throughout Turkey. In terms of museum incomes, the ratio occurs to be 17%. The number of museum visitors in Ankara corresponds to 2% of the visitors throughout Turkey, while İstanbul accommodates 29% of all museum visitors. Shares of these two cities in terms of museum visitor incomes occur to be respectively 1% and 45%. Considering the number of visitors and incomes, İzmir ranks over Ankara but under İstanbul (Table 22). The number of museum visitors occurred to be 3,244,689 and total obtained income occurred to be 13,833,133 TL in İzmir as of the year 2012.

Table 22:
Information on the Museums Functioning Under the Ministry of Culture and Tourism, 2012

Province	Total Visitors	Income (TL)
İzmir ²⁰	3.255.689	13.833.133
Ankara	663.373	2.873.165
İstanbul	8.152.662	114.306.065
Türkiye	28.781.308	252.616.445

Source: TurkSTAT, 2012e

There are a total of 127,792 articles, comprising of 40,658 archaeological materials, 4,603 ethnographic works of art, 82,199 coins and other materials, under protection in the museums of the Ministry of Culture and Tourism in İzmir as of the year 2007. Inventory of total of 203,091articles, comprising of 60,885 archaeological materials, 9,633 ethnographic works of art, 132,119 coins and other materials was performed in the abovementioned museums in the year 2011. There are a further 181,140 articles, comprising of 54,310 archaeological materials, 5,508 ethnographic works of art, 121,322 coins and other materials in storage. Although the number of articles exhibited in the museums is improving, it is striking that there are still an abundance of cultural articles kept in storage..

2.c.4.b. Libraries

Libraries have an important role regarding the cities' cultural infrastructure as places where books and non-book materials are sorted, archived and presented to the user according to a certain system.

In recent years, libraries function not only as places to access books and printed media but also for presenting an opportunity to conduct study and research and realise certain cultural and educational activities in the prominent European cities.

İzmir houses a minimum of 1 library per each of the 30 districts, with the presence of National Library, provincial public libraries, university libraries, municipality libraries and libraries and bookstores of other institutions and organisations. İzmir houses a total of 1,294 libraries, comprising of 38 public libraries and a majority of formal and informal education libraries (Table 23).

Table 23:
Distribution of Libraries in İzmir, 2011

Type of Library	Number of Libraries
National Library	1
Public Library	38
Metropolitan Municipality Library	5
District Municipality Library	14
University Library	10
Formal and Informal Education Library	1.222
Other	4
Total	1.294

Source:TurkSTAT, 2012f

The number of public libraries is 42 in İstanbul and 36 in Ankara. The number of beneficiaries per book occurs to be 89 for İzmir, 61 for İstanbul and 30 for Ankara. Although İzmir has a lower total number of beneficiaries, the ratio of benefitting from libraries is relatively high in İzmir compared to Ankara and İstanbul (Table 24).

Table 24:
Number of Public Libraries, Books and Beneficiaries by Province, 2011

Province	Number of Libraries	Number of Books	Number of Beneficiaries
İzmir	38	339.207	303.094
Ankara	42	1.032.811	626.601
İstanbul	36	1.357.726	412.029

Source: TurkSTAT, 2012f

Although the number of libraries throughout Turkey was on decline between the years 2002 and 2011, number of books was on the rise. The number of libraries in İzmir decreased from 44 to 38 between years 2007 and 2011, approximate number of beneficiaries decreased by 60,000 and number of books decreased by 10,000. As of the end of year 2012, the number of public libraries in İzmir was observed to be 38, while the number of readers

¹⁸ Including museums belonging to individuals.

¹⁹ Corresponds to the total number of museums serving under the Ministry of Culture and Tourism. Archaeological sites are not included.

²⁰ Data on İzmir have been obtained from İzmir Provincial Directorate of Culture and Tourism.

occurred to be 338,927 and the number of books occurred to be 337;625. The decline in the number of libraries, readers and books may be tied to the loss of functionality of libraries due to internet becoming more and more widespread, as displayed by 6 libraries closing downbetween years 2007 and 2011.

2.c.4.c. Cultural Centres in İzmir

It may be mentioned that the number of cultural centres and multipurpose halls in İzmir increased visibly especially after the year 2008. Audience capacity of cultural centres active within the provincial borders of İzmir is 11,205 people as of the year 2012. Assets that provide this capacity include 36 culture and arts centres, 2culture houses/memorial houses, and 1 synagogue restored to become a cultural area.

On the other hand, it is seen that local administrations' strategies towards strengthening cultural space infrastructures find widespread implementation, and investments are realised not only in central districts but outlying districts as well.Construction of multipurpose halls that enable culture and art activities in district and county municipalities has gained momentum in the recent years, leading to a total number of 42 multipurpose halls throughout İzmir. There are 39 cultural centres throughout the province as of the year 2012. With the completion of 14 facilities currently under construction, this number will reach 53 (Table 25).

Table 25:
Culture and Art Centres in İzmir, 2007, 2012

Cultural Activity Place	Culture Place		Capacity	
	2007	2012	2007	2012
Cultural Centres	14	39	5.435	11.205
Open Air Theatres	4	12	7.670	30.722
Cultural Centres Under Construction	5	14	-	-
Total	23	65	13.105	41.927

Source: İZKA and DEÜ, 2012
* 2007 data cover only facilities built by İBB

2.c.4.d. Theatres in İzmir

İzmir province has been one of the cities with the most significant theatre scene of the country since 17th century up to the end of 19th century. Also it comes foremost among regions with rich antique theatre heritage due to its location. Having reflected the colourfulness of its social structure at the theatrical arts especially after the 17th century, İzmir was famed as the “city of theatres” back in the time.

The first open-to-public theatre in İzmir was founded by amateurs in 1775, and actions towards bringing into life a stately theatre building in the city began in 1834 (İZKA and DEÜ, 2012).

In our day, there are a wide variety of young potential theatre groups and many private theatres functioning either in a professional or amateur manner in İzmir. These theatres display their plays sometimes on their own stages and sometimes in cultural centres or multipurpose halls. In line with the increase in the number of cultural centres, it is observed from official statistics that there is also an increase in the number of theatre communities.The number of theatres that occurred to be 10 back in 2001 rose to 64 as of 2010 with an increase over five times (Tablo 26).

Table 26:
Theatre, Play and Audience Information for İzmir by Period, 2001-2011

Information	2001-2002	2006-2007	2010-2011
Number of Theatre Halls	10	11	64
Number of Total Pieces	80	80	511
Number of Total Plays	705	916	1.966
Number of Total Audience	138.615	211.249	441.880

Source: TurkSTAT, 2012f

Such an increase in theatre activities is hope-inspiring for the future of city theatre.Especially due to its number of theatre halls, İzmirhas a spatial infrastructure that almost doubles that of the capital city of Ankara.

Table 27:
Theatre, Play and Audience Information by Province, 2010-2011

Level	Number of Pieces	Number of Plays	Number of Audience	Audience per Piece Played
Turkey	4.252	23.361	5.385.588	1.267
İstanbul	1.748	9.003	1.736.783	994
İzmir	511	1.966	441.880	865
Ankara	155	2.975	646.300	4.170

Source: TurkSTAT, 2012f

During 2010-2011 season, 511 theatrical pieces were presented for a total of 1,996 plays, reaching an audience of 441,880 in İzmir.

Table 28:
Intended Purpose of Theatre Halls, 2010-2011

Purpose of Construction of Hall						
Level	Number of Theatre Halls	Number of Seats	Theatre	Multipurpose	Cinema	Other
Turkey	511	194.020	162	321	13	28
İstanbul	147	54.736	67	76	6	4
İzmir	64	27.840	20	42	-	2
Ankara	28	7.306	23	4	1	1

Source: İZKA and DEÜ, 2012

In Ankara, 155 pieces were presented for 2,975 plays, reaching an audience of 646,300 (Table 27). The number of audience per piece played in İzmir is over four times that of Ankara. It is also seen that there is a larger theatre audience in Ankara.

The share of multipurpose halls within all theatre halls of İzmir is higher than that of both Ankara (14%) and İstanbul (52%), in addition to Turkey average (63%) (Table 28). The distribution of culture and art centres within İzmir province also illustrate that the multipurpose halls within İzmir province are concentrated more dominantly in the districts outside of city centre. The reason behind this situation may be considered to lie in that the non-central districts within İzmir province have significant infrastructure relevant to theatre plays.

2.c.4.e. Cinemas in İzmir'de

According to year 2011 data obtained from İzmir Provincial Directorate of Culture and Tourism, the number of movie theatres (cinemas) in the province is 112 (Table 29).

Table 29:
Information on Cinema by Province, 2011

Düzyey	Sinema Salonu	Koltuk	Gösterilen Film		Toplam Seyirci	Yerli Film Seyirci Sayısı	Yabancı Film Seyirci Sayısı
			Yerli	Yabancı			
Türkiye	1.917	257.604	13.027	24.865	37.439.786	17.954.808	19.484.978
İstanbul	647	90.024	3.864	7.767	13.435.241	5.902.608	7.532.633
İzmir	112	16.208	767	1.887	2.719.564	1.229.671	1.489.893
Ankara	174	26.863	905	2.636	4.424.255	1.918.730	2.505.525

Kaynak: TÜİK, 2012f

Although the indicators of İzmir in regards to cinema sector fall behind İstanbul and Ankara, there is not much difference among İzmir (1,025), İstanbul (1,155) and Ankara (1,249) in terms of number of audience per movie on vision.

2.c.4.f. Fair Culture in İzmir

Fair (exposition) organisations in İzmir are realised dominantly in İzmir Kültürpark Fair Area. There is also Ödemiş National Fair held by Ödemiş Municipality since

Table 30:
Information on the Fair Organisations Held Within İzmir International Fair Area, 2007-2011

Year	Fair Organisation	Number of Participant Companies	Number of Visitors	Number of Foreign Participants	Number of Foreign Visitors
2007	30	6.078	1.957.839	610	3.438
2008	27	5.872	2.198.474	554	2.602
2009	22	5.562	2.828.429	577	5.363
2010	23	6.357	2.320.028	555	5.869
2011	27	7.413	2.182.717	622	6.709

Source: İZFAŞ, 2012

27 years ago and EgeArt Art Days held by Ege University since the year 2005.

Number of participants-fair organisations by year correlation shows that a certain decline was experienced in the number of specialisation fairs after 2007, while significant increase was noted in the number of participant companies in 2011 (Table 30). Also, the construction of the new fair area to be established by İBB in Gaziemir is underway. Completion of the said area will strengthen the fair infrastructure of İzmir.

Fairs outstanding in terms of number of visitors in İzmir occur to be wedding gown and marble fairs. IF Wedding Fashion İzmir wedding gown fair was held first in the year 2007. The number of participants that was 4,864 back in 2007 displayed a considerable increase to reach 14,210 people in the year 2011.

International Natural Stone & Technologies Fair MARBLE has been held since the year 1995. Approved by Global Association of the Exhibition Industry (UFI), MARBLE is recognised as one of the top three fairs of its field.

2.c.4.f. Fair Culture in İzmir

Fair (exposition) organisations in İzmir are realised dominantly in İzmir Kültürpark Fair Area. There is also Ödemiş National Fair held by Ödemiş Municipality since 27 years ago and EgeArt Art Days held by Ege University since the year 2005.

Number of participants-fair organisations by year correlation shows that a certain decline was experienced in the number of specialisation fairs after 2007, while significant increase was noted in the number of participant companies in 2011 (Table 30).

Also, the construction of the new fair area to be established by İBB in Gaziemir is underway. Completion of the said area will strengthen the fair infrastructure of İzmir.

Fairs outstanding in terms of number of visitors in İzmir occur to be wedding gown and marble fairs. IF Wedding Fashion İzmir wedding gown fair was held first in the year 2007.

The number of participants that was 4,864 back in 2007 displayed a considerable increase to reach 14,210 people in the year 2011. International Natural Stone & Technologies Fair MARBLE has been held since the year 1995. Approved by Global Association of the Exhibition Industry (UFI), MARBLE is recognised as one of the top three fairs of its field.

2.c.5. Culture Economy

Culture encompasses a wide area ranging from economic gain, social communication, art activities and local image to tourism and culture industry.

Culture economy²¹ is related to economic organisations within the culture sector and the behaviours of the producer, consumer and state within this sector.

Table 31:
Culture Economy Sectors

Code	Definition
22.11	Publishing of books
22.12	Publishing of newspapers
22.13	Publishing of journals and periodicals
22.14	Publishing of sound recordings
52.47	Retail sale of books, newspapers and stationery
64.20	Telecommunication
71.40	Renting of personal and household goods n.e.c.
72.21	Publishing of software
72.40	Database activities
74.20	Architectural and engineering activities and related technical consultancy
74.81	Photographic activities
74.87	Other business activities n.e.c.
75.14	Supporting service activities for the government as a whole
80.42	Adult and other education n.e.c.
92.11	Motion picture and video production
92.12	Motion picture and video distribution
92.13	Motion picture projection
92.20	Radio and television activities
92.31	Artistic and literary creation and interpretation
92.32	Operation of arts facilities
92.34	Other entertainment activities n.e.c.
92.40	News agency activities
92.51	Library and archives activities
92.52	Museums activities and preservation of historical sites and buildings

Source: İZKA and DEÜ, 2012

²¹ All economic activities realised by public or private sector towards creative arts, cultural heritage and cultural industries are cumulatively defined as culture economy (UN, 2010).

²² Culture industries (sectors) were defined by UNESCO as sectors that naturally unite creation, production and commercialisation of cultural and intangible content

It is widely accepted that culture industries²² are sectors that produce cultural goods and services. Furthermore, this content generally has the aspect of “protected by property rights, convertible to goods and services”. According to UNESCO, the most important aspects of these industries are developing and preserving cultural diversity while enabling democratic access to culture.

Culture economy reveals the identities of countries via these industries and contributes to global scale expansion. Existence of media (mass communication) tools within culture sector provide the greatest contribution to this expansion, while culture economy positively affect the growth of countries with the impact of such tools and constitute importance in regards to sustainable development.

“Culture Economy Sectors” compiled by use of expanded NACE Rev.1.1 definitions within the context of İzmir Culture Economy Inventory and Development Strategy study are as below (Table 31).

The study for determination of mature, potential and candidate sectors on culture field within İzmir has been realised through “Three-Star Analysis”. Furthermore, important analysis studies were realised that study culture infrastructure and culture economy.

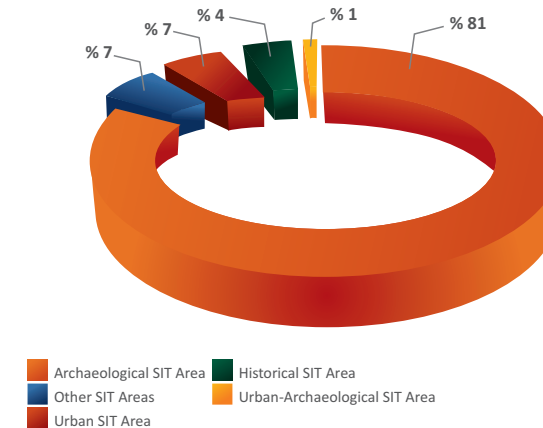
2.c.6. Protection Zones in İzmir

Two separate *Regional Boards of Cultural Asset Protection* and two separate *Regional Boards of Natural Asset Protection* function for the purposes of determining the cultural assets to be taken under protection, archaeological, urban and historical SIT areas and inspecting the implementations in such places within İzmir province and its districts. In addition to these four boards, the Directorate of Historical, Natural and Cultural Assets formed within the body of İBB also conducts relevant actions in cooperation with the boards. Also, “Regional Board of İzmir Renewal Area Cultural Assets Protection” was established in the year 2012 but its organisational preparation is still underway as of May 2013.

According to the official data obtained from the Ministry of Culture and Tourism, there are 441 Archaeological SIT Areas, 35 Urban SIT Areas, 23 Historical SIT Areas, 7 Urban Archaeological SIT Areas within the borders of İzmir province as of the year 2012.

The total number of all SIT areas of İzmir province, which include Other SIT Areas (overlapping areas) with 30 Archaeological and Natural SIT Areas, 2 Archaeological and Urban SIT Areas, 1 Archaeological-Natural-Historical SIT Area, 4 Archaeological and Historical SIT Areas, 1 Urban and Natural SIT Area, and 1 Historical and Natural SIT Areas, was reported to be 546 (Figure 8).

Figure 8:
Distribution of SIT Areas in İzmir by Type, 2012

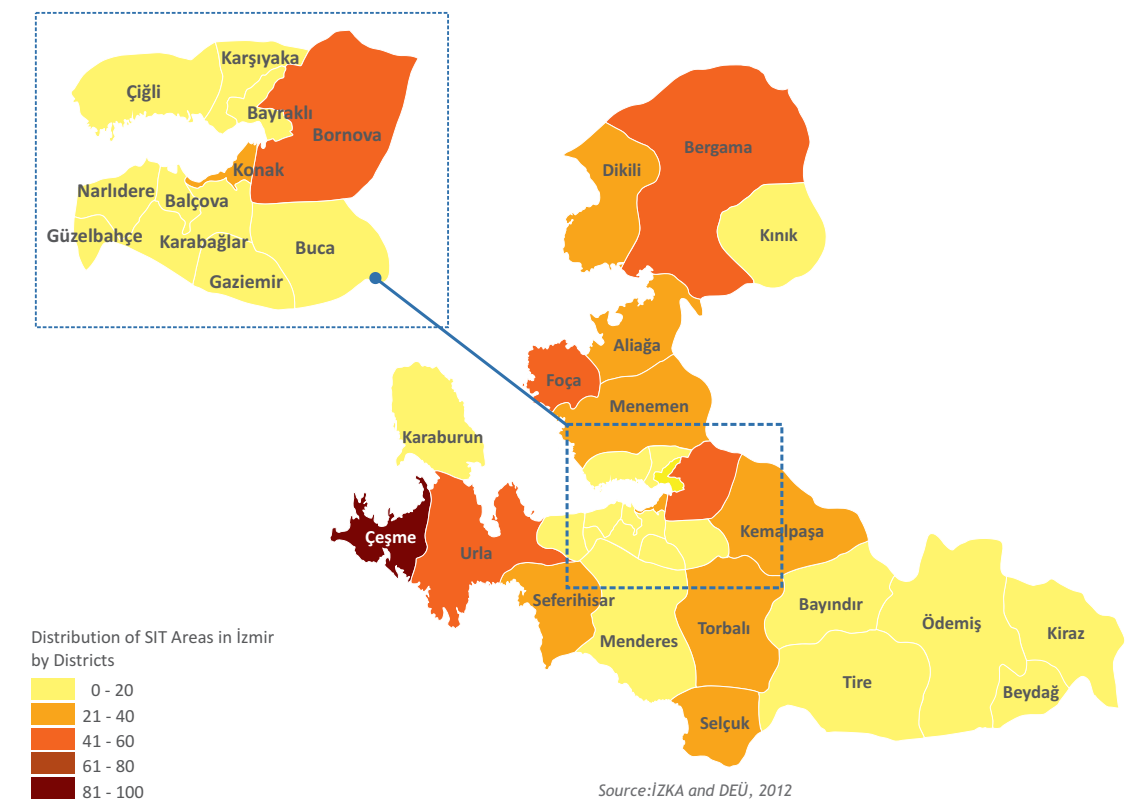


Source: İZKA and DEÜ, 2012

There are a total of 5,115 registered immovable cultural assets within the provincial borders. Distribution of cultural assets by type reveals that especially residential structures and mixed usage structures where the ground floor is used as store and upper floor is used as house constitute a significant portion of the inventory. Industrial and commercial structures and structures classified as immovable come foremost following this group. Most of the residential, commercial and industrial structures are dated to end of 19th century and beginning of 20th century.

Konak-Karabağlar area that may be considered as the core of the city houses the highest number of registered immovable cultural assets. Following the city centre that houses many works of art belonging to Hellenistic, Roman and Ottoman eras, Bergama district comes foremost with its rich Antique era and Ottoman era assets. Tire, Çeşme and Ödemiş districts follow Bergama, which had been important centres during the Ottoman era. On the other hand, there are no registered works in Çiğli district. Kiraz, Güzelbahçe, Narlıdere, Balçova, Aliağa, Menderes and Karaburun are districts with less than 10 registered works. Considering the size and rich past of their locations of these districts, it is estimated that these values could be increased through research and documentation studies.

Map 5: Distribution of SIT Areas in İzmir by Districts, 2012



Source: İZKA and DEÜ, 2012

Distribution of SIT areas by district reveals that there are no SIT areas in Bayındır district, while Balçova, Beydağ, Çiğli, Gaziemir, Güzelbahçe Karaburun, Kınık, Kiraz, Narlıdere and Tire houses less than 10 SIT areas. The highest number of SIT areas is found for Çeşme district with 89 areas, followed by Bergama with 53 areas, Foça with 50 areas, Bornova with 48 areas, and Urla with 46 areas (Map 5). The numbers of SIT areas are lower especially in districts where relatively less antique era settlements exist, while this goes up in districts housing archaeological sites. Especially Erythrae ancient city in Çeşme Peninsula, Pergamon ancient city in Bergama, Phocaea ancient city in Foça and Clazomenae ancient city in Urla play an important role towards this result. On the other hand, Bornova houses an important number of natural SIT areas rather due to the richness of natural assets abundant in the surrounding rural areas.



2.c.7. Assessment

With effective policy measures to be issued in regards to utilising the historical and archaeological cultural assets of İzmir, significant advances may be made in the prosperity level and quality of living for the city.

It was observed that visitors could not be served through a modern museum operation approach that should provide also various recreation opportunities, heat, moisture and light etc. aspects' control should be developed for better preservation of cultural assets, special themed museums are insufficient in numbers, and an inspection process is not implemented in the museums. Museum capacity has to be increased in order to be able to display the many pieces kept in storage. After the year 2008, the number of cultural centres and multipurpose halls increased visibly in the city. However, it is observed that cultural space investments are usually limited to local administration investments and remain insufficient in terms of quantity.

İzmir is very suitable for display of cultural activities at open air spaces due to its climate and culture of living, and thus actions towards this end should be increased and investments should be encouraged.

Compared to other metropolitan cities, the size of audience per theatre play is relatively low in İzmir. Therefore, increasing actions towards encouraging theatre audience are of importance. Fair culture is a field that İzmir is capable of displaying superiority compared to many other provinces. Especially the rising specialisation fairs and number of visitors observed in the recent years is an important development. Specialisation fairs are seen as one of the fields to be supported in İzmir. Keeping regular records of enterprises functioning in İzmir under culture economy field and development of new policies in this field should be prioritised objectives.

222

the number of
doctors per a hundred
thousand people in İzmir

% 7,4

infant mortality
rate

% 100

vaccination rate

2.d. HEALTH

World Health Organisation (WHO) indicates that healthcare system of a country should enable providing high quality healthcare services required by everyone. Every country creates and develops its own healthcare system in an effective, affordable and socially acceptable manner.

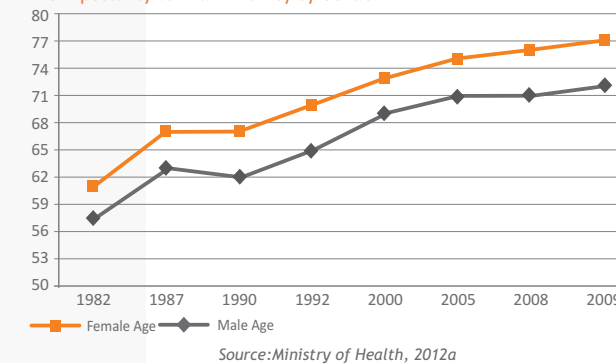
By signing "Tallinn Convention" in 2008, Turkey accepted that the performances of healthcare systems are to be monitored and assessed under a certain systematic. The Convention aims for signatory countries' healthcare systems to be improved while taking into consideration the social, cultural and economic differences among them and for human health to be developed. WHO mentioned that Turkey is a successful example among countries that implement the fairness and accountability principles in healthcare of Tallinn Convention. (WHO, 2011)

Family practice was implemented in İzmir in the year 2007 within the context of Healthcare Transformation Programme (HTP) implemented by the Ministry of Health between years 2003 and 2012. With the Statutory Decree (SD) no. 663 that was effectuated in the year 2012 to alter the organisation of the Ministry of Health, two separate –Northern and Southern– Public Hospitals Unions were formed in İzmir. As of the end of year 2012, there are 14 healthcare facilities within the body of Northern Public Hospitals Union and 12 healthcare facilities within the body of Southern Public Hospitals Union within İzmir province.

2.d.1. Base Indicators in Health

Life Expectancy at Birth for Turkey as of year 2025 was reported to be 75 years according to the report published by WHO in 1998. The improvement observed in the life expectancy at birth parameter occurred to be higher in Turkey than that in the European Union, and achieved the objective as of the year 2009 (WHO, 2011). As of the year 2009, the life expectancy at birth in Turkey is 72 for males and 77 for females (Figure 9).

Figure 9:
Life Expectancy at Birth in Turkey by Gender



Ranking at the third place following İstanbul and Ankara in terms of socioeconomic development level, İzmir ranks as second regarding development of healthcare sector and third regarding development of health and education sectors among all 26 NUTS 2 regions according to the study dated 2003.

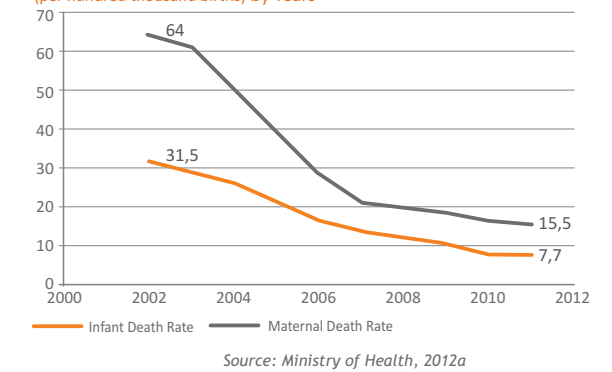
Infant death rate and maternal death rate are key indicators for comparing the health levels and social prosperities of different societies. Infant death rate in Turkey declined from its 31.5 per 1,000 live births value in the year 2002 to 7.7 as of the year 2011 (Figure 10). This value in İzmir is lower than Turkey average that occurred to be 7.4 per mille. Although this decline is a positive indication, the level of developed countries is yet to be achieved. Infant death rates in the high income group countries of OECD and EU member states are around 4.2 per mille.

Figure 32:
Distribution of İzmir Provincial Healthcare Institutions

Affiliated Institution - Type	Hospitals	Public Health Centres (PHC)	Family Practice Units (FPU)	Family Health Centres (FHC)	Maternal and Infant Health and Family Planning Centres (MIHFPC)	Tuberculosis Control Dispensaries (TCD)	Other	Total
Ministry of Health	26	30	1.136	325	23	12	110	1.662
University	4	-	-	-	-	-	-	4
MSB	1	-	-	-	-	-	-	1
Municipality	1	-	-	-	-	-	-	1
Private Healthcare Organisations	21	-	-	-	-	-	130	151
Total	53	30	1.136	325	23	12	240	1.819

Source: İzmir Provincial Directorate of Health, 2012

Figure 10:
Infant Death Rates (per thousand live births) and Maternal Death Rates (per hundred thousand births) by Years



Maternal death rate that occurred to be 64 per hundred thousand in Turkey in the year 2002 declined to 15.5 per hundred thousand as of the year 2011. This value declined from 32 per hundred thousand in 2002 to 15.3 per hundred thousand in 2011 for İzmir and Aegean Region in line with the Turkey average (İzmir Provincial Directorate of Health, 2012).

2.d.2. Sağlık Hizmetlerine Erişim

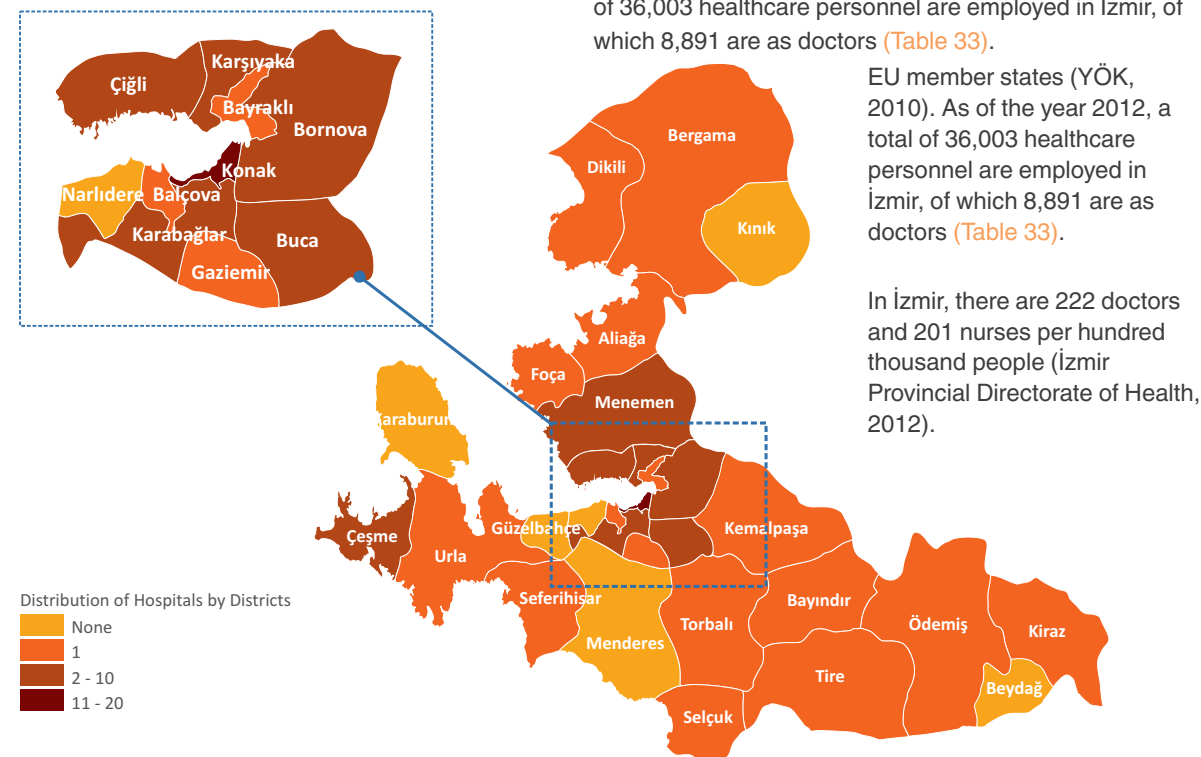
In regards to healthcare accessibility, İzmir fares better than Turkey average. Healthcare services in İzmir province are carried out by a total of 1,819 healthcare institutions comprising of 53 hospitals of which 26 function under the Ministry of Health, 30 Public Health Centres (PHC), 1,136 Family Practice Units (FPU), 325 Family Health Centres (FHC), 23 Maternal and Infant Health and Family Planning Centres (MIHFPC), 12 Tuberculosis Control Dispensaries (TCD), 110 Other Facilities (Sanatoriums, Public Health, Rabies, Malaria, Ketem) and 130 Private Healthcare Organisations (private polyclinics, medicinal centres, DAL centres). The number of hospitals decreased from 54 in 2012 to 53 in 2012. No comparison may be made with Aegean Region and Turkey due to failure to obtain data in this regard for the year 2012. 2012 up-to-date İzmir data may be seen in (Table 32). (İzmir Provincial Directorate of Health, 2012).

When the distribution of these 53 hospitals among the districts is examined, it is revealed that Konak district takes the first place with 18 hospitals. This concentration in Konak is considered to be normal due to being the city centre district. It is observed that 24 out of 30 districts have at least one hospital, while healthcare services in Beydağ, Güzelbahçe, Karaburun, Kınık, Menderes and Narlıdere districts that possess no hospitals are carried out through primary healthcare services and mobile healthcare services (Map 6).

Public trainings on women education, basic first-aid training, hygiene trainings, organ and blood donation trainings are provided by Eşrefpaşa Hospital, which is the only municipality hospital of Turkey, enabling raising of the public awareness and teaching correct health related behaviours to wide society segments.

According to October 2012 data, total number of beds in hospitals of İzmir is 11,046,²³ bed occupancy rate is 68.1% and number of operation tables was 354. 1/3 of all beds belong within Konak district borders,

Map 6: Distribution of Hospitals by Districts



²³ Number of beds in Military Hospitals were not included

Table 33:
Healthcare Personnel Distribution in İzmir Province

Personnel	Ministry of Health	University	Municipality	Private Hospital	Private Personnel Employed Independently	Total
Specialist Physician	2.131	1.158	59	601	1.048	4.997
Assistant Physician	934	969	-	-	-	1.903
Practitioner Physician	1.669	32	23	77	190	1.991
Dental Physician	436	141	7	7	1.074	1.665
Pharmacist Nurse	106	33	2	17	1.700	1.858
Delivery Nurse	4.592	1.984	87	811	517	7.949
Other Healthcare	2.252	64	13	206	83	2.618
Personnel	3.819	1.029	84	911	462	6.305
Other Personnel	2.604	1.73	222	1.854	307	6.717
Total	18.501	7.14	497	4.484	5.381	36.003

Source: İzmir Provincial Directorate of Health, 2012

*One hospital under the jurisdiction of Ministry of National Defence is not included.

and 10,272 beds are located within metropolitan district borders. More than half of the total number of operation tables (182) belong to hospitals under Ministry of Health jurisdiction, while the remaining are shared by university hospitals (83) and private healthcare organisations (89) (İzmir Provincial Directorate of Health, 2012).

The number of doctors per hundred thousand people is 153 throughout Turkey, while the average value for EU member states occur to be 322. According to this the number of doctors per hundred thousand people in Turkey is less than half of the average value for EU member states (YÖK, 2010). As of the year 2012, a total of 36,003 healthcare personnel are employed in İzmir, of which 8,891 are as doctors (Table 33).

EU member states (YÖK, 2010). As of the year 2012, a total of 36,003 healthcare personnel are employed in İzmir, of which 8,891 are as doctors (Table 33).

In İzmir, there are 222 doctors and 201 nurses per hundred thousand people (İzmir Provincial Directorate of Health, 2012).

Figure 11:
Change of Number of Doctors per Hundred Thousand People in Turkey and İzmir by Years, 2006-2012

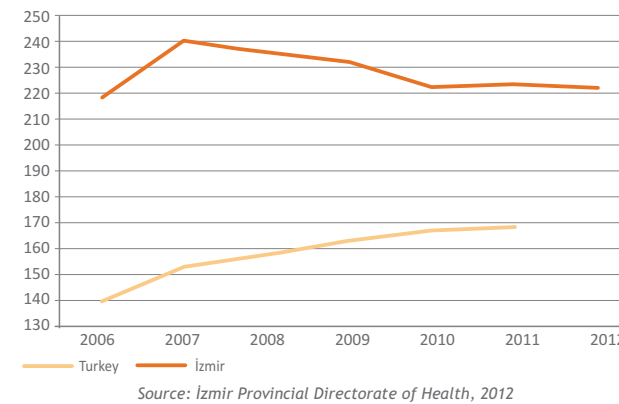
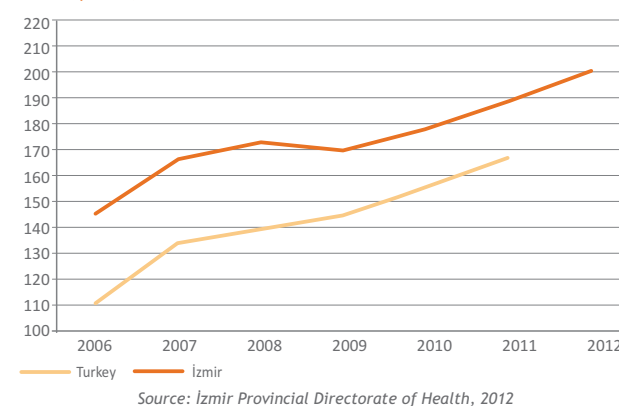


Figure 12:
Change of Number of Nurses per Hundred Thousand People in Turkey and İzmir by Years, 2006-2012



It is observed that the number of doctors and nurses is above that of Turkey average but a certain decline was observed in the number of doctors and a rise was observed in the number of nurses in line with the increase throughout Turkey during recent years (Figure 11 and Figure 12).

The number of diagnoses in community clinics, which was reported to be 69 million throughout Turkey in the year 2002, occurred to be 240 million as of the year 2012. Primary healthcare services are made use of more widely in recent years. In regards to the family practice system that was started to be implemented in İzmir in the year 2007, there are 1,136 family practitioners as of October 2012. The value of utilising primary healthcare services increase constantly through the years (Table 34).

Table 34:
Number of Family Practice Diagnoses

Year	Number of Family Practice Diagnoses
2009	13.647.005
2010	13.872.026
2011	15.536.774
2012	14.575.530

Source: İzmir Provincial Directorate of Health, 2012

In the year 2012, 699,906 doses of vaccination and 100% vaccination ratio were achieved. In line with this high ratio, no case of polio and measles was experienced during recent years in İzmir and only two tetanus cases were reported in the year 2012 (İzmir Provincial Directorate of Health, 2012).

Medical Home Services implementation was initiated on the 10th of December 2010. Medical home service covers satisfying certain medical care and rehabilitation demands of bedridden patients at home environment. This service is provided following the application made to relevant telephone line, family practitioners or PHCs, or an application made to Provincial Directorate of Health by the person in charge of patient. In the first 9 months of the year 2012, a total of 220,000 people were provided with medical home services. 48,075 applications were made by telephone in İzmir, and medical services and consultancy services were provided for a total of 63,692 times. As of the end of the year 2012, regular medical home services are provided to 4,692 patients (İzmir Provincial Directorate of Health, 2012).

163,000 cases were brought to 112 Emergency Service in İzmir during the year 2011. Coverage ratio of these applications occur to be as 90.2% for medical attention within the first 10 minutes at metropolitan areas, and 91.3% for medical attention within the first 30 minutes at rural areas. A total of 184,616 cases were subject to emergency medical attention in the year 2012 (İzmir Provincial Directorate of Health).

Institutions within the healthcare sector make use of information technologies and healthcare informatics systems for the purposes such as utilising data during decision making stage, expanding the area of service, reducing costs by increasing efficiency, improving customer relations and ensuring better management of resources.

In the field study conducted by Ömürbek and Altın regarding how the healthcare informatics systems are applied specifically for İzmir example, an assessment was made through forming sampling over 42 hospitals in İzmir. According to this, internet and computer use based on information and communication technologies is widespread in hospitals, while use of specialised systems and information systems remain limited (Table 35).

Table 35:
Utilisation of Healthcare Informatics Systems in Hospitals

Information Technologies	Average
Internet Use	3,45
Personal Computer Use	3,43
Office Automation Systems	3,31
Management Informatics Systems	3,09
Local Area Network (LAN)	2,83
Electronic Data Exchange	2,38
Executive Informatics Systems	2,21
Intranet Use	1,59
Decision Support Systems	1,38
Wide Area Network (WAN)	1,09
Extranet Use	0,64
Specialised Systems	0,45

Source: Ömürbek and Altın, 2009

Widespread application of office automation is a positive aspect in respect to process effectiveness, while further development is required in decision support systems too.

The share of public health expenditures within GDP was 3.2% in the year 2001, while it occurred to be 4.5% as of the year 2011. This ratio is average 8.5% for EU-27, and 6.4% for OECD.

Improvement works on the existing hospitals of İzmir are underway, while new healthcare investments are implemented. With the commissioning of new healthcare investments, improvements will be obtained regarding healthcare sector services. Two health campuses planned for construction are the largest scale investments among others. The first of these campuses is Bayraklı Health Campus that will house a bed capacity of 2,060 on a land area of 874,720 m². The other one, Yenışehir Health Campus, is planned to house a bed capacity of 1,200 on a land area of 159,000 m² and built on the area that accommodates the existing Tepecik Training and Research Hospital, Dr. Suat Seren Pulmonary Diseases and Surgery Training and Research Hospital, Atatürk Healthcare Vocational High School Building and Hospital Development Zone.

In addition, Çiğli Regional Training Hospital with 400 bed capacity, Ödemiş State Hospital with 250 bed capacity and Urla State Hospital with 150 bed capacity, of which construction works are still underway, are planned to be completed within the year 2014.

Bornova State Hospital with 200 bed capacity, Çeşme State Hospital with 50 bed capacity, Dr. Behçet Uz Pediatric Diseases and Surgery Training and Research Hospital Annex Building along with Karaburun Primary Healthcare Services Building with 10 bed capacity investments are at procurement stage. Aliağa State Hospital Emergency and Polyclinic Annex Building and Kınık Primary Healthcare Services Building investments are at project design stage. Torbalı State Hospital with 200 bed capacity, Foça State Hospital with 50 bed capacity, Selçuk State Hospital with 75 bed capacity are also among planned investments.

The fact that elderly population ratio will increase in line with the extension of life expectancy in Turkey renders preventive healthcare services against non-contagious diseases important. Healthcare programmes are implemented by the Ministry of Health throughout the country for providing a healthy life and raising health awareness. Main actions realised in this context are as follows:

“Turkey Healthy Nutrition and Active Life Programme” was prepared for the purpose of preventing obesity. In addition to encouraging regular physical activities among the public, this programme made it mandatory not to offer foods and beverages with high energy content but low nutrient level at school canteens and boarding school cafeterias and include nutritional foods/beverages such as milk, ayran, yoghurt and fruit juice instead of these for the purpose of preventing obesity in children.

In addition to this, **İzmir as a City of Active Life** programme was initiated by the İzmir Directorate of Public Health for the purposes of preventing obesity and gaining physical activity habits. It is aimed within the context of this programme to raise awareness on the importance of an active life and to direct the public more towards sports with various activities and arrangement in İzmir. In this direction, Obesity Consultancy Units were established in all Public Health Centres (PHC), and in Buca High Security Penal Institution's F1 and F2 prisons as of October 2012.

“School Milk Dispensing Campaign” has been realised by dispensing 1,2 litres of milk every week to 246 primary education schools in districts where dominantly low income citizens are accommodated since the year 2007 through the cooperation of İBB and Tire Milk Cooperative. The campaign for starting dispensing milk to schools throughout all of Turkey in result of joint work of Ministries continued under the campaign of “Suckling Lamb” aimed towards 0-5 years age group children. Within the context of this project, four litres of pasteurised milk are provided to 46,000 families every 15 days, particularly aiming towards low income families (İBB, 2012a).

Within the framework of “Tobacco Control Programme”, it was aimed to aid those who wishes to quit smoking, protect the public from the hazards of passive smoking, and warn all society on the harm of tobacco. In this context, 20 smoking cessation polyclinics were founded, organised by the İzmir Provincial Directorate of Public Health.

2.d.3. Assessment

Development objectives accepted in the Millennium Summit held in New York on September 2000 are summed up under 8 main articles. Three of these objectives are related to health, namely reducing infant deaths, improving maternal health and combatting HIV/AIDS, malaria and other epidemic illnesses. HTP was initiated in the year 2003 for the purpose of improving healthcare services in Turkey. In result of HTP and implemented regional actions, Turkey average values in infant death and maternal health were exceeded in İzmir province.

İzmir possesses the infrastructure necessary for the development of healthcare sector.

Existence of special hospitals specialised in their fields, and establishment of a special university solely oriented towards healthcare field increase the region's potential to become the healthcare centre. Also, newly planned health investments will develop the already existing health tourism potential of İzmir. On the other hand, capacity of healthcare organisations in rural regions should be improved due to the fact that these regions are at a larger disadvantage in regards to benefitting from healthcare services.

The intense demand arising from surrounding provinces due to İzmir being the centre of Aegean Region also regarding the field of healthcare impacts the quality of provided healthcare services. This situation has to be taken into account when evaluating health indicators of İzmir.



4.923

the number of active associations

The first and only University Platform in Turkey

University Platform

Social Capital

the most developed region in Turkey in terms of social capital

2.e. GOVERNANCE AND SOCIAL CAPITAL

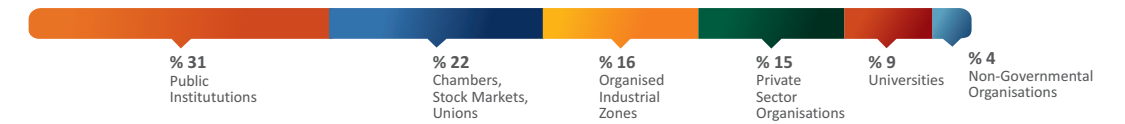
2.e.1. Governance

The concept of governance, which covers implementations within private sector and public sector, is defined differently by different institutions. Goof Public Governance Specialisation Commission established within the context of the 9th Development Plan studies made a comprehensive general definition in line with these different definitions: “Governance is an economic and political order that is respectful to democracy, superiority of law, and human rights and freedoms, ruled through participation, effectiveness and efficiency, inspection, decentralisation, demonstrability, transparency and accountability, quality, competence and ethics, highlighting civil society, paving way for the development of non-governmental organisations, possessing independent legal process, in line with developments in technology” (SPO, 2007).

“The most distinct feature of governance approach is that central government ceases to be the dominant and determinant power in taking and implementing public decisions, thus including many local, regional, national and international actors to the process and establishing an environment of dialogue, leading to the state to share its power with other actors, and non-governmental organisations' roles in decision making processes to increase” (SPO, 2007). Fundamental principles of governance may be listed as participation, transparency, accountability, effectiveness, consistency, fairness and adherence to laws (TESEV, 2008).

Another concept frequently used in the field of development is “multi-level governance”. Multi-level governance concept highlights horizontal relations at central, regional and local administration levels and implementation of good governance principles for interrelations of these administration levels. The effectiveness level of governance mechanisms, planning and implementation processes and non-governmental organisations comes foremost among the base aspects required to actualise good governance at region level. Current situation, problems and fields of improvement for İzmir province in regards to these aspects are summarised below.

Figure 13:
Distribution of İZKA Development Board Members, 2013



2.e.1.a. Coordination Structures

There are many coordination structures operating at different levels in İzmir Region for the purpose of actualising good governance principles. Operation and activities of these structures are briefly summarised below.

2.e.1.a.1. İzmir Development Agency Administration Board and Development Board

It may be mentioned that actualisation of governance is one of the most fundamental features of Turkey's new regional development approach. Within the context of this approach, Development Agencies, together with their organisational structures and organs, are key actors for actualisation of multi-level governance and realisation of coordination at regional scale. Agencies are outfitted with many tools and flexibilities that will enable formation of mechanisms aimed towards actualisation of governance. Administration Boards and Development Boards, as decision and coordination organs of Agencies, constitute the basic governance framework of regions. On the other hand, development and improvement of good governance within these governance structures are of importance in regards to implementation processes.

İzmir Development Agency Administration Board is the most important governance structure where issues related to the development of İzmir are handled and decided at the highest level. The 8-member Board comprises of İzmir Governor, İzmir Metropolitan Municipality Mayor, İzmir Provincial Council Chairperson, İzmir Chamber of Commerce (İZTO) Administration Board Chairperson, Aegean Region Chamber of Industry (EBSO) Administration Board Chairperson and 3 representatives elected from the public sector and/or non-governmental organisation members among board members by the Development Board.

On the other hand, Development Board is the structure that establishes recommendations for handling the problems and opportunities of İzmir. Development Board comprises of a total of 100 persons assigned from representatives of public institutions, private sector organisations and non-governmental organisations. Distribution of İzmir Development Board members are illustrated below.

Although the Development Board has been essentially founded for the purpose of making decisions as recommendations to be submitted before the Agency Administration Board, workgroups were established within the body of İzmir Development Agency Development Board during 2010-2013 İzmir Regional Plan period for the purposes of more actively working, supporting Agency actions and playing a role in the plan implementation.

Some of the workgroups, which have been founded and functioned for definite periods within the framework of Regional Plan key sectors, namely Advanced Technology Based Industries, Renewable Energy, Tourism, Logistics, Agriculture and Agriculture Based Industries and Promotion, also actualised some tangible projects and informed the Development Board in regards to their fields of work. For instance, the Promotion Workgroup organised an İzmir visit for a UNESCO committee of 30 members and a conference titled Culture and Tourism: Intercultural Bridges for Europe and Mediterranean for having Ephesus Antique City and Bergama to be included into UNESCO World Heritage List.

2.e.1.a.2. İzmir City Council

City councils were established with the issuance of Regulation no. 26313 on City Councils, in line with the Municipality Law no. 5393. The founding reasons of the city councils have been defined as developing city vision and citizenship awareness within city life, protecting rights and laws of the city, and actualising the principles of sustainable development, environmental sensitivity, social assistance and solidarity, transparency, accountability, participation, governance and in-situ management. İzmir City Council carries out its activities through its women, youth, handicapped and children assemblies along with environment, protective public health, energy, natural disaster, tourism, and health improvement workgroups. In the year 2012, city council assemblies and workgroups realised more than 50 activities including panels, sports tournaments, trainings and artistic shows.

2.e.1.a.3. İzmir Economic Development Coordination Board

İzmir Economic Development Coordination Board was established under the leadership of İBB for the purpose of developing a shared mind between all stakeholders regarding economic development in year 2009.

The Board comprises of voluntary participant opinion leaders determined to represent İBB, public institutions, professional chambers, private sector and non-governmental organisations that play important role for the development of the city. This Board's general purposes have been defined as developing the shared ideas, plans and projects towards increasing national and international level effectiveness that will contribute to the economic development of İzmir, and realising communication, information exchange, joint work and coordination between local actors in this framework.

Secretariat services of the Board that assembles once per month are carried out by İBB. The Board has 103 members and realised its 38th meeting as of January 2013. Priorities of İzmir were determined by the Board for directing its own actions in these aspects, and sub-committees were formed around these priorities that were updated in time.

2.e.1.a.4. Universities Platform

İzmir Universities Platform that comprises of the rectors of the nine universities in İzmir carries out an important function in terms of enabling universities to execute joint activities with each other and with public-private-NGO partnerships. The platform was established at the end of year 2008 for the purpose of enabling universities of İzmir to act with solidarity in academic, social, cultural and sportive fields, utilising resources effectively and benefitting from the synergy to form due to interconnectedness. İzmir Universities Platform that does not possess a legal entity status is the first and only platform throughout Turkey where all universities of a city are members. One of the most important projects of this platform, which realised social projects aiming towards the development of the region, namely "Study in İzmir" covers establishment of an internet portal, workgroup focusing on this portal and contribution to international scale promotion of İzmir universities.

2.e.1.a.5. New Synergies for İzmir Institute

New Synergies for İzmir Institute, also called İzmir Institute, is an opinion platform established in year 2004 for the purpose of generating solution recommendations and ideas on economic, social and cultural problems of entire Turkey, particularly of İzmir. The Platform does not have a legal entity or financial source, and its activities are financed by the platform's members. Institute members comprise of opinion leaders that came together voluntarily for İzmir. The Institute functions for the purpose of generating project ideas and recommending such

ideas to relevant institutions, and assembles regularly each month. Members carry out the chairperson's duties by changing each month as per a rotation system. The Institute has provided idea support to many central and local public institutions and local administrations until this day.

2.e.1.a.6. İzmir Mediterranean Academy

Mediterranean Academy that functions under the leadership of İBB and coordination of Branch Directorate of Mediterranean Academy was established on the 12th of March 2012. Its establishment stretches back to İzmir Culture Workshop in the year 2009, where people affiliated with science, arts and culture and set their hearts on İzmir came together for discussing life in İzmir.

İzmir Mediterranean Academy, which was founded with the initiative of İBB and became the first ever think tank and democratic platform to have been established within a municipality structure, undertook the role of supporting the innovation and design potential of the city and actualising İzmir's vision of strengthening relations with the Mediterranean area with which it had constant relations throughout its historical development. Mediterranean Academy functions as four separate coordination units under the fields of history, design, culture-arts and ecology. The Academy aims towards jointly working with stakeholders for actualising the vision for İzmir, while contributing to the development of globalisation strategy of İzmir and opening up new horizons for the city and the country.

2.e.1.a.7. Sectoral and Thematic Platforms

In addition to the abovementioned coordination structures that were established in relation to the region's general development issues; there are also many sectoral and thematic platform structures in İzmir. Abundance of structures such as İzmir Clustering Committee, İzmir Innovation Committee and İzmir Agriculture Group that do not have a distinct legal entity status and assembled through volunteering principle illustrate the existence of an infrastructure required for empowering governance in İzmir. Besides the voluntary platforms mentioned here as first to come to mind, there are boards established by law such as Human Rights Board, Employment and Vocational Education Board, and Public Health Board.

2.e.1.b. Regional Planning and Regional Governance

Planning and strategy development studies also come foremost among important means towards actualising governance principles. It may be mentioned that institutions in İzmir have wide collection of experience and information in this regard.

2.e.1.b.1. 2010-2013 İzmir Regional Plan Experience

Within the context of studies for the Preliminary Regional Development Plan prepared by İzmir Development Agency for 2007-2008 period and 2010-2013 İzmir Regional Plan studies, many activities have been conducted at region scale for the purpose of actualising participation, leading to much experience gained in the region. Participation principle, a foundation for governance of regional development, has to be actualised initially in the regional planning process. In this context, many meetings, workshops and analyses were realised towards increasing participation during the preparation stage of 2010-2013 İzmir Regional Plan. In the preparation stage of the plan, 600 different institutions and more than 2,500 people were included to participate in the planning and implementation processes at city centre and 30 districts of İzmir.

Furthermore, within the context of regional strategy development studies carried out during the implementation process stage that may not be separated from the planning process due to being an extension of this process within the entirety of activities in this regard, participation was taken as the base principle again and committees have been established in this framework. In general, these committees supported studies aimed towards increasing the knowledge level regarding the subject, along with relevant scientific studies and research studies, monitored and assessed Agency actions, exchanged data and realised national/international lobbying activities. Within this period, strategy development actions were conducted on clustering, urban marketing, innovation and entrepreneurship fields, and clustering and innovation committees were established, which are still active as of today.

2.e.1.b.2. 2014-2023 İzmir Regional Plan Governance Framework

A similar process was designed and implemented for 2014-2023 İzmir Regional Plan. Studies towards preparation of İzmir Situational Analysis document that constitutes the first stage of planning process comprises of consolidation of the socioeconomic analyses conducted under the coordination of İZKA, and summary of İzmir's regional, demographic, economic, social and environmental structure.

2.e.1.c. Non-Governmental Organisations in İzmir

Actualising participation, the most fundamental principle of governance, may only be possible through the existence of strong non-governmental organisations. In this context, İzmir Civil Society Survey was conducted for the purpose of revealing the aspects, demands and priorities of Non-Governmental Organisations (NGO) in İzmir and published in September 2012 (İZKA and EÜ, 2012a).

In this context, an inventory study covering the entirety of associations and foundations in İzmir, a field study conducted with the participation of 315 NGO representatives, in-depth interviews made with 10 foremost representatives of İzmir's civil society field and finally focus group studies with representatives of the foremost NGOs within İzmir in the fields of social solidarity, women's solidarity, handicapped people's solidarity, cultural and economic solidarity were realised. Analyses and assessments in this section is a summary of the mentioned study.²⁴

2.e.1.c.1. Overall View of Non-Governmental Organisations

A total of 11,372 NGOs were founded as associations or foundations in İzmir, including ones that closed down. 98.2% of these comprise of associations (11,167), and 1.8% comprise of foundations (205) (Tablo 36). Due to establishing associations is relatively easy compared to establishing foundations, this table is observed similarly throughout Turkey.

Table 36:
Distribution of NGOs Founded in İzmir Since
1860 by Type

Type of NGO	Number	Percentage
Association	11.167	98,2
Foundation	205	1,8
Total	11.372	100,0

Source: İZKA and EÜ, 2012a

It may be mentioned that 96.3% of active (open) NGOs in İzmir comprise of associations and 3.7% comprise of foundations. According to this, there are 4,923 associations and 190 foundations active in the provinces of year 2011 (Tablo 37).

²⁴ İzmir Civil Society Survey was prepared within the framework of 2014-2023 İzmir Regional Plan preparation studies under the cooperation of İZKA and Ege University's Faculty of Communication in the year 2012. The study may be accessed at: http://www.izmirplanliyorum.org/static/upload/file/2014-2023_izmir_boilge_plani_ikincitaslak.pdf



Table 37:
Open and Closed NGOs in İzmir

Type of NGO	Open	Closed	Total
Number of Associations	4,923	6,244	11,167
Number of Foundations	190	15	205
Total	5,113	6,259	11,372

Source: İZKA and EÜ, 2012a.

When all NGOs founded within a 150-year period are examined regarding their founding purposes, it is observed that the first four places are occupied by education (16%), economic solidarity (13.2%), sports-youth (11.2%), and religious issues (11.1%) (Table 38).

Table 38:
Distribution of NGOs in İzmir
by Establishment Purpose

NGO Purpose	Number	Percent age
Science	102	0,9
Environment-Tourism	465	4,1
Non-local Countrymen	844	7,4
Religion	1.258	11,1
Education	1.814	16,0
Economic Solidarity	1.506	13,2
Hobby	625	5,5
Women-Children	161	1,4
Culture	524	4,6
Politics	323	2,8
Health	350	3,1
Art	282	2,5
Social Solidarity	837	7,4
Social Services	322	2,8
Sports-Youth	1.269	11,2
City Club	207	1,8
Local Countrymen	483	4,2
Total	11.372	100

Source: İZKA and EÜ, 2012a.

Establishment of school protection and development associations in primary and secondary education institutions caused NGOs with education purpose to come up first in this table. However, the prioritised purpose of such type of NGOs remain limited to providing financial support to the education institutions due to the share allocated to them from central administration being limited.

The fact that NGOs with economic solidarity purpose come at the second place may be considered as a reflection of the economic life solidarity patterns of citizens of İzmir on civil society field. The most striking point in here is that NGOs with sports and youth purpose achieve as high a share as 11.2%. These NGOs that were formed mostly to provide financial support to sports clubs are followed by NGOs with religious purpose with a ratio of 11.1%.

Mosque building and maintenance associations and Quran education associations take the lead among NGOs with religious purpose. The abundance of such NGOs arises from the need for financial support especially in the example of mosque building and maintenance associations. Such organisations are formed for collecting financial aid towards religious facilities planned to be built in neighbourhoods and villages, and thus the associations established next to each mosque increases the quantitative value of this field.

Table 39:
Problems of NGOs and Their Level of Importance, %

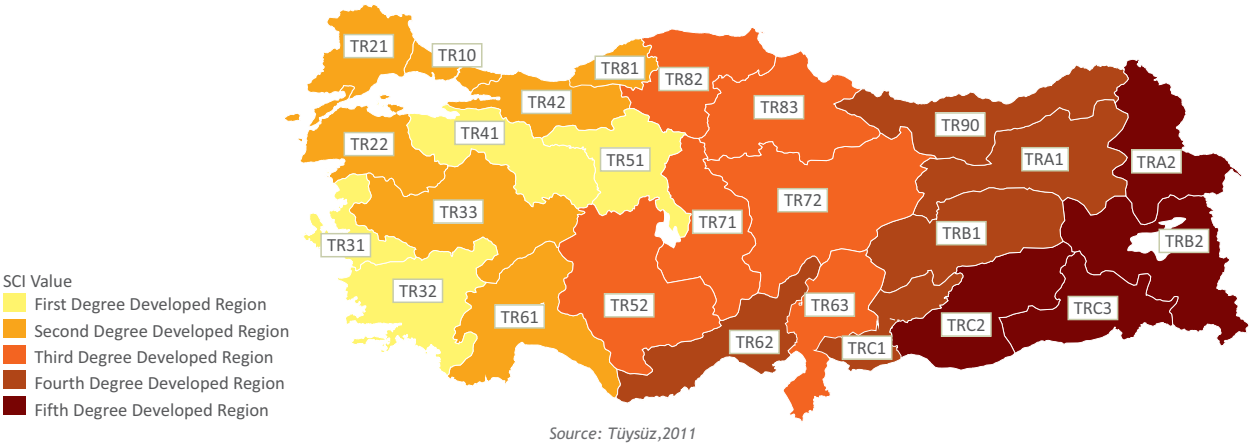
Problem Titles	Very Important	Important	Neither Important Nor Unimportant	Unimportant	Very Unimportant
Problems regarding official registration	30,2	36,2	14,6	8,9	10,2
Lacking aspects in country legislation	31,7	42,9	14,6	6,0	4,8
Weakness of relations with central government	36,8	31,4	19,0	6,7	6,0
Unfair/high taxes	38,1	24,4	17,8	9,2	10,5
Weakness of relations with local/regional organisations	33,0	41,3	16,8	5,4	3,5
Weak administrative structure/bad government of NGOs	34,9	33,3	15,6	7,6	8,6
Lacking aspects regarding modern communication tools	28,9	39,0	17,5	7,3	7,3
Insufficient personnel/lacking education of members	39,7	35,2	13,0	5,7	6,3
Insufficient financial sources	58,7	26,3	8,3	4,1	2,5
Lack and absence of reliable information	36,5	36,8	15,2	6,3	5,1
Lack of cooperation with other NGOs/organisations	31,7	41,9	14,9	6,7	4,8
Weakness of the voluntary actions in İzmir	38,7	37,8	15,2	5,4	2,9
Insufficient volunteer support for NGOs	44,8	34,3	13,3	4,8	2,9

Source: İZKA and EÜ, 2012a.

2.e.1.c.2. Main Problems of Non-Governmental Organisations

Various academic studies conducted on this field revealed that NGOs in Turkey constantly face many problems with economic, social and political aspects. In the field study conducted within the context of İzmir Civil Society Survey Study, the problems faced by NGOs were categorised and NGO representatives were asked to indicate these problems by their level of significance in regards to civil society (Table 39).

Map 7: Social Capital Index Groups by NUTS 2 Regions



When the answers falling within “very important” and “important” are evaluated together, it is observed that NGOs in İzmir experience all problems included in this study at severe levels. More than 60% of NGO representatives consider all these problems as “very important” and “important”, and it is significant that the three most important problems are revealed respectively as insufficient financial sources (85%), insufficient volunteer support for NGOs (79.1%) and weakness of the voluntary actions in İzmir (76.5%). When these three problems are assessed together, it may be mentioned that there is significant levels of deficiency in organisation culture.

Another important problem finding is lacking aspects in country legislation regarding NGOs (74.6%). Another point to be highlighted here is that 58.7% of representatives mentioned lack of financial resources as a 'very important' problem. The existing picture reveals that NGOs have widespread problems in economic, political, legal and administrative fields. Also, solution of volunteers in NGOs problem is of significance. In this respect, initially the society's awareness on inclusion to civil society should be raised and strategies aimed towards encouraging voluntary work should be developed.

2.e.2. Social Capital

The concept of social capital is considered as an important tool for development according to Turkey's new regional development approach. Due to social capital being a level within which joint work, cooperation and trust may be built at local and regional scales, it is defined as an important component of regional development.

According to World Bank, social capital is the existence of norms and networks that make joint cooperation possible. These norms and networks are generalised as institutions, relations and traditions. On the other hand, OECD defines social capital as “approaches, shared values, norms and networks that facilitate cooperation within the group or between groups” (Tüysüz, 2011).

There is no detailed study on the sub-components of social capital for İzmir. Although Turkey has usually ranked at lowest places in studies conducted regarding social capital, İzmir Region was revealed to be the most developed region throughout Turkey in terms of social capital according to the study conducted on NUTS 2 regions by Tüysüz (2011).

Table 40:
Social Capital Index Values by Region

Code	Region Name	SCIValue
TR31	İzmir	0,93
TR51	Ankara	0,83
TR32	Aydın, Denizli, Muğla	0,79
TR41	Bursa, Eskişehir, Bilecik	0,72
TR22	Balıkesir, Çanakkale	0,64
TR10	İstanbul	0,62
TR81	Zonguldak, Karabük, Bartın	0,62
TR21	Tekirdağ, Edirne, Kırklareli	0,6
TR42	Kocaeli, Sakarya, Düzce, Bolu, Yalova	0,59
TR33	Manisa, Afyon, Kütahya, Uşak	0,55
TR61	Antalya, Isparta, Burdur	0,46
TR52	Konya, Karaman	0,41
TR82	Kastamonu, Çankırı, Sinop	0,32
TR83	Samsun, Tokat, Çorum, Amasya	0,27
TR72	Kayseri, Sivas, Yozgat	0,25
TR71	Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir	0,14
TR63	Hatay, Kahramanmaraş, Osmaniye	0,06
TR90	Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane	-0,05
TR62	Adana, Mersin	-0,09
TRB1	Malatya, Elazığ, Bingöl, Tunceli	-0,55
TRC1	Gaziantep, Adıyaman, Kilis	-0,63
TRA1	Erzurum, Erzincan, Bayburt	-0,7
TRC3	Mardin, Batman, Şırnak, Siirt	-1,53
TRC2	Şanlıurfa, Diyarbakır	-1,7
TRB2	Van, Muş, Bitlis, Hakkari	-1,74
TRA2	Ağrı, Kars, Iğdır, Ardahan	-1,82

Source: Tüysüz,2011

Within the context of this study, region's election attendance ratio, number of associations, suicide ratio, divorce ratio, gazette and journal circulation, tax collection/accrual ratio, net migration rate, electricity loss-illegal use ratios and educated population ratio data were taken into assessment. Social capital index values obtained in result of the study are summarised at the table below (Table 40).

In conclusion of the grouping made based on the regions' social capital index values (SCI values), regions were collected into 5 groups. The map below illustrates the distribution of these groups (Map 7).



2.e.3. Assessment

Establishment of development agencies and actualisation of coordination structures are positive aspects in terms of regional governance. However, there are important fields open to further improvement in terms of actualising good governance at local, regional and central levels, and communication and coordination between local-central components.

Agency Administration Board is one of the unique platforms where important agenda articles relevant to region may be discussed, joint decisions may be taken, and cooperation mechanisms may be established. Realising coordination between institutions represented by Agency Administration Board members, developing cooperation and ensuring the jointly defined development objectives to be adopted by these represented institutions are of significance in terms of developing the functionality of this senior level governance structure.

It may be mentioned that the method of establishment for the Development Board is significantly centralised, and important representation and adoption problems are experienced.

New mechanisms have to be developed for the Development Board to become a vital part of region's development agenda and of Agency activities. In this framework, it is revealed that the Development Boards' method of establishment, duties and authorities have to be reviewed.

There are fields open to further improvement also regarding the implementation stage of regional plans. Preparation of regional plans in accordance to good governance principles and at region scale is a very important step. On the other hand, plans' implementation mechanisms do not exist yet. Regional plans affect the strategic plans of other regional institutions and regional approaches of central institutions at a minimum level, and activities of institutions are almost not affected. In this framework, it is of importance to form regional programmes as to define implementation mechanisms. Although development agencies are to play important roles at regional scale regarding development, public institutions at central and local levels determining their activities dominantly based on central policies has to be taken into account when forming implementation mechanisms.

% 14,8

rate of Unemployment
in İzmir

% 53,2

workforce
participation rate

% 24,5

non agricultural informal
employment rate

2.f. EMPLOYMENT SITUATION

2.f.1. Workforce

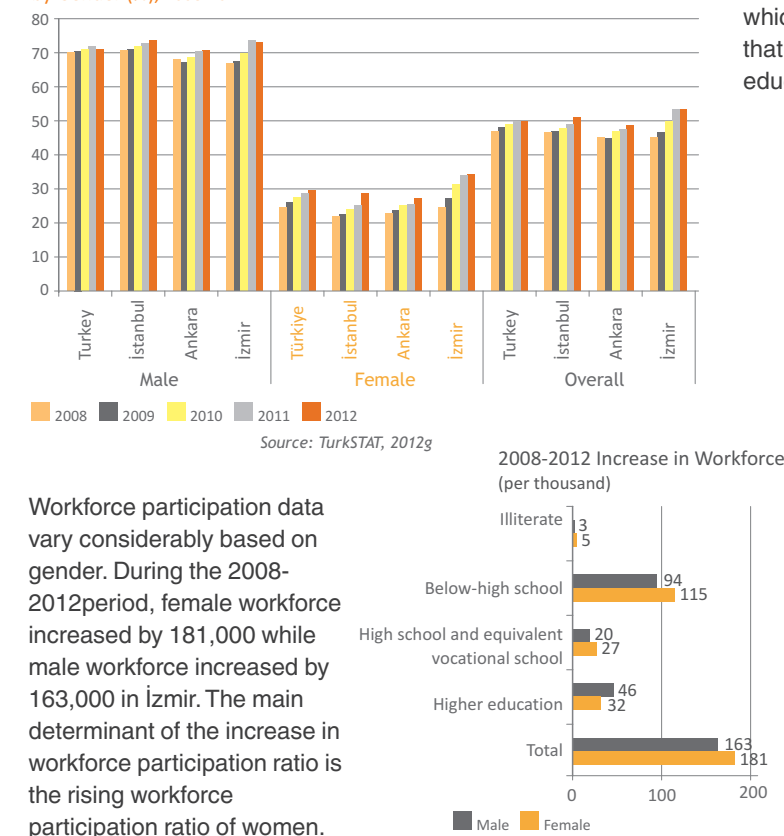
According to International Labour Organisation's (ILO) data, workforce participation ratio has been on decline throughout the world during the last 10-year period. Workforce participation ratio, which declined with a 0.3 points decrease from 65.1% to 64.8% during the 2002-2007 period, displayed a 0.7 decrease and declined to 64.1% as of the year 2011 (ILO, 2012). While workforce participation ratios displayed a more severe decline in developed countries and EU member states due to the global economic crisis, a certain rising trend is observed in developing regions such as Southeast and Central Europe, Latin America and Caribbean (ILO, 2013). The declining trend in developed countries is considered to be based on the increase recorded in long-term unemployment. Furthermore, the increase of unemployment risk plays a more distinct role on participation ratios due to social security systems providing rather limited opportunities in developing countries.

Long terms assessment reveals that workforce participation ratio is on a declining trend also in Turkey due to the recession in agricultural workforce. This ratio that occurred to be 49.9% back in the year 2000 declined to 46.2% as of the year 2007, while moving on to a rising trend in the following period also with the impact of the economic crisis and returned to its year 2000 level (49.9%) in the year 2011 (TurkSTAT, 2012g). As of the year 2012, Turkey is considerably behind that of world average with a 50% workforce participation ratio. The main reason behind this situation is that women's participation to workforce is at a very limited level (29.5%).

As of year 2012, the population in the working age in İzmir is approximately 3,142,000 and workforce is 1,671,000 people. In terms of gender distribution, İzmir workforce market houses 1,122,000 men and only 549,000 women. Workforce participation ratio in İzmir is observed to be 34.3% for women and 53.2% for men. Although both of these values are higher than Turkey average, they are still considerably behind that of world average.

During economic crisis periods, establishments affected from the crisis face difficulties in creating new employment or protecting existing employment. This situation leads to implementations such as employee dismissal, curtailment of work periods, compulsory leave and short time working. Increase of unemployment risk of employees and their social circles depending on the context and magnitude of the economic crisis leads to development of the will to work of people outside of workforce, which is then reflected on workforce participation ratios.²⁵ İstanbul and İzmir workforce markets were impacted intensely from the global crisis of which effects on Turkey had been felt during the year 2008. During 2008-2011 period, workforce participation ratio increased by 3 points throughout Turkey, 2.3 points in İstanbul and 2.5 points in Ankara, while it displayed an increase as much as 8.2 points in İzmir (Figure 14). Workforce participation ratio of İzmir, which was 45.2% back in the year 2008, occurred to reach 53.4% as of the year 2011. In the year 2012, a limited level (0.2 points) of decline was observed in workforce participation ratio for the first time after the crisis, resulting in a value of 53.2%.

Figure 14:
Workforce Participation Ratios for Turkey, İstanbul, Ankara and İzmir
by Gender (%), 2008-2012

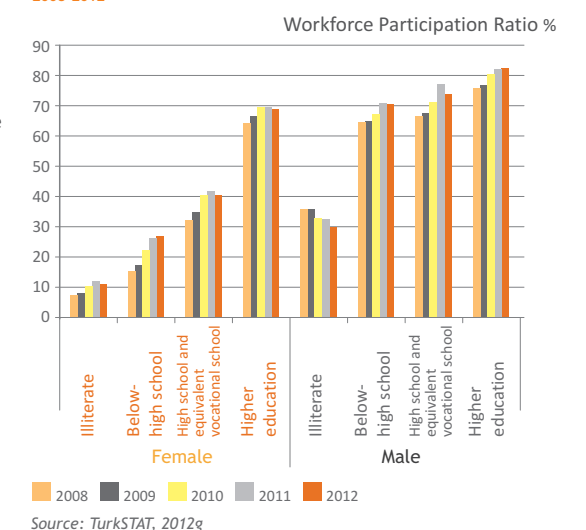


Workforce participation data vary considerably based on gender. During the 2008-2012 period, female workforce increased by 181,000 while male workforce increased by 163,000 in İzmir. The main determinant of the increase in workforce participation ratio is the rising workforce participation ratio of women.

The increases in workforce participation ratio that reflected as 5 points for women and 0.9 points for men for Turkey average occurred to be 9.8 and 6.1 points respectively in İzmir (higher than that of the other two metropolitan cities). In result of these increases, workforce participation ratio in İzmir reached 72.9% for men and 34.3% for women as of year 2012. Although workforce participation ratio of men declined by a point of 0.7 in year 2012 compared to the previous year both throughout Turkey and in İzmir, the increase of the same value regarding women was observed to continue also in year 2012.

As a general principle, workforce participation ratio increases in line with the level of education. When education levels are examined, it is observed that the highest workforce participation ratio is seen among the higher education graduates, for both male and female citizens in İzmir (Figure 15). However, during the period that followed 2008 when the impacts of the crisis were felt, the highest increase in workforce participation was observed within the group with below-high school education level in terms of ratio and numbers. During the 2008-2012 period, a total of 115,000 women and 94,000 men at the mentioned education level participated in the workforce. The only category within which the workforce participation of women fell behind that of men during this period occurred to be higher education graduates.

Figure 15:
Workforce Indicators According to Education Levels by Gender (%), 2008-2012



²⁵ In regards to reflection of economic crisis on workforce participation ratios, the prosperity model of the country and the development of social protection mechanisms against unemployment may be effective. The main reason behind the fact that participation ratios declined in developed countries and EU member states -that have more generous social protection systems such as unemployment insurance, unemployment aid- but an opposite development was observed in regions such as Turkey and Latin America.

Although the workforce participation ratio in this category was observed to be relatively high both throughout the country (70.9%) and in İzmir (69.1%) as of year 2012, this is still 13.7 points lower than the level observed for men (82.8%).

Despite the significant increase observed in the workforce participation ratio for women, it is not possible to mention that this participation is at a sufficient level. According to TurkSTAT year 2012 data, it is seen that 549,000 of women in İzmir participated in workforce in İzmir, while there are women approximately twice that value (1 million 53 thousand) who could not. It is observed that 593,000 women (56.3%) could not participate in the workforce due to being busy with housework. This data underlines the importance of careful assessment of the socioeconomic and cultural determinants that keep women away from workforce market.

2.f.2. Employment

The development with the biggest impact on employment at global scale during the 2000s occurred to be the global economic crisis centred on developed western countries. The reflection of the crisis on employment data essentially occurred to be a 1 point decline (from 61.3% to 60.3%) in global employment during the 2007-2012 period (ILO, 2013). In this period, declines in line with the worldwide employment ratio declines were observed in developed countries, EU, East Asia and South Asia; while employment ratio increases were recorded in Central and East Europe (excluding EU member states), Latin America and Caribbean, Southeast Asia-Pacific countries at stronger levels and in Middle East, North Africa and Sub-Saharan Africa regions at weaker levels. During the same period, the employment ratio of Turkey occurred to decline in the year 2009 by 0.5 point, while this changed to a stronger rise of 4.2 points in the following years (TurkSTAT, 2012g).

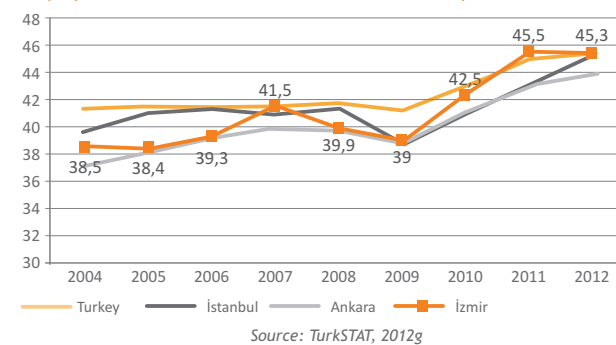
Employment in İzmir occurred to reach a total of 1,424,000 people as of year 2012, comprising of 432,000 women and 992,000 men (TurkSTAT, 2012g). In contrast to the increases displayed in the employment ratios of both women and men during 2004-2007 period, these values declined during 2008-2009 period due to the effects of global economic crisis (Figure 16).

İzmir displayed an increase above Turkey average in the 2010-2011 period in terms of employment ratios when recovery began following the crisis.

The employment ratio of İzmir that declined in the year 2009 (39%) by 0.9 points compared to the previous year then increased by 6.5 points in the following period and reached 45.5% as of the year 2011. İzmir employment realisations displayed a progress similar to that of Turkey average, Ankara and İstanbul realisations in the period that began with the economic crisis impacts but observed to have higher performance in the recovery period.

In year 2011, İzmir's employment ratio (45.5%) rose above Turkey average (45%) for the first time within the post-2004 period (Figure 16). However, this advantageous state that reflected upon employment data could not be maintained in year 2012, and the employment ratio declined back to 45.3%. This value is equal to the employment ratio of İstanbul, 1.4 points above that of Ankara, and 0.1 points below Turkey average value. It may be mentioned that the decrease of 34,000 people observed in the agricultural employment that had displayed an increase during crisis period is effective in the decline seen later in employment ratios.²⁶

Figure 16:
Employment Ratios in İzmir, Ankara, İstanbul and Turkey (%), 2004-2012



2009 has been a year during which net employment loss was experienced in İzmir, similar to İstanbul and Ankara (Figure 16). The source of the decline recorded in the employment ratio of İzmir in the year 2009 lies in that 33,000 men left the workforce. Participation of 32,000 women to the workforce in the same year limited this decline. During the 2008-2012 period remembered with the economic crisis, female employment increased by 118,000 (6 points) and reached 432,000, while male employment increased by 135,000 (4.8 points) and reached 992,000 (Table 41). According to this, 7.2% of the employment increase displayed throughout the world (3,544,000) during the recovery period following 2009 occurred to be in İzmir.

The positive development seen in the women's workforce participation data in the recent years are also reflected in employment data.

As of the year 2012, women's employment ratio in İzmir (27%) occurred to be over the Turkey (26.3%), İstanbul (24.5%) and Ankara (23.5%) values (Table 41). Although the increase recorded in İzmir regarding women's employment ratio is a positive indicator, the sufficiency level of this has to be evaluated together with some additional data related to the quality of employment such as informal employment level, sectoral distribution of employment, workplace situation. Findings in this framework are included in the following sections of the analysis.

Table 41:
Employment Levels and Employment Ratios by Gender, 2004-2012

Year	Employment level (thousand people)			Employment ratio (%)		
	Total	Men	Women	Total	Men	Women
2004	1045	795	251	38,5	59,6	18,1
2005	1059	820	239	38,4	59,7	17,3
2006	1104	838	266	39,3	60,2	18,8
2007	1202	884	318	41,5	61,7	21,7
2008	1171	857	314	39,9	59,6	21
2009	1170	824	346	39	57	22,3
2010	1303	906	397	42,5	60,8	25,2
2011	1410	988	422	45,5	65,1	26,7
2012	1424	992	432	45,3	64,4	27

Source: TurkSTAT, 2012g

At the top of the indicators recognised to be related to the quality of employment comes the informal employment ratio. Informal employment displays a declining trend at long term scale also in İzmir similar to what is observed throughout the country. Although this trend has been maintained (with a slowing rate) in the years following the economic crisis throughout the country, it is observed that this turned to opposite in İzmir and began to increase by passing years following year 2009 (Table 42).

Table 42:
Employed People According to SGK Registration (Formal Employment), 15+ age, 2004-2012

Year	İzmir						Turkey		
	Informal (thousand people)	Formal (thousand people)	Total (thousand people)	Informal Employment Ratio (%)	Non-Agriculture Informal Employment Ratio (%)	Agriculture Informal Employment Ratio (%)	Informal Employment Ratio (%)	Non-Agriculture Informal Employment Ratio (%)	Agriculture Informal Employment Ratio (%)
2004	382	663	1.045	36,6	30,8	83,1	50,1	33,8	89,9
2005	378	681	1.059	35,7	30,1	82,3	48,2	34,3	88,2
2006	417	687	1.104	37,8	32,9	78,6	47	34,1	87,8
2007	396	806	1.202	32,9	28,3	78,4	45,4	32,3	88,1
2008	325	846	1.171	27,8	23,8	76,1	43,5	29,8	87,8
2009	339	831	1.170	29	25,1	70	43,8	30,1	85,8
2010	397	906	1.303	30,5	24,7	74,5	43,3	29,1	85,5
2011	464	946	1.410	32,9	26,4	78,1	42,1	27,8	83,9
2012	429	996	1.424	30,1	24,5	79,2	39	24,5	83,6

Source: Calculated by using TurkSTAT, 2012g data.

²⁶ Analyses related to the sectoral distribution of employment are included in this study under the title of General Economic Structure

While the informal employment ratio of İzmir industry sector (24.9%) is under the country average value (27.9%), the same value regarding services sector (24.3%) occurs to be over the country average (22.7%). Despite that the informal employment in non-agriculture sectors is proportionately very low compared to the informal employment in agriculture sector, this picture is observed to be different when these are evaluated in respect to the number of employees. 314,000 people are informally employed within non-agriculture sectors of İzmir.

Informal employment is observed more commonly among women in İzmir. As of the year 2012, the informal employment ratio in women's employment is 37.5%. This value was observed to be 96.9% in agriculture sector, and 27.2% in non-agriculture sectors. Another adverse development regarding women's employment is that the share of unpaid family workers within overall employment increased significantly compared to the pre-2008 period. This ratio, which had declined to 11.2% back in the year 2008, increased to 19.4% in the year 2011 but declined to 17.6% in the year 2012. The share of unpaid family workers within overall employment in İzmir is lower than the country average value of 33.7%. However, this data grabs attention when it is considered that agriculture sector –fuelling this type of employment- has a relatively low share within İzmir economy.

2.f.3. Unemployment

The global economic crisis of which impact began to be felt strongly with the coming of the year 2008 affected also the workforce markets of almost all developed and developing countries. According to ILO data, the number of unemployed people rose from its 177.4 million value observed in the year 2007 to 197.3 million as of the year 2012. The highest surge of this increase was displayed in the year 2009 (22 million) (ILO, 2011). The global unemployment ratio observed as 5.6% in the year 2007 rose to 6.3% in the year 2009 but declined to 6.2% in the year 2010.

USA and EU member states came foremost among the countries that were affected from the crisis. Unemployment ratio reached 9.6% in USA as the highest value of the last 20 years, which declined to 8.9% in the year 2011 and 8.1% in the year 2012 (EUROSTAT, 2012b). Throughout EU, neither the increase nor the decline of unemployment ratio in the following years occurred to be as sharp as was in USA.

²⁷ The incongruity between the unemployment ratio data presented in this and following sections of the analysis is due to the difference between TurkSTAT and EUROSTAT definitions. Different values related to the same indicator had to be given for keeping the data comparable.

The highest unemployment ratio of 2000s throughout EU was observed in the year 2010 as 9.7%, which then declined to 9.6% as of the year. Throughout OECD countries, the unemployment ratio observed as 8.5% in the year 2010 declined to 8.2% as of the year 2011.

The impact of the global crisis was felt considerably severe together with the surge in unemployment in the year 2009, which declined rapidly in the following years. The unemployment rate that was recorded to be 12.5% in the year 2010 declined to 8.8% as of 2011²⁷ (EUROSTAT, 2012b). According to this, the unemployment ratio that exceeded USA and EU overall values due to the impact of the crisis has returned to its pre-crisis level after recovery from the first shock.

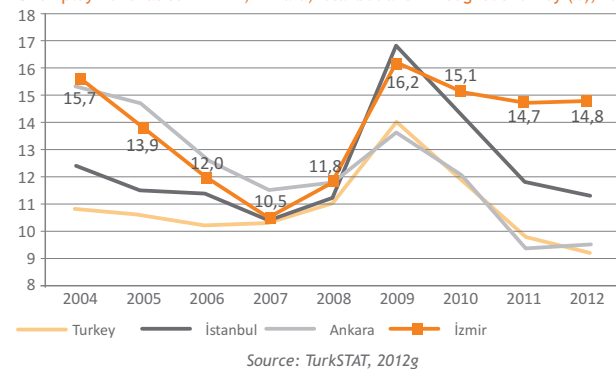
Table 43:
State of Workforce for the Non-Institutional Population
in İzmir, 2004-2012 (15+ age, thousand people)

Year	Population at Working Age	Workforce	Employment	Unemployed
2004	2.715	1.240	1.045	195
2005	2.757	1.230	1.059	170
2006	2.809	1.255	1.104	151
2007	2.898	1.344	1.202	142
2008	2.937	1.327	1.171	156
2009	2.997	1.397	1.170	227
2010	3.066	1.534	1.303	231
2011	3.099	1.653	1.410	243
2012	3.142	1.671	1.424	247

Kaynak: TÜİK, 2012g

Climbing above Turkey average with the coming of the global economic crisis, unemployment rate comes up as the most fundamental problem of İzmir workforce market. As of year 2012, a total of 247,000 people –comprising of 117,000 women and 130,000 men- are unemployed in İzmir (TurkSTAT, 2012g).

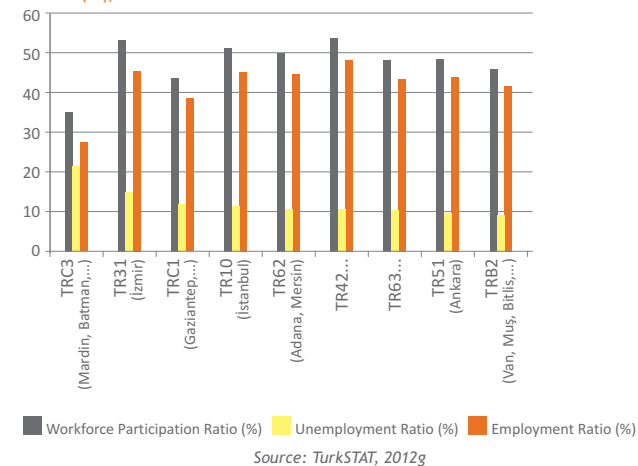
Figure 17:
Unemployment ratios in İzmir, Ankara, İstanbul and Throughout Turkey (%), 2004-2012



Having decreased both in ratio and in quantity in the period prior to the crisis, unemployment began to increase with the coming of year 2008. It is observed that the number of unemployed people increased more than 70% (105,000 people) in the 2008-2012 period. In the year 2009 when the impact of the crisis was felt the strongest, an increase of 71,000 was observed in total unemployment, encompassing 49,000 men and 22,000 women. When considered together with the workforce and employment data of the same period, it is observed that the majority of this increase (70,000) emerged from the rise in the workforce participation ratio while only a limited portion of it was due to recession in employment (Table 43).

Essentially, the state of unemployment in İzmir does not differ with those valid for the country and other metropolitan cities. The unemployment ratio that displayed a decline during the 2004-2007 period then was observed to make a surge in the year 2009, and began to decline in the following years in line with the alleviation of the crisis' impacts (Figure 17). However, the decline in unemployment occurred with a relatively low rate when compared to other regions. As of year 2012, unemployment ratio that is 14.8% in İzmir is significantly higher than that of İstanbul (11.3%), Ankara (9.5%) and Turkey average (9.2%).

Figure 18:
Base Workforce Data on NUTS 2 Regions with High Unemployment Ratios (%), 2011

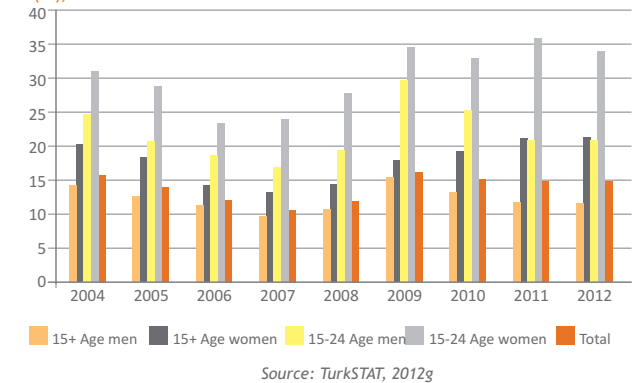


Although the employment ratio of İzmir (45.3%) is close to that of Turkey average (45.5%); in terms of unemployment ratio, the province surpasses Turkey (9.2%) with a value of (14.8%). The main reason behind this situation is that the workforce participation ratio in İzmir (53.2%) is above that of Turkey average (50%). Ranking at the 17th place regarding workforce participation ratio and 14th place regarding employment ratio, İzmir also happens to constitute the second region with the highest unemployment ratio following TRC3 (Mardin, Batman, Şırnak, Siirt) region among all NUTS 2 regions (Figure 18).

In the period following the leap in unemployment, a significant increase was observed in employment but this increase did not cover the increase in workforce participation ratio sufficiently, which led to a decline lower than expected in the unemployment of İzmir.

As was mentioned before, female workforce increased by 181,000 while male workforce increased by 163,000 in İzmir during the 2008-2012 period. 63,000 women that participated but not employed in the workforce took their places as unemployed within the workforce market. The variations on the unemployment level illustrate that unemployment among women is still on the rise in spite of the steep fall observed in the unemployment among men following the end of the surge recorded during the year 2009 (Table 44). Annual variations in the unemployment levels displaying different trends highlight that the workforce market of İzmir remain insufficient to cover the demands of women.

Figure 19:
Unemployment Ratio in İzmir Based on Gender and Age Groups, (%), 2004-2012



As is the case with overall Turkey, it is observed in İzmir that unemployment ratios among women and 15-24 years age group young people occur to be considerably high. Unemployment ratio of women (21.2%) is 9.6 points over that of men (11.6%) (Figure 19).

Table 44:
Change of Unemployment Level by Gender, 2004-2012

Year	Men	Women	Change Compared to Previous Year / Men (%)	Change Compared to Previous Year / Women (%)
2004	132	63		
2005	117	54	-11,4	-14,3
2006	107	44	-8,5	-18,5
2007	94	48	-12,1	9,1
2008	103	53	9,6	10,4
2009	152	75	47,6	41,5
2010	137	95	-9,9	26,7
2011	130	113	-5,1	18,9
2012	130	117	0	3,5

Source: Calculated by using TurkSTAT, 2012g data

This value is 10.4 points over the country average (10.8%) (TurkSTAT, 2012g). In İzmir more than one fifth of all women and more than one fourth of all young people are unemployed. Scoring 11 points over the provincial general unemployment ratio, the young unemployment ratio in İzmir (25.8%) is also 8.3 points over the Turkey overall young unemployment ratio (17.5%) (TurkSTAT, 2012g). The segment with the highest unemployment risk within İzmir workforce market is observed to be young women with an unemployment ratio of 34% as of the year 2012. The highest increase in the unemployment ratio occurred in this group during 2008-2012 period.

Another group worthy of special consideration in workforce assessments is the long term unemployed people. When the period between the years 2004 and 2011 is examined, it is observed that the long term unemployment observed to display a declining trend up until the year 2009 then increased in the years 2009 and 2010 due also to the impact of the economic crisis and declined back in the following years. The long term unemployment, ratio of İzmir, which was 26.9% as of the year 2008, occurred to rise to 28.2% in the year 2009 and 34.6% in the year 2010, and then declined to 32.5% in the year 2011 and 28.8% in the year 2012. According to TurkSTAT data, the number of long term unemployed people in İzmir was 71,000 as of the year 2012.

Although unemployment ratio among both women and young people is significantly high and more than a quarter of the unemployed consist of long term unemployed people in İzmir, difficulties are experienced regarding coverage of the workforce demand. According to the workforce market survey study conducted by İzmir Provincial Directorate of İŞKUR, the ratio of vacant job positions in İzmir occurs to be 3.6% (İŞKUR, 2012a). Another interesting finding in the same survey is that 53.2% of all employers stated that they experienced difficulties in finding employees due to lack of personnel with sufficient skills/qualities regarding their relevant profession. This data illustrates that workforce skill/qualification problem is also at striking levels in addition to the unemployment problem in İzmir workforce market.

2.f.4. Assessment

When Turkey workforce market and other metropolitan cities are also taken into assessment, it is observed that the reflections of the global economic crisis on İzmir workforce market are considerably strong. In the year 2009 when the impact of the crisis were felt most strongly and the following recovery years, reverse trends were noted both in the unemployment, workforce participation and employment indicators, and in the sectoral distribution of employment and the state of women within the workforce market compared to the pre-crisis period. Year 2012 data point to the fact that the cyclical reflection of the crisis on İzmir workforce market have begun to dissipate.

Workforce participation, which is a determinant on employment and unemployment indicators, increased significantly with the coming of the year 2009, and exceeded Turkey average level for the first time in the year 2010. Rapid and significant increase of workforce participation ratio created severe pressure on unemployment. Although a relative surge of employment ratio was noted during the 2010-2011 years in İzmir, this surge remained insufficient for covering the increase in workforce and returning the unemployment ratio to acceptable levels. Without disregarding the limited decline of 0.2 points noted in the year 2012, alternative measures have to be discussed aimed towards creating new and decent jobs and developing employment, with the assumption that the rising trend of the workforce participation ratio is to continue, though with a decelerating increase rate.

As with the Turkey workforce market, the problems of the İzmir workforce market are not limited to creating workforce demand. In terms of workforce supply, a considerable lack of skill and qualification issue may be observed. This problem essentially increases workforce training costs, limits the efficiency of workforce and feeds unemployment.

In this regard, the most important supplement to the actions aimed towards improving workforce demand and developing employment in İzmir province has to consist of studies towards tackling the qualification issue of the workforce and developing education's capability for covering the workforce market demands in a broad sense.

The significant subject relevant to the increase of the workforce participation in İzmir is the segment of women who comprised more than half of the additional workforce that participated in the workforce Market. Women's employment ratio has displayed a stable increase in İzmir since the year 2008, while it was also observed that employment ratio has also been on the rise. According to year 2012 data, the segment with the highest unemployment risk is composed of 15-24 years age young women. This fact points out that the workforce market fails to satisfy the demands of the women. On the other hand, it is necessary to review the developments in employment in general and the developments in women's employment in special and examine the quality of the employment created in recent years in depth.

Informal employment ratio that displayed a declining trend up until the year 2009 entered a rising trend with the start of the crisis. This ratio that was observed as 27.8% in İzmir as of year 2008 reached 32.9% as of year 2011. 58.2% of the employment increase realised in this period occurred to be informal. The ratio of informal employment within the additional women's employment in the same period occurred to be 67.6%. Although agriculture sector did have a contribution to the rising trend of informal employment, non-agriculture sectors also displayed increases. While informal employment was observed to decline significantly in the year 2012 (excluding agriculture sector), the informal employment ratio is still much higher than acceptable levels.

According to year 2012 data, more than three quarters of those employed in agriculture sector and approximately one quarter of those employed in industry and services sectors are employed informally. It is striking that even though the informal employment indicators were observed to be lower in İzmir compared to overall Turkey data, they occurred to display a significant increase within a short time due to the crisis' impact in contrast to the country average trends.

Another adverse phenomenon in terms of women's employment besides informal employment is the high value found for the share of unpaid family work within overall employment in İzmir. The share of unpaid family work within overall women's employment occurred to be 17.6% as of the year 2012. According to this, more than one sixth of women who participated in employment within İzmir are employed without salary and devoid of any protective arrangements of a reliable employment relationship. More than one third of all women who are employed as unpaid family workers work in non-agriculture sectors. In addition to informal employment, unpaid family work is also among issues that are in need of deciphering through field studies and shared mind development towards resolution. Marketing jobs undertaken by women in line with gender roles and transforming these into paid work, and particularly developing the accessibility to care services shall lead to both direct and indirect development of women's employment.



3.986

the number of employed disabled citizens as of 2012

21.986.873₺

the financial aid by ASPB and İBB in 2012

397

the number of people employed while receiving social aid

2.g. INCOME DISTRIBUTION AND POVERTY

2.g.1. Income Distribution

The prosperity of a society is generally measured up in the size of national income generated. National income, national income per capita and household disposable income are used as basic social prosperity indicators. An issue as important as income level occurs to be how fair this income is distributed among production factors, social groups or individuals. A commonly used indicator for the determination of income distribution is the Gini coefficient. Any increase of Gini coefficient - varies between 0 and 1-shows that the inequality of income distribution increases. Poverty data are also considered as indicators of the reflection of national income on social prosperity.²⁸

Income inequality was observed to decline globally during the 1990-2007 period, while it was noted to rise for certain country groups, countries and regions (UNICEF, 2011). Groups of countries within which income inequality increased encompass Eastern Europe –including Turkey- and Central Asia along with high income countries group. Another study on this subject has revealed that interregional inequalities rose in 70% of OECD countries during the 1995-2005 period (OECD, 2009). According to the UNICEF report that revealed the existing status of income inequality in a comprehensive framework, Turkey also occurred to reside among the countries with rising inequalities during the 1990-2008 period (UNICEF, 2011).²⁹

²⁸ There are important constraints against accessing up-to-date data regarding income distribution and poverty on NUTS Level 2 and Level 3 economic regional units. Therefore, this section initially included explanations based on Year 2011 Income and Life Conditions Study on Aegean Region, followed by presentation of assessments based on TurkSTAT Household Budget Survey covering 2002-2005 period on İzmir province. Lack of up-to-date data on İzmir was supplemented through institutional data.

²⁹ In the OECD reports studying the 1995-2005 and 1985-2008 periods, Turkey was included among regions where inequalities are declining. In the UNICEF report, data from Standardized World Income Inequality Database (SWIID) database are used, which standardises data obtained from most significant data providers and makes them comparable. This report was accepted as reference related to the status in Turkey due to being an up-to-date report that assesses the inequalities through multidimensional analyses conducted at global scale.

According to year 2010 OECD data, average Gini coefficient in OECD countries was observed as 0.31 while this coefficient occurred to be 0.41 for our country (OECD, 2010). With this coefficient value, Turkey ranks as the third country with the highest income distribution inequality after Chile and Mexico³⁰.

This fact illustrates that the inequality of income distribution present in our country is at considerably high levels in a relative sense. The income distribution for overall Turkey and NUTS Level 1 regions valid for the 2006-2011 period is summarised below.

The average annual disposable income per household is 24,434 TL throughout Turkey, while the average annual equivalent household disposable income³¹ is 10,774 TL. Equivalent household disposable income of Aegean Region occurred to be 12,924 TL, thus higher than the Turkey average value. With this income level, Aegean Region ranks as the second region with the highest income, following İstanbul Region that had a 14,823 TL income (TurkSTAT, 2011b).

One of the most important impacts of economic crises on economy is that they cause income redistribution.

Depending on the impact area and scale of the crisis, this income redistribution process may occur at global, national and/or regional scale. This situation may be assessed by monitoring the changes occurring on the Gini coefficient during crisis period. According to equivalent household disposable income, Gini coefficient rose together with the global economic crisis in line with the developments observed during the 1999 and 2001 crises (TurkSTAT, 2011b).

(Table 45) Illustrates that income distribution inequalities rose during the period when the impact of the global economic crisis was felt but this increase did not gain permanency. Gini coefficient calculated at national scale displayed a declining trend during the 2006-2008 period, after which an increase was observed in the year 2009 that was limited and a declining trend was caught in the following year. In most of NUTS Level 1 regions, Gini coefficient returned to their 2006 levels or below those levels as of the year 2011.

It strikes attention that the situation is different for Aegean Region compared to other regions. The coefficient increase observed in the year 2008 –despite the partial decline in the year 2009- continued throughout the following years.

Table 45:
Gini Coefficients According to Equivalent Household Disposable Income, 2006-2011

Level	2006	2007	2008	2009	2010	2011
Turkey	0,428	0,406	0,405	0,415	0,402	0,404
Urban	0,415	0,394	0,395	0,405	0,389	0,394
Rural	0,406	0,375	0,378	0,38	0,379	0,385
NUTS, Level 1						
TR1 İstanbul	0,375	0,346	0,362	0,363	0,373	0,371
TR2 West Marmara	0,35	0,321	0,331	0,361	0,36	0,365
TR3 Aegean	0,426	0,376	0,387	0,381	0,387	0,397
TR4 East Marmara	0,392	0,393	0,335	0,368	0,341	0,326
TR5 West Anatolia	0,413	0,379	0,402	0,408	0,367	0,374
TR6 Mediterranean	0,421	0,418	0,387	0,403	0,397	0,404
TR7 Central Anatolia	0,342	0,328	0,339	0,395	0,362	0,366
TR8 West Black Sea	0,372	0,36	0,366	0,382	0,348	0,335
TR9 East Black Sea	0,378	0,346	0,365	0,359	0,327	0,327
TRA Northeast Anatolia	0,381	0,405	0,436	0,407	0,404	0,39
TRB Central East Anatolia	0,404	0,397	0,405	0,415	0,417	0,427
TRC South East Anatolia	0,396	0,366	0,395	0,411	0,404	0,396

Source: TurkSTAT, 2011b

³⁰ In the OECD table accepted as reference, Gini coefficient data for Hungary, Ireland, Japan, New Zealand and Turkey belong to the year 2009, while that of Chile belong to the year 2011.

³¹ Equivalent household disposable income is obtained by dividing the annual disposable income of the household to the equivalent household size. Equivalent household size shows how many adults (equivalent individual count) each household size corresponds to for the purpose of converting the income accumulated at household level to individual incomes.

While the impact of the global crisis became limited according to many other indicators during the years 2010 and 2011, the expected recovery in income distribution within Aegean Region did not occur. According to year 2011 data, Aegean Region is the third region where income distribution occurred to be at its most adverse following TRB Central East Anatolia and TR6 Mediterranean regions. It is considered that the increase observed in the unemployment and agriculture's share within employment since the year 2008 in the Region have contributed to the coefficient increase noted for Aegean Region (TurkSTAT, 2012g).

Table 46:
Distribution of Annual Equivalent Household Disposable Income Among Groups of 20% Sorted as per Equivalent Household Disposable Income, 2011 (İBBS, Düzey 1)

Level	First % 20	Second % 20	Third % 20	Fourth % 20	Fifth % 20
Turkey	5,8	10,6	15,2	21,7	46,7
TR1 İstanbul	7,2	11,5	15,5	20,7	45,1
TR2 West Marmara	6,9	11,7	16	21,6	43,8
TR3 Aegean	6,6	10,6	14,7	21	47,1
TR4 East Marmara	8,1	12,5	16,4	21,9	41
TR5 West Anatolia	6,6	10,9	15,8	22,4	44,3
TR6 Mediterranean	6,5	10,6	14,8	20,8	47,3
TR7 Central Anatolia	7	11,6	15,6	21,9	43,9
TR8 West Black Sea	7,3	12,5	16,6	22,2	41,3
TR9 East Black Sea	8	12,4	16,5	22,3	40,8
TRA Northeast Anatolia	6,6	10,8	15,2	21,5	46
TRB Central East Anatolia	5,9	10	14	20,6	49,5
TRC South East Anatolia	6,2	10,6	15	21,9	46,3

Source: TurkSTAT, 2011b

Another indicator on income distribution is the distribution of household disposable income among groups of 20% sorted as per this income level (Table 46). According to TurkSTAT data belonging to the year 2011, the share taken by the 20% group with the highest income within the equivalent household disposable income is 8 times that of the 20% group with the lowest income throughout Turkey. This same ratio occurs to be 7.1 times for Aegean Region. Thus, there are wide gaps between the richest group and the poorest group both throughout Turkey and throughout Aegean Region.

When the distribution of equivalent household disposable income among income groups is considered together with the average and median income levels, it is observed that the average income level of the Aegean Region is 20% higher than Turkey's average income level (TurkSTAT, 2011b).

Furthermore, median income and average income of the Aegean Region have higher values than Turkey's average income for all income groups. It is understood through these indicators that the poverty ratio is relatively low in the Aegean Region.

Population increase rate and net migration rate are essentially variables that adversely affect income distribution. When the Gini coefficients of NUTS Level 2 regions are examined, it is seen that particularly regional centre provinces with high immigration come foremost regarding income distribution inequality (Table 47).

Table 47:
Income Distribution, Migration and Population Indicators for NUTS Level 2 Regions

NUTS** Code	Net Migration Rate* (per mille)	Annual population increase rate (per mille)	Gini coefficient
TR51	11,2	24,67	0,43
TR10	8,98	27,42	0,43
TR21	8,77	31,1	0,37
TR61	8,57	7,33	0,39
TR41	6,47	11,55	0,41
TR42	5,86	21,13	0,37
TR32	2,31	14,7	0,35
TR31	2,26	4,14	0,39
TR22	1,32	-1,19	0,35
TRB1	-0,9	23,51	0,33
TRC1	-1,79	23,39	0,31
TR52	-1,83	11,54	0,38
TR62	-4,01	11,62	0,4
TR33	-4,8	-21,14	0,37
TRC2	-4,82	29,28	0,41
TRC3	-5,74	35,32	0,36
TR82	-6,43	-4,16	0,39
TR63	-6,51	3,05	0,40
TR72	-6,92	-2,07	0,39
TRA1	-8,49	4,11	0,39
TR83	-9,18	-8,41	0,4
TR81	-9,49	-15,23	0,34
TR90	-9,88	-1,25	0,35
TR71	-11,67	-0,45	0,35
TRA2	-16,13	20,85	0,37
TRB2	-28,98	11,63	0,39

Source: TurkSTAT, 2003; TurkSTAT, 2011c
* Net migration rate and annual population increase rate data belong to the year 2011, while Gini coefficient data belong to the year 2003.
** Codes of NUTS Level 2 Regions are presented under Annex-1.

According to year 2003 data of TurkSTAT, İstanbul is the province with the highest income inequality, while İzmir ranks at the eighth place on that list. It is considered that an important determinant of the adverse income distribution status present for İzmir is the migration phenomenon. İzmir net migration rate, although displaying a considerable decline during the years 2010 and 2011, occurred to be significantly high in the previous period. İzmir net migration rate, which was observed as 4% according to year 2000 GNS data, was calculated to be 0.2% as of the year 2011.³²

İzmir ranks at the third place under the year 2011 socioeconomic development index (SEGE) listing prepared by the Ministry of Development. This gradation study, which has been prepared by using 61 variables under 8 subcategories, namely demography, education, health, employment, competitive and innovative capacity, financial capacity, accessibility and quality of living, is the only official indicator where the socioeconomic development differences among the provinces of Turkey may be observed.

2.g.2. Poverty and Social Inclusion³³

In addition to services directly related to employment such as continuous income, healthcare and social security, access to basic public services such as education, accommodation and transportation is also among the prerequisites for healthy integration into society. In this perspective, some individuals and groups such as handicapped people, women, people with different sexual orientations, Roma people, migrants and poor people face social exclusion at varying degrees. Social exclusion, which makes individuals face issues against existing effectively within social processes and brings along some very adverse social problems, is a phenomenon that represses social development. In this regard, an absolute intervention is required in both central and regional sense.

Poverty is both a structural aspect and a result of social exclusion. The issue of poverty, which took its place among the fundamental agenda topics of international social policy with the coming of the 1990s, is still of significance on both national and global scale. International research and policy documents point out to the fact that not a satisfactory improvement could be obtained regarding the combat against poverty throughout the world.



³² Due to migration being a phenomenon of which economic and social impacts stretch over many years, net migration rate's power to explain the unfairness of income distribution in İzmir increases. Detailed explanations on migration may be found under the Migrating Population section.

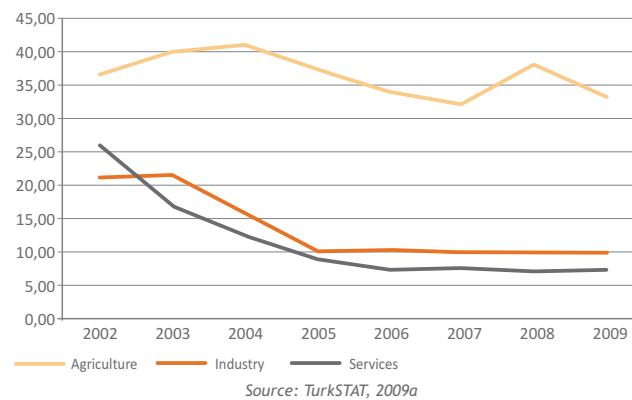
³³ Due to difficulty in accessing up-to-date and reliable data on poverty and social inclusion based on NUTS Level 2 Regions, this section was explained through NUTS Level 1 Regions and accessible regional İzmir data.

During the period between the mid-1980s and late-2000s, an increase of 1 point was observed in the annual average poverty ratio of OECD countries.³⁴ As of the period's end, poverty ratio reached 11.1% throughout OECD (OECD, 2011a). According to the abovementioned study, Turkey's poverty ratio was observed to be 17% as of the end of 2000s, displaying an annual average of 0.2% increase throughout this period. On the other hand, the ratio of population under poverty risk to overall population was found out to be 24.1% for EU member states as of the year 2011 (EUROSTAT, 2012b).³⁵

Poverty ratios that are calculated via different methods by TurkSTAT³⁶ reveal that poverty bears a declining trend throughout the country (TurkSTAT, 2009a). Analyses conducted on national scale illustrate, as expected, that poverty ratio is inversely proportional with education level.³⁷ According to year 2009 data, poverty ratio is at 29.8% for illiterate people and people without any graduation, while at 0.7% for people with college or faculty graduation. When poverty ratios are considered by gender, no distinct difference between women's and men's poverty ratios could be observed.

Poverty ratios vary based on the sector the household individuals are employed in. Poverty ratios of those employed in agriculture sector are considerably higher than those employed in industry and services sectors (Figure 20). Poverty ratio calculated to be over 20% for industry and services sectors of Turkey as of the beginning of the period is seen to have declined under 10% as of the

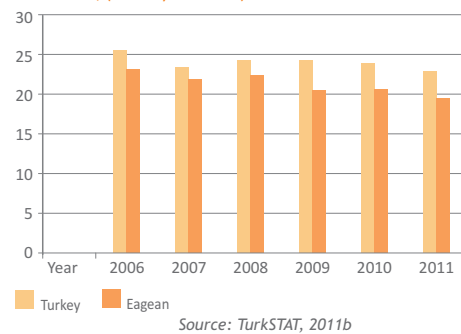
Figure 20:
Poverty Ratios in Turkey by the Sector the Household Members are Employed In, 2002-2009



end of the period. In regards to those employed in agriculture, only a 3.3 points of improvement was made as of the year 2009 compared to the year 2002.

Poverty ratio displayed a partial increase during 2007-2009 years but declined during the 2010-2011 period and fell back under its 2007 value (22.9%) (TurkSTAT, 2011b). In TR3 Aegean Region, poverty ratio declined from its 2006 value of 23.1% to 19.4% as of the year 2011 (Figure 21).

Figure 21:
Poverty Ratios by Income Based Poverty Thresholds, 2006-2011, (Poverty Risk 60%)



With the indicated decline, TR3 Aegean Region became the second region with the highest decline observed among NUTS 1 regions, following TR8 West Black Sea Region. Social supports are the most traditional policy tools in combatting against poverty and social exclusion.³⁸ ASPB Provincial Directorates and municipalities provide real and cash supports to individuals and families who are unable to satisfy their basic needs and face difficulty in surviving due to poverty.

İzmir ASPB Provincial Directorate made payments to a total of 2,325 people worth 9,691,000 TL in the year 2011 and 3,105 people worth 13,156,223 TL in the year 2012 within the context of social and economic grants. (İzmir ASPB Provincial Directorate, 2012). According to these data, it is seen that the number of beneficiaries to such supports increased by 33.5% and the value of dispensed support increased by 35.8% within the last one year.³⁹ İzmir Metropolitan Municipality provided cash supports worth 8,830,650 TL to a total of 58,123 people in the year 2012.

Another passive mechanism considered within the context of combatting poverty and social exclusion is unemployment insurance.⁴⁰ According to İŞKUR data, a

sum of 55,385,447 TL unemployment insurance payment was made to 34,538 unemployed people in the year 2011 and a sum of 70,958,142 TL unemployment insurance payment was made to 39,349 unemployed people in the year 2012 in İzmir province. 13.9% increase observed in the number of beneficiaries of unemployment insurance is considered as a natural result of the high levels of unemployment experienced in İzmir during the period that followed the economic crisis.

The most fundamental condition of access to continuous income, social security and healthcare services is being employed in a decent work⁴¹. In recent years, the dominant trend in combatting poverty has been transition from passive policies with limited permanent effect to active policies based on employment, which is conceptualised as “inclusion through employment”, in developed and developing countries. In this framework, it has been stipulated for beneficiaries of ASPB to be directed to İŞKUR, employed and integrated back to society in the shortest possible time period as per the protocol signed between ASPB, ÇSGB and İŞKUR⁴². Selected data belonging to overall Turkey and İzmir as of November 2012 are illustrated in (Table 48).

Within the context of this protocol, individual interviews were held with 1,556 (18.5%) of those registered under İŞKUR. İzmir Provincial Directorate and 3,257 people (38.8%) were directed to employment (Table 48). Compared with the respective Turkey overall values of 9.8% and 27.3%, it is observed that the performance of İzmir in directing to employment in terms of social assistance fields is over that of Turkey average. However, İzmir's performance in directing registered people to vocational trainings and

rehabilitation courses (0.2%) and employment placement performance (12.2%) are seen to be relatively insufficient.

Extension of unemployment period eliminates access to services vital regarding participation in social life such as continuous income, health and social security and thus increases social exclusion risk. Therefore, long term unemployed people constitute one of the groups in need of special policies in terms of social inclusion approach. As mentioned under the workforce market section, long term unemployment ratio of İzmir province⁴³, which declined from 42.6% to 26.9% through the 2004-2008 period and observed to rest under the country average level, displayed a significant surge in the following period also due to the global crisis and reached 34.6% (Figure 22). (TurkSTAT, 2012g). As of the year 2012, more than a quarter of the unemployed people within İzmir workforce market (28.8%) have been unemployed since more than 1 year ago. Considering that only 26.7% of the unemployed people registered under İŞKUR within İzmir may benefit from unemployment insurance, it is considered that exclusion risk runs significantly high for this group.⁴⁴

Figure 22:
Long Term Unemployment Ratio, 2004-2012

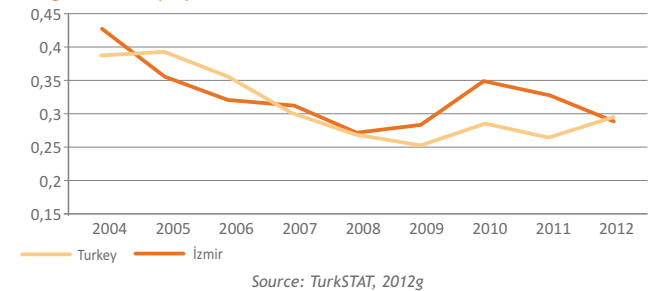


Table 48:
Services Towards Those Directed to İŞKUR as per ASPB-İŞKUR Protocol

Indicators	Turkey	İzmir	Indicators	Turkey (%)	İzmir (%)
Number of people within 15-64 years age segment in target group of İŞKUR	1.056.209	17.572			
Number of people registered to İŞKUR	322.687	8.404	The ratio of 15-64 years age segment being registered to İŞKUR	30,6	47,8
Number of people interviewed individually	31.692	1.556	The ratio of people interviewed individually within registrations to İŞKUR	9,8	18,5
Number of people directed to employment	88.182	3.257	The ratio of people directed to employment within registrations to İŞKUR	27,3	38,8
Number of people employed	19.069	397	The ratio of people employed within the number of people directed to employment	21,6	12,2
Number of people who participated in courses within the context of vocational training and/or vocational rehabilitation	15.073	166	The ratio of people participated in courses within registrations to İŞKUR	4,7	2
The number of people benefitted from unemployment insurance	37.874	1.733	The ratio of people benefitted from unemployment insurance within registrations to İŞKUR	11,7	20,6

Source: İŞKUR, 2012b

³⁴ Belirtilen yoksulluk rakamları, OECD tarafından, medyan eşdeğer hanehalkı gelirinin % 50'sinden az gelirlere yaşamını sürdüren kişilerin oranı olarak hesaplanmıştır.

³⁵ EUROSTAT veritabanında sadece 2006 yılına ait Türkiye yoksulluk riski verisi bulunmaktadır. % 72,4 düzeyinde Türkiye 2006 yılında AB ülkeleri arasında en yüksek yoksulluk riski altındaki nüfus oranına sahip ülke olarak görülmektedir.

³⁶ Within the context of TurkSTAT Year 2009 poverty study, poverty ratios were calculated via food poverty, general poverty, daily income per capita threshold value and via expenditure based poverty methods. Due to the difference between calculation methods, TurkSTAT and OECD data are not aligned.

³⁷ Poverty ratio according to TurkSTAT definition: The ratio of population whose equivalent income per capita (individual equivalent income) is lower than the poverty limit value

³⁸ Social support system at Turkey's central administration level became significantly more centralised as a part of the structural transformation of social security system. Social supports under ASPB responsibility are dispensed by Ministry run Provincial Directorates at local level.

³⁹ No assessments on the sufficiency of these increases may be made due to the absence of the number of individuals/families in need of assistance.

⁴⁰ Although unemployment insurance is not a social assistance but social insurance application, it is also considered as a passive policy aiming towards eliminating the income loss brought together with becoming unemployed.

⁴¹ “Decent work” definition of ILO was embraced as definition. See: <http://www.ilo.org/global/topics/decent-work/lang-en/index.htm>

⁴² The mentioned protocol is the protocol signed among the referred institutions on the date of 17th of February 2012. There are cooperation protocols signed by İŞKUR with different institutions with similar framework prior to this protocol.

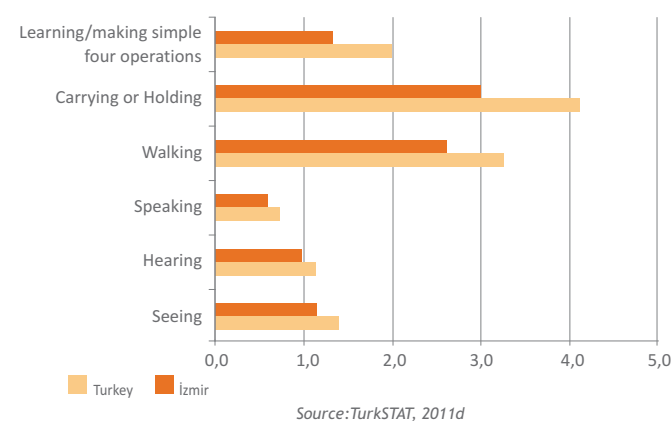
⁴³ Long term unemployment ratio points out to the ratio of those unemployed for more than 1 year within the overall number of unemployed people.

⁴⁴ According to TurkSTAT unemployment data, the ratio of the number of people benefitting from unemployment insurance within the overall number of unemployed people is observed to be 1.5%. The level of benefitting from unemployment insurance in our country is lower than OECD average. According to year 2008 data, the ratio of the number of people benefitting from unemployment insurance within the overall number of unemployed people is 12.7% throughout Turkey, while OECD average is 46.5% (OECD, 2011b).

Due to being face to face with obstacles against access to different fields of social services, especially education, employment and transportation, along with social integration handicapped people are considered to be yet another group in need of special policies.⁴⁵ However, there are significant problems regarding accessing standard, regular and comparable data on handicapped people on regional scale. Yet, findings of the Year 2011 Population and Accommodation Survey conducted by TurkSTAT illustrate a general framework throughout the country and at province scale on the handicapped population. As of the year 2011, there are 4,882,841 handicapped people throughout Turkey and 206,142 handicapped people in İzmir.⁴⁶ According to this data, İzmir is the third province with the highest number of handicapped people throughout Turkey.

Concentration of different handicap groups in İzmir is in line with Turkey average values, while it is observed to be lower compared to Turkey average based on each of the handicap groups. the handicap group with the highest numbers among all handicapped people in İzmir are those having difficulty with carrying or holding (3%) (TurkSTAT, 2011d), followed by those having difficulty with ascending/descending stairs (2.6%), and those having difficulty with learning/making simple four operations, remembering/focusing compared to peers of same age (1.3%) (Figure 23).

Figure 23:
Proportional Distribution by Handicap Type



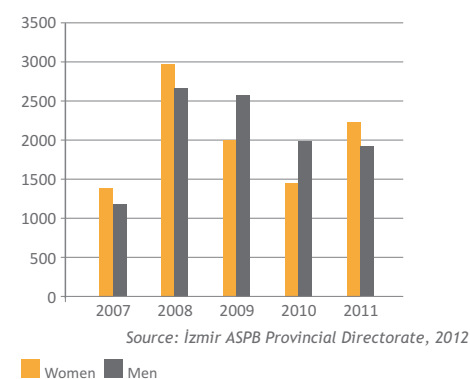
In the listing of handicapped people's expectations from public institutions and organisations according to the Problems and Expectations of Handicapped People Survey⁴⁷ conducted by TurkSTAT in year 2010 towards

the purpose of determining the daily life problems and expectations of handicapped people registered to the National Handicapped People Database; increasing social assistance and supports was expressed by most people with a value of 85.7%, followed by improvement of healthcare services with 77%, improvement and universalisation of care services with 40.4% and increasing employment opportunities with 28.7% (TurkSTAT, 2010).

The background of the expectation towards increasing of employment opportunities mentioned by more than a quarter of the handicapped people comprises of very serious problems in accessing employment. Recruitments realised within the context of obligation to employ handicapped people that was regulated as per the Labour Law no. 4857 for the purpose of supporting handicapped people's employment are carried out via İŞKUR. A total of 3,986 handicapped people, consisting of 661 people in public sector and 3,325 people in private sector, were provided with employment in İzmir within this framework by İŞKUR as of the year 2012. However, the quota assigned for 1,366 handicapped people (25.5% of total quota), consisting of 1,256 in private sector and 110 in public sector could not be filled. This high vacant quota should be inspected in detail together with the reasons behind the inadequate employment level of handicapped people, and relevant policies should be implemented towards eliminating this adverse condition.

Homecare services for handicapped people and disability pensions constitute the most basic social support mechanisms conducted by ASPB in terms of access to continuous income of handicapped people who face significant problems in accessing employment.

Figure 24:
Number of People Benefitting from Homecare Services for Handicapped People, 2007-2011



Homecare fee payments were made to a total of 4,167 handicapped people, comprising of 2,240 women and 1,927 men by ASPB Provincial Directorate within as of the year 2011 (İzmir ASPB Provincial Directorate, 2012). Data illustrate that a 119% increase was observed regarding the number of people benefitting from this type of support in the year, while this value declined rapidly with the coming of the year 2009 (Figure 24).

Again in the year 2011, 5,864 female and 3,511 male (total 9,375) handicapped people were provided with disability pension payments (SGK, 2011). A 5% increase occurred in the number of people receiving disability pension in the last year. No analytical assessment may be made on the sufficiency and effectiveness of the indicated supports with the present data. Eliminating the lack of data and analyses on the issue is of vital importance regarding correct analysis of the present situation and effectiveness of implementation.



⁴⁵ Explanations on the accessibility of handicapped people to education are included under the Education section.

⁴⁶ According to 2011 Population and Accommodation Survey, handicapped is defined as a person with at least one handicap, and these are classified under six groups as per relevant handicaps such as having difficulty in seeing, hearing, speaking, walking and ascending/descending stairs, carrying and holding, learning/making simple four operations, remembering/focusing compared to peers of same age.

⁴⁷ The study covered a total of 280,014 handicapped individuals who are registered into the National Handicapped People Database created by ASPB General Directorate of Handicapped and Elderly Citizen Services, dwelling in households within Turkey borders and reported to have a minimum of 20% handicap ratio in the health report.

2.g.3. Assessment

There are no comparable and up-to-date statistics on income distribution based on NUTS Level 2 and Level 3 regions. Year 2003 Gini coefficient values that comprise the most up-to-date data on this subject regarding the region display that İzmir is the eighth worst Level 2 region in terms of income distribution. However, considering the fact that economic crises contributed to the redistribution of income, that global economic crisis in the year 2008 caused mass fluctuations and developments opposite the general trends in İzmir workforce market, the adequacy of data belonging to the year 2003 is to be doubted on the level of light shed for 10 years beyond that time. At this point, messages indicated through the developments throughout the country and Aegean Region in recent years have to be included into this assessment at a certain degree.

In spite of the unfair income distribution that increased (Gini coefficient increase) throughout the country and other Level 1 regions due also to the crisis declined in the following years and returning –in some regions- to the pre-crisis position, it is striking that this value continues to increase in Aegean Region. On the other hand, informal employment that increased by 2 points throughout Aegean Region rose by 5 points in İzmir, and the share of unpaid family workers within overall employment that increased by 4.6 points throughout Aegean Region increased by 8.2 points in İzmir during the 2008-2011 period.

Indicators such as the simultaneous increase of the share of agriculture within employment and high unemployment ratios observed in İzmir during the same period point out that there may be more adverse developments in İzmir compared to Aegean Region in terms of income distribution.

Adverse developments regarding income distribution reveal themselves in daily life first as an increase in the absolute and relative poverty. However, poverty data based on Level 2 and Level 3 regions are also not available. Regular generation of developments on income distribution and poverty level specific to İzmir as correctly compiled, comparable and up-to-date data is of vital importance for correct analysis of the problem and development of solution-oriented policies and specific measures.

Socialexclusion is among the most fundamental problems, particularly of urban life. Both creating and feeding off of poverty, social exclusion majorly represses living satisfaction. The amorphous characteristic of exclusion that is not independent from time and space makes quantitative measurement significantly difficult. Employment is revealed in literature essentially as a critical concept for limiting social exclusion, which is associated with poverty level, education and healthcare services along with access to continuous income and social security, and integration of groups in need of special policies into society in a healthy manner.

Experiences regarding social support dependency in developed countries laid the groundwork for the welfare state to decline also throughout Europe due to rising global competition and development of inclusion through employment approach in terms of combatting poverty and social inclusion policies.

Inter-institution cooperation and more concentrated and employment-oriented professional guidance and career planning studies lie at the foundation of the actions aimed towards bringing those who receive social supports to be brought back to employment as soon as possible. Implementation of policies aiming for employment of social support beneficiaries via ASPB in İzmir reveals that although a higher performance is displayed compared to overall country regarding services provided to those people, the same performance may not be achieved when concluding these actions with employment. This situation points out to a fundamental pairing problem and underlines the necessity of increasing the effectiveness of these actions. Effectiveness of pairing may only be possible through realising effective cooperation between parties via well designed mechanisms. Assessment of the subject via participative processes as a part of a comprehensive employment strategy is of vital importance.

The increasing importance of employment regarding social inclusion issue does not reduce the role of social supports as the most traditional tools of combatting poverty and in contrast increases the motivation to make social supports more effective in line with the purpose. One of the conditions for increasing the effectiveness of social supports is preparation of realistic and traceable regional income maps, and another is realisation of coordination among institutions granting social supports.

Inaccessibility of data on handicapped people just like those on poverty and income distribution at İzmir scale prevents correct analyse of another target group of significance to social supports and inclusion actions. Data on handicapped people should be kept in a standardised and comparable manner and presented to policy makers and researchers in order to design and implement effective measures towards inclusion of handicapped people.

Healthy integration of handicapped people with the society may be possible through first being able to access the basic social services. Relevant central administration authorities and municipalities have to work in coordination for providing comprehensive and permanent access of handicapped people to services.

Support of such actions through scientific studies by universities and through actions to raise social awareness and sensitivity by non-governmental organisations shall increase the impact and sustainability of the actions. Therefore, awareness raising activities to be carried out initially on the handicapped people and their inner circle and towards the public and all relevant institutions have to be considered as a significant component of works aimed towards developing the social integration of handicapped people.

Another group with high risk of social exclusion due to different aspects is comprised of women who face difficulties in accessing especially education and employment. İzmir has more positive data regarding indicators such as women's education level, women's workforce participation ratio and women's employment ratio compared to overall Turkey. However, international comparisons reveal that women not only of Turkey but of İzmir are also significantly far from where they are needed to be in relation to socioeconomic development and participation to social processes. Therefore, İzmir has to aim for achieving developed countries' standards by steering towards objectives that exceed country borders in terms of women's empowerment and realisation of gender equality. In order to achieve the high objectives, gender equality has to be considered for any and all policies to be developed in economic, social, environmental etc. fields (mainstreaming gender equality) in addition to raising social awareness. İzmir has significant regional dynamics to realise this. Improvement of such dynamics and receiving successful results may be possible through development of a shared will in the region and performance of all actions with a comprehensive approach and a decisive manner.



Economic Structure



₺704,6 million

The share of İzmir in the Investment Program

% 89,1

2004-2010 period
GVA increase rate

44

The number of firms
conducting R&D studies
by 2011 according to
EBSO 100 largest
firms survey

3.a. GENERAL ECONOMIC STRUCTURE

In the Global Metro Monitor report prepared by USA Brookings Institute, economic performances of many metropolitan regions from different geographies of the world are assessed in line with the estimates found out through data compiled from different sources. While only İstanbul was included in the year 2010 report where 150 metropolitan regions were studied, İzmir, Ankara and Bursa (2012) also took place in the 2011 and 2012 reports that studied respectively 200 and 300 metropolitan regions.

According to the index calculated by using GDP per capita and employment data in the Year 2011 Global Metromonitor report, İzmir was indicated to be the 4th metropolitan region with the highest economic performance during the 2010-2011 period. Index data display that a 5.5% income (GDP per capita) and 5.6% employment increase occurred in İzmir during the mentioned period. (Brookings, 2011). In this list led by China's city of Shanghai, as other representatives of our country, Ankara ranked at the 6th place with 5.4% income and 5.7% employment increase and İstanbul ranked at the 7th place with 5.3% income and 5.6% employment increase.

In the report of year 2012, the decline that occurred in the employment generation performance of İzmir, similar to other metropolises representing Turkey, made the city fall to the 45th place among 300 metropolises (Table 49). Although a relative decline was observed in the economic performance of İzmir, Ankara and İstanbul during the 2011-2012 period, it has been determined through the abovementioned study that these provinces broke completely free of a serious recession.

Table 49:
Global Metro Monitor Economic Performance Indicators

Regions	Per Capita Income Increase Ratio (%)			Employment Increase Ratio (%)			Ranking		
	2011 2012 (3)	2007 2011 (2)	1993 2007 (1)	2011 2012 (3)	2007 2011 (2)	1993 2007 (1)	2011 2012 (3)	2007 2011 (2)	1993 2007 (1)
İzmir	1,9	-4,3	2,3	3,1	-2,5	2,7	45	195	98
Ankara	2	-6,2	2,6	3,4	-0,8	2,9	35	152	79
İstanbul	1,6	-9,7	2,8	2,5	-5,0	2,5	70	282	95
Bursa	1,1	-10,0	2,9	2,5	-3,6	1,8	78	263	133

Source: Brookings, 2012

On the other hand, Year 2011 Global MetroMonitor report also compares metropolitan regions by their GDP per capita levels. In the listing of regional income levels that ranged between 2000 and 75,000 Dollars, İzmir ranked at the 181th place with 8,560 Dollars (Brookings, 2011). When examined together with economic performance indicators, İzmir displayed the appearance of a metropolis with low income but relatively high economic performance during the 2010-2011 period when recession conditions dominated the developed economies.⁴⁸

Recognised as one of the most developed regions of the country in terms of many economic and social indicators, İzmir is also the most developed province and centre of attraction within the Aegean Region. However, it is not possible to mention that the human resources, natural resources, logistics infrastructure and potential of İzmir could be fully actualised yet. Indicators relevant to economic growth point out to the necessity to take measures towards better actualising this potential in order to prevent İzmir economy from losing its economic advantage and competitiveness of many years.

3.a.1. Gross Domestic Product and Value Added

Official data that could be accessed make it possible for assessments on the economic value generated at regional level to be conducted for two separate periods of 1987-2001 and 2004-2010. Within the context of regional calculation statistics compiled by TurkSTAT, GDP values⁴⁹ may be obtained for 1987-2001 period, and GVA data may be obtained for 2004-2010. In order to tackle the difficulty of working with different definitions on different periods and the problem of accessibility, some sections of this analysis used also the gross regional product (GRP) data obtained through estimates found by using GVA data were used for the years 2004, 2008 and 2011.⁵⁰

The share of İzmir within overall Turkey GDP varies between 6.8% and 7.8% as per the current prices of the 1987-2001 period, showing little fluctuation (Table 50). With these data, İzmir ranks as the third province with the highest share within national GDP, following İstanbul and Ankara.

At the same time, İzmir is the province with the highest share within the Aegean Region. As of the year 2001, GDP level of İzmir was observed to rest at 13,382,810 billion TL. According to 1987 prices, a 44.6% increase occurred in the GDP level of İzmir between the years 1987 and 2001. This ratio is higher than the national GDP increase rate that was calculated as 43.7%.

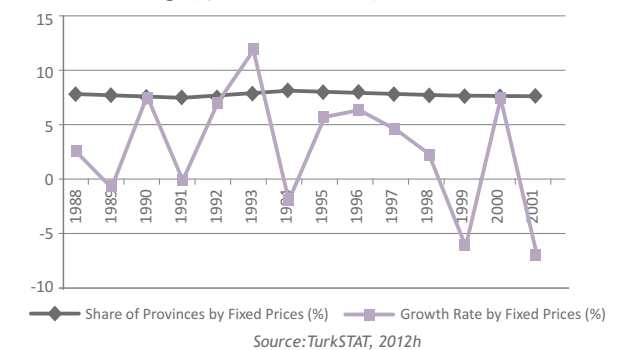
Table 50:
Change of İzmir GDP, Its Share within the Region and Turkey
(With Current Prices, billion TL)

Level	1987	1990	1995	2000	2001
İzmir	5.797	29.293	577.547	9.089.081	13.382.810
Aegean Region	12.392	62.154	1.210.816	19.036.527	27.863.436
Turkey	74.722	393.060	7.762.456	124.583.458	178.412.438
İzmir/Aegean Region (%)	46,8	47,1	47,7	47,7	48
İzmir/Turkey (%)	7,8	7,5	7,4	7,3	7,5

Source: TurkSTAT, 2012h

When the gross growth rate of İzmir Region and the share of regional product within Turkey GDP during the 1987-2001 period are examined, it is observed that there was negative growth of İzmir regional GDP during the years 1989, 1991, 1994, 1999 and 2001, while all other years displayed positive growth (Figure 25). During the period in question, İzmir realised an annual average of 2.8% growth. When analysed together with national GDP developments, the years when negative growth was observed are seen to coincide with periods of significant economic performance declines or economic crises throughout the country.

Figure 25:
İzmir GDP Change (by Fixed Prices of 1987)



⁴⁸ Year 2011 report data were included due to lack of findings on these data in Global MetroMonitor 2012 report.

⁴⁹ Different concepts were used for periodical assessments. Definitions approved by TurkSTAT for these concepts are as follows:

Gross Domestic Product (GDP): The value obtained by subtracting the sum of all inputs used for the production of goods and services produced by producer units inherent in an economy at a certain time interval due to domestic activities from the sum value of all these goods and services created in the same period.

Regional Gross Value Added (RGVA): The value found by subtracting the value of goods and services (intermediate consumption) used by economic units settled in a region for realising production from the value of goods and services (output) produced by the same units in result of their economic dealings in that region

⁵⁰ The gross regional product (GRP) data used in the analysis were obtained from the study titled "Orta Gelir Tuzağından Çıkış: Hangi Türkiye? Cilt 1: Makro/Bölgesel/Sektörel Analiz" written by E. Yeldan et al. NUTS Level 2 Regions prepared within the context of this study are given under Annex-2.

According to year 2010 data, a 63,298 million TL portion (6.5%) of overall Turkey GVA corresponding to 980,547million TL was generated by İzmir (Table 51). İzmir GVA increase rate observed between 2004-2010period starting and ending values is 89.1%. It is striking that the GVA increase realised in İzmir remained behind that of Aegean Region (92.4%) and Turkey (98.1%). This situation may be evaluated that the share of İzmir within Turkey and Aegean Region GVA levels decline at a limited degree through years.

İzmir follows İstanbul and Ankara as the third province in the listing made according to year 2010 GVA values (Table 52).

Table 52:
GVA Values and Increase Rates of Regions at NUTS 2 Level, 2004-2010

Code No	NUTS 2 Level	2004	2005	2006	2007	2008	2009	2010	2004 2010 Increase (%)
TR10	İstanbul	137.445.626	156.743.890	183.812.274	210.163.922	236.293.086	234.357.209	263.657.981	0,918
TR21	Tekirdağ, Edirne, Kırklareli	12.401.839	14.851.456	17.679.847	19.869.898	23.227.726	22.579.113	26.219.460	1,114
TR22	Balıkesir, Çanakkale	10.145.822	11.749.207	13.068.814	15.320.106	18.453.821	18.907.062	21.182.242	1,088
TR31	İzmir	33.466.656	38.126.018	44.376.653	49.695.246	55.859.157	55.472.204	63.297.473	0,891
TR32	Aydın, Denizli, Muğla	18.952.007	21.394.492	25.340.132	27.317.922	30.798.743	31.159.199	34.868.655	0,84
TR33	Manisa, Afyon, Kütahya, Uşak	17.199.480	20.292.956	23.920.353	26.751.665	30.970.272	31.599.716	35.777.518	1,08
TR41	Bursa, Eskişehir, Bilecik	31.229.718	37.059.077	44.384.803	50.843.318	56.670.413	55.394.464	61.493.987	0,969
TR42	Kocaeli, Sakarya, Düzce, Bolu, Yalova	28.948.384	33.880.850	40.828.815	45.329.209	52.576.318	52.018.676	58.647.982	1,026
TR51	Ankara	41.724.058	47.552.518	56.820.917	64.063.334	72.784.720	76.017.059	84.838.769	1,033
TR52	Konya, Karaman	11.895.953	13.648.959	15.503.281	17.707.924	20.270.377	20.929.072	22.735.113	0,911
TR61	Antalya, Isparta, Burdur	19.426.569	22.793.587	26.547.835	30.012.066	32.941.880	34.196.832	40.004.998	1,059
TR62	Adana, Mersin	20.120.471	23.416.918	27.180.415	30.708.639	34.120.118	34.686.590	39.909.003	0,984
TR63	Hatay, Kahramanmaraş, Osmaniye	12.035.936	13.958.002	15.574.494	18.317.284	21.880.965	22.201.647	25.630.678	1,13
TR71	Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir	7.653.499	8.790.307	9.908.368	11.415.859	12.939.573	13.280.815	15.038.126	0,965
TR72	Kayseri, Sivas, Yozgat	11.780.597	13.338.854	15.325.325	17.881.627	20.059.248	20.543.875	23.331.184	0,98
TR81	Zonguldak, Karabük, Bartın	7.526.303	8.969.178	10.384.952	10.693.407	11.402.299	11.311.134	12.312.391	0,636
TR82	Kastamonu, Çankırı, Sinop	4.288.594	4.551.143	5.049.803	5.669.381	6.289.362	6.495.068	7.392.996	0,724
TR83	Samsun, Tokat, Çorum, Amasya	13.927.568	16.033.008	18.668.697	20.530.783	24.141.055	23.601.879	26.517.979	0,904
TR90	Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane	12.420.882	15.174.935	17.389.282	19.576.656	22.600.000	22.609.256	25.616.791	1,062
TRA1	Erzurum, Erzincan, Bayburt	4.735.871	5.092.524	5.928.071	6.636.141	7.557.603	8.182.798	9.304.442	0,965
TRA2	Ağrı, Kars, Iğdır, Ardahan	3.385.948	3.887.211	4.394.111	4.706.945	5.257.444	5.720.214	6.910.139	1,041
TRB1	Malatya, Elazığ, Bingöl, Tunceli	6.766.898	7.972.143	8.813.155	10.045.910	11.393.014	12.325.264	13.767.055	1,034
TRB2	Van, Muş, Bitlis, Hakkari	5.064.326	5.960.077	6.502.317	7.436.404	8.662.709	9.706.378	11.245.883	1,221
TRC1	Gaziantep, Adıyaman, Kilis	8.035.266	9.651.052	11.139.925	12.093.643	13.489.538	14.195.784	17.616.078	1,192
TRC2	Şanlıurfa, Diyarbakır	9.354.714	10.519.376	12.027.073	13.106.837	14.441.022	16.171.223	19.770.650	1,113
TRC3	Mardin, Batman, Şırnak, Siirt	4.951.075	6.306.733	7.848.552	8.490.417	9.504.753	10.787.156	13.459.443	1,718
TR	Türkey	494.884.058	571.714.470	668.418.265	754.384.542	854.585.214	864.449.686	980.547.016	0,981

Source:TurkSTAT, 2013

Table 51:
Change of İzmir GVA, Its Share within the Region and Turkey, 2004-2010 (MillionTL)

Level	2004	2005	2006	2007	2008	2009	2010
İzmir	33.467	38.126	44.377	49.695	55.859	55.472	63.298
Aegean	69.618	79.814	93.637	103.765	117.628	118.231	133.944
Turkey	494.884	571.715	668.418	754.385	854.585	864.450	980.547
İzmir/Aegean (%)	48,1	47,8	47,4	47,9	47,5	46,9	47,3
İzmir/TR (%)	6,8	6,7	6,6	6,6	6,5	6,4	6,5

Source:TurkSTAT, 2013

According to 2004-2010period GVA increase rate, İzmir ranks at the 23rd place with a value of 89.1%.

This situation points out to the fact that the recent economic performance of İzmir, which historically accommodates one of the largest economies of the country, has not been at a satisfactory level. However, the GVA increase rate of İzmir in the year 2010 (14.1%) occurs to be higher than Turkey average (12.3%) and NUTS Level 2 regions with high national GVA shares.

Sectoral developments are of importance for the determination of general trends and regional standing related to GVA. The issue may be discussed from two perspectives, namely the relative importance of the region specific to sectors, and the relative importance of sectors specific to the region.

Table 53:
Sectoral GVA and the Share of İzmir

Year	Level	GVA (Thousand TL)			Share of İzmir within GVA (%)		
		Agriculture	Industry	Services	Agriculture	Industry	Services
2010	Türkiye	92.739.021	259.022.057	628.785.937			
	İzmir	3.712.277	16.315.388	43.269.807	4	6,3	6,9
2009	Türkiye	78.775.886	218.623.211	567.050.589			
	İzmir	2.868.068	13.863.558	38.740.578	3,6	6,3	6,8
2008	Türkiye	72.274.585	232.475.082	549.835.548			
	İzmir	2.702.316	14.941.853	38.214.987	3,7	6,4	7
2007	Türkiye	64.331.717	209.515.201	480.537.624			
	İzmir	2.306.456	13.852.529	33.536.261	3,6	6,6	7
2006	Türkiye	62.662.754	188.646.805	417.108.706			
	İzmir	2.418.970	12.741.178	29.216.505	3,9	6,8	7
2005	Türkiye	60.713.747	160.331.023	350.669.700			
	İzmir	2.028.801	11.520.529	24.576.688	3,3	7,2	7
2004	Türkiye	52.997.645	138.411.772	303.474.641			
	İzmir	2.007.842	10.164.121	21.294.693	3,8	7,3	7

Source: TurkSTAT, 2013

When the GVA levels of İzmir and Turkey for the 2004-2010 period and the shares İzmir received within country GVA based on sectors are examined in this context; it is observed that the share of İzmir within agriculture sector added value fluctuates between 3.3% and 4% (Table 53). The share of İzmir within agriculture sector GVA as of the year 2004 was observed to be 3.8%, which declined to 3.3% in the year 2005 with a significant drop but rose to 4% as of the year 2010. According to the year 2010data, İzmir ranked at the 22nd place within the listing of Level 2 regions' contributions within agriculture sector GVA.

In terms of change of industry sector GVA, it is observed that İzmir's contribution to sectoral GVA declines regularly with the passing years. İzmir's contribution to industry sector that occurred to be 7.3% in the year 2004 declined to 6.3% as of the year 2010.

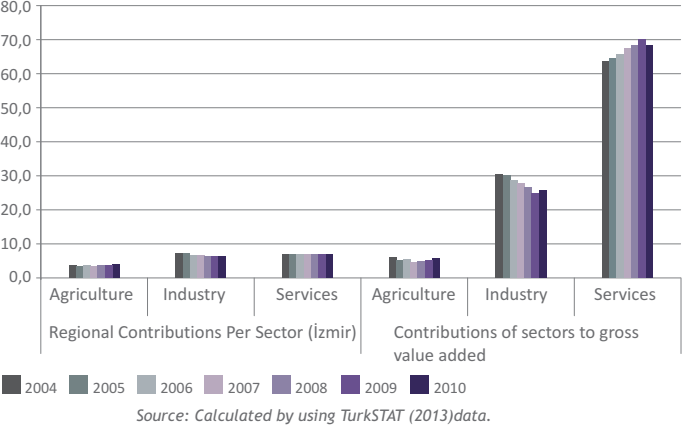
With this decline value, İzmir occurs to be the second region with the highest decline in sectoral GVA contribution, following İstanbul(1.9%). According to the data belonging to the indicated period, İzmir has the fifth place in regards to contribution to industry sector GVA. The determinant of the relative deficit in the GVA increase ratio of İzmir during 2004-2010period is considered to be the low value of industry sector GVA increase.

Regarding services sector, it is observed that the share of İzmir within national sector GVA did not display a large enough change to reflect distinctly on the data. İzmir, which possessed a 7% share within services sector GVA during the 2004-2008 period, maintained its statue as the third province with the highest contribution to the sector following İstanbul and Ankara during the years 2009 and 2010 with a 0.2 point decline in the former year and a 0.1 point rise in the latter year.

Presenting the contribution of base sectors to İzmir GVA level, in other words the sectors' development in İzmir after providing the abovementioned contributions of İzmir to GVA in base sectors duringthe 2004-2010period will make the economic overview of İzmir clearer. Through this approach, the contributions of agriculture, industry and services sectors to İzmir GVA and the contribution of İzmir to overall Turkey GVA based on the abovementioned sectors were herein discussed together.According to this; 63.6% of İzmir GVA was generated by services sector in the year 2004, while data belonging tothe year 2010display

this ratio to have risen to 68.4%. It is seen that the contribution of services sector to İzmir GVA rose regularly with the passing years up to the 1.4 points decline in the year 2010 (Figure 26).

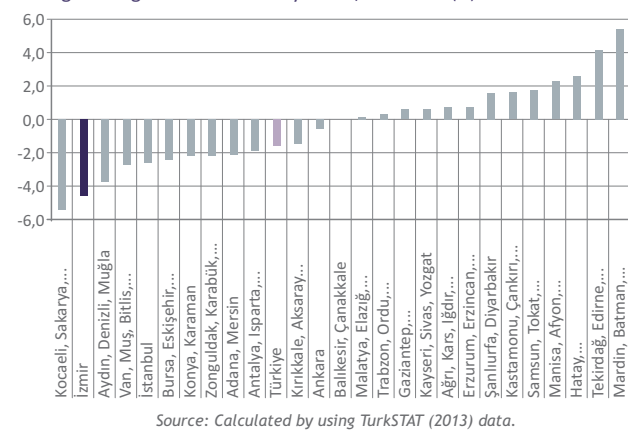
Figure 26:
GVA Sectoral and Regional Contributions, (%), 2004-2010, İzmir



The fact that İzmir do not display any change of important level regarding sector based overall country GVA contribution while the significance of services within İzmir economy are on the rise point out that the mentioned increase emerged not due to the display of a performance over country average but due to the relative weakness of other sectors' contribution to GVA. In terms of period starting-ending GVA contribution increase in this sector, İzmir left İstanbul (2.8%) and Ankara (1%) with a value of 4.7%.

The contribution of industry sector in İzmir GVA level is observed to decline in ratio (excluding 2009) despite the value increase. The share of industry sector within country overall GVA declined by 1.6 points between the years 2004 and 2010, reaching 26.4%. When the data are assessed for İzmir, it is observed that the sector's İzmir GVA contribution that was 30.4% in the year 2004 declined by 4.6 points to rest at 25.8% as of the year 2010. İzmir was one of the NUTS Level 2 regions with the highest decline of GVA industry share following TR42 Kocaeli, Sakarya, Düzce, Bolu, Yalova region (5.4%) with a value of (4.6%) during the 2004-2010 period (Figure 27).

Figure 27:
Change of Regional GVA Industry Share, 2004-2010 (%)



According to the 2004-2010 period regional GVA data, the share of agriculture sector within GVA declined across almost all Level 2 regions. The share of agriculture sector within İzmir GVA that was 6% as of the year 2004 declined down to 4.6% in the year 2007 and rose back to 5.9% in the year 2010.

The decline in the share of agriculture emerges not due to the sector's value decrease at GVA level but due to the relative weakness against the developments occurred in the other sectors.⁵¹ An important determinant of this situation, which is not contrary to the economic development process of developing countries, is considered to be the labour-intensive character of agriculture sector in our country along with the professional inadequacy of the agricultural workforce.

3.a.1.a. GDP and GVA Per Capita

Another important indicator of a region's economic development is the per capita GDP or GVA level that takes into account the population of the region.⁵² GDP per capita that was observed to be 2,722 Dollars⁵³ in İzmir as of the year 1987 steered over 4,000 Dollars through the 1990s and rested at 3,275 Dollars in the year 2001 (Table 54). Compared to data belonging to overall Turkey, it is observed that the GDP per capita in İzmir occur to be approximately 1.5 times higher.

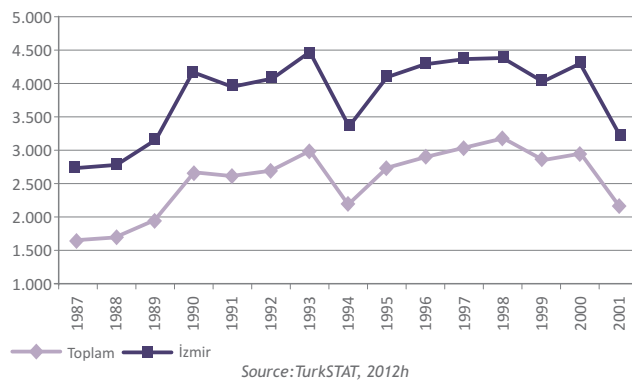
Table 54:
GDP Per Capita (Dollar)

Year	Turkey	Aegean Region	İzmir
1987	1.629	2.021	2.722
1990	2.655	3.123	4.156
1995	2.727	3.133	4.093
2000	2.941	3.403	4.302
2001	2.146	2.545	3.215

Source: TurkSTAT, 2012h

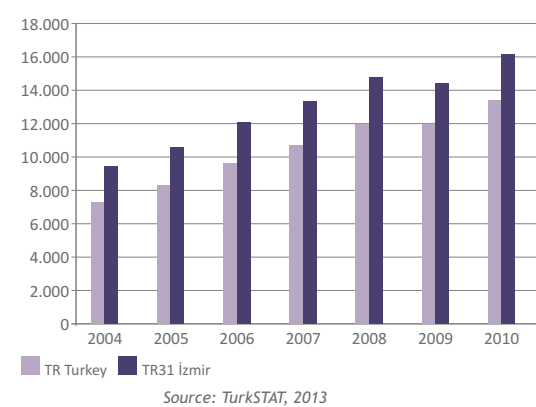
In İzmir, which scored higher than Aegean Region and overall Turkey in terms of GDP per capita during the 1987-2001

Figure 28:
Change of GDP Per Capita, 1987-2001, (Dollar)



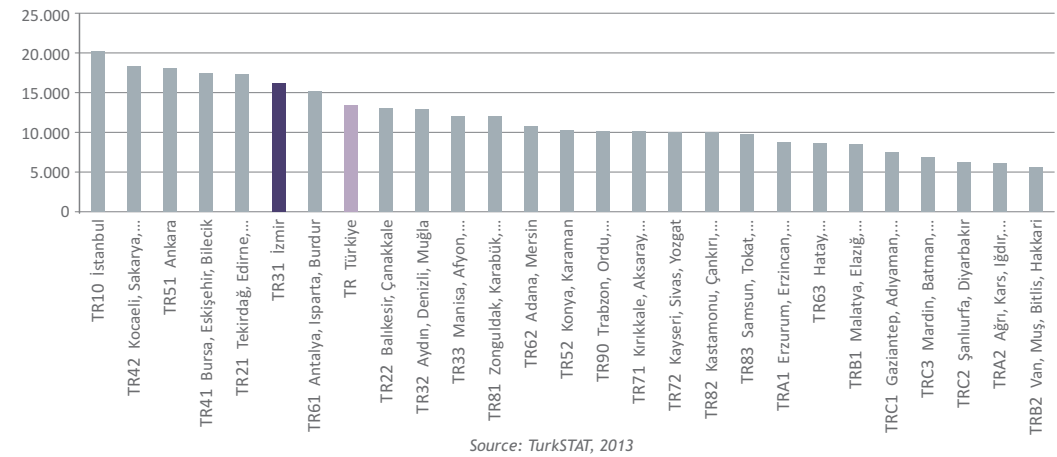
period, increase ratio of GDP per capita calculated in Dollars over the period starting and ending values (20.3%) is lower when compared to that of Aegean Region (25.9%) and overall country (31.7%). Yearly change of the indicator in question is illustrated in in (Figure 28). According to this, GDP per capita growth and recession processes are mostly in line with that of the country in general.

Figure 29: Change of GVA Per Capita (with Current Prices)



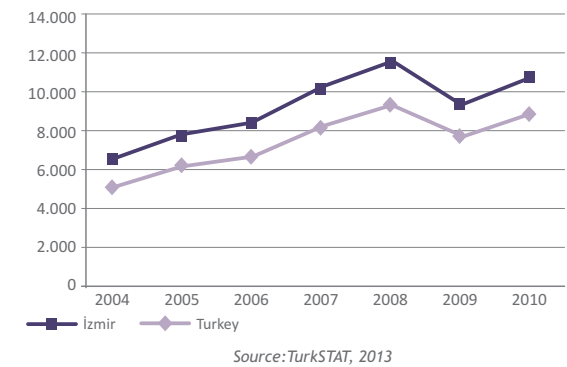
Assessments based on region's population data in regards to the regional development level during the 2004-2010 period may be conducted over GVA per capita data. GVA per capita value in İzmir, which was found out to be 9,448 TL as of the year 2004, reached 16,195 TL in the year and thus rose by 71.4% during the 2004-2010 period (Figures 29 and 30) (TurkSTAT, 2013). Considering that the GVA per capita value occurred to be 83.5% throughout Turkey in the same period, it is observed that İzmir actualisation remained behind that of country average.

Figure 31:
GVA Per Capita at NUTS 2 Level Regions, TL



When the GVA per capita values are studied based on a Level 2 regions listing, it is observed that İzmir, which took the fifth place in the year 2004, ranked at the sixth place during every year of the 2005-2010 period (TurkSTAT, 2013). It is striking for İzmir, which ranks at the third place regarding regions' total GVA levels, to have regressed to the sixth place in the GVA per capita listing (Figure 31).

Figure 30:
Change of GVA Per Capita (Dollar)



Regions' standing throughout the country in terms of income levels may be determined by using their GDP per capita values. Regions' standing based on income level is important for the purpose of analysing their position against the middle income trap⁵⁵, which is deemed by economists as one among the important risks that developing countries face. The classification of Level 2 regions according to the assessment conducted based on the GDP values calculated for the 2004-2011 period is given in (Figure 32)⁵⁶. İzmir is among the regions without middle income trap risk.

⁵¹ The only NUTS 2 region where agriculture sector GVA level displayed also a value (absolute) declining trend during the 2004-2010 period. İstanbul agriculture sector GVA values for the years 2006, 2007, 2008 and 2010 showed certain drops.

⁵² Regional Gross Value Added Per Capita: Obtained by dividing the regional gross value added per capita over current prices to the midyear regional population estimate, in form of TL. By dividing this value to the import weighted average Dollar exchange rate, the regional gross value added per capita may be obtained in form of Dollars.

⁵³ Due to the presence of high inflation rates during the 1987-2001 period and the GDP per capita data having been calculated over current prices, GDP per capita value was given in US Dollars (\$).

⁵⁴ Because the inflation declined significantly and reached one digit values through the 2004-2010 period, GVA per capita was illustrated both over the current prices in TL, and also in Dollars for providing traceability with the previous period.

⁵⁵ Middle income trap is defined for the situation where the countries or regions, which reached the middle income level in terms of GDP per capita, face congestion at a certain income band and fail to transition to the upper income level. The study that bears this definition and assesses the regions of Turkey for the first time in terms of middle income trap was conducted by TÜRKONFED in the year 2012. This study data are taken as basis for analysis in regards to this subject.

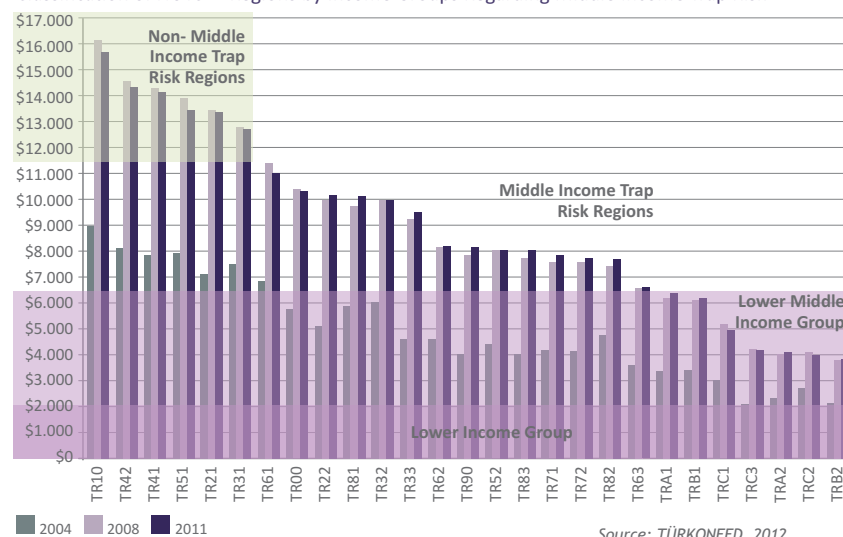
⁵⁶ The grouping in Figure 31 was made over the ratio of regions' GDP per capita values within the US per capita income (over 30% of US per capita income level, between 19% - 29% of US per capita income level or under 19% of US per capita income level).

However, when the fact that İzmir ranked at the last place among Level 2 regions without risk was considered together with the relatively low increase seen in the GDP per capita value indicated above, it is deemed that İzmir bears a certain risk towards maintaining this position.

3.a.1.b. Competitiveness

Competitiveness indexes are recognised as important indicators that reveal regions' economic states. According to data belonging to the Year 2012 Global Competition Index⁵⁷ prepared by the World Economic Forum (WEF),

Figure 32:
Classification of NUTS 2 Regions by Income Groups Regarding Middle Income Trap Risk



Turkey ranked at the 43rd place in this listing of 144 countries. With this ranking, Turkey was listed as per the index values to be within the group of countries that transitioned from efficiency-driven economy to innovation-driven economy.⁵⁸ There is not any recognised index among global competition indexes that includes İzmir.

Interprovincial Competitiveness Index prepared by International Competitiveness Research Institute (URAK) reveals the relative competitiveness of all 81 provinces of Turkey. This index, which has been developed according to the sub-indexes of human capital and living quality (HCLQ), branding skill and innovation (BSI), trade skill and production potential (TSPP) and accessibility (A), was issued three times during the 2007-2010 period.

The first five provinces maintained their places within the Interprovincial Competitiveness Index during the 2007-2010 period and İzmir was ranked at the 3rd place following İstanbul and Ankara through all three periods (Tablo 55). However, it is observed that the index values of İzmir declined at a limited degree (URAK, 2010).

3.a.2. Employment

The 2008-2009 fracture brought by the global economic crisis is observed to be reflected significantly on the indicators of sectoral employment distribution.

Therefore, the 2004-2008 period within which more consistent trends can be traced and the 2009-2012 period within which the economic crisis impacted heavily on the workforce market are handled as two different periods. As is the case with many indicators related to employment in İzmir, the year 2012 displayed actualisations contrary to those of previous years associated with the crisis also in terms of sectoral employment distribution data. Thus, actualisations belonging to the year 2012 are assessed apart from the abovementioned period grouping.

The share of agriculture within employment, which displayed a long-term declining trend, maintained this trend also during the 2004-2008 period. The sector's share declined from its year 2004 value of 10.8% to

Table 55:
First Five Provinces in the Interprovincial Competitiveness Index

Place	Province	Index Value 2007-2008	Index Value 2008-2009	Index Value 2009-2010
1	İstanbul	86,33	86,83	86,01
2	Ankara	49,68	49,35	49,73
3	İzmir	43,35	43	42,72
4	Bursa	35,21	35,45	35,1
5	Kocaeli	32,37	35,1	32,82

Source: URAK, 2010

7.5% as of the year 2008 (Figure 33). Within the same period, the contribution of industry sector within employment decreased by 5.4 points, declining from its year 2004 value of 36.9% to 31.5% as of the year 2008. In line with the proportional decline, these sectors also displayed declines in the absolute employment values. Employment loss corresponding to 25,000 employees in agriculture occurred as 17,000 for industry. The transition observed to occur during the 2004-2008 period from industry to services is considered partially as a reflection of the decline seen in the industry sector's contribution within İzmir GVA.⁵⁹

It is observed that the employment losses in agriculture and industry become the gains of services sector, and that services sector received significant shares of the agriculture and industry sectors' employment during the 2004-2008 period. During this period, the number of employees in services sector increased by 169,000, and the sector's employment share rose from its year 2004 value of 52.2% to 61.1%. According to this, the sector compensated for the workforce losses of the other sectors, while also bringing new participants to the workforce. When the nationally or even internationally recognised services sector expansion came together with the large potential of İzmir regarding service sectors, particularly tourism and trade; a considerable difference was made in the sectoral employment distribution in a short time.

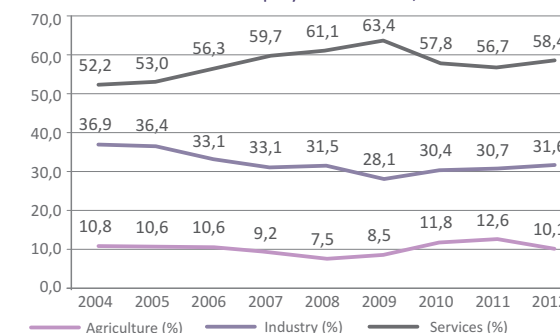
Between the years 2009 and 2012, it is observed that employment increases occurred in all sectors throughout Turkey and in İzmir. During this period, İzmir enjoyed employment increase of 78,000 in agriculture, 105,000 in industry and 57,000 in services (Table 56). In the year 2012, the absolute increases in industry and services sectors continued throughout Turkey and in İzmir, while observing employment losses agriculture sector.

Table 56:
Number and Ratio of Employment by Economic Activity, (age 15+), (NACE Rev. 2)

Year	Turkey			İzmir			Turkey			İzmir		
	Agr. (%)	Ind. (%)	Ser. (%)	Agr. (%)	Ind. (%)	Ser. (%)	Agr. (thousand)	Ind. (thousand)	Ser. (thousand)	Agr. (thousand)	Ind. (thousand)	Ser. (thousand)
2009	24,6	25,3	50,1	8,5	28	63,4	5.240	5.385	10.652	100	328	742
2010	25,2	26,2	48,6	11,7	30,5	57,8	5.683	5.927	10.985	153	397	753
2011	25,5	26,5	48,1	12,6	30,7	56,7	6.143	6.380	11.587	178	433	799
2012	24,6	26,0	49,4	10,1	31,6	58,4	6.097	6.460	12.264	144	450	831

Source: TurkSTAT, 2012g

Figure 33:
Sectoral Distribution of Employment in İzmir, 2004-2012



Source: TurkSTAT, 2012g

Considering that the impacts of the crisis were partially alleviated at this date, this phenomenon is evaluated as the agriculture employment, which has shown artificial increases on the contrary to its long term trends due to the crisis, displaying a trend towards returning to its normal levels.

2009-2011 period data on sectoral distribution of employment point out that the share of agriculture within employment in İzmir had a rising trend. The share of agriculture within employment that was observed to be 8.5% as of the year 2009 actualised as 12.6% in the year 2011. During the same period, the share of industry rose from 28% to 30.7%. However, the share of services sector, which had risen since the year 2004 up to this day, declined by 6.7 points and occurred to be 56.7% in the year 2011. These data illustrate that, within the period following the economic crisis, the sectoral employment distribution displayed workforce trends contrary to what was observed during the 2004-2008 period. On the other hand, actualisations in 2012 point out that the workforce market mostly broke free of the crisis' impacts and steered back towards the pre-crisis employment distribution. As of the year 2012, the share of agriculture within overall employment is 10.1%, share of industry is 31.6% and share of services is 58.4% in terms of sectoral distribution.

⁵⁷ Global Competition Index calculated over the base requisites (based on institutions, infrastructure, macroeconomic environment, health and basic education parameters), effectiveness multipliers (based on higher education, effectiveness of goods markets, effectiveness of workforce markets, development of financial markets, technological state and market scale parameters) and innovation and sophistication sub-indexes.

⁵⁸ Countries were grouped under five developmental stages in the report. These groups that were defined based on the development stages are: factor-driven, transition from factor-driven stage to efficiency-driven stage, efficiency-driven, transition from efficiency-driven stage to innovation-driven stage and innovation-driven countries.

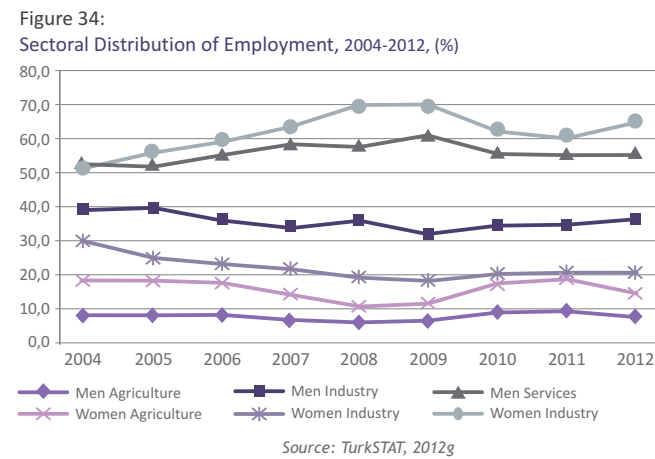
⁵⁹ Gross Domestic Product and Value Added section may be seen for further information on the subject.

Table 56 illustrates that there is a limited scale rising trend for the share of agriculture and industry within employment, while there is a declining trend for the share of services within employment throughout the country up to the year 2012. It is observed during the 2009-2011 period that agriculture sector employment rose by 0.9 point, industry sector employment rose by 1.2 points, and the services sector employment declined by 2 points throughout Turkey; while the share of agriculture within employment returned to its 2009 level, and the shares of industry and services sectors increased by 0.5 and 1.3 points respectively as of the year 2012. According to this, the sectoral employment distribution trends in İzmir run in line with those of overall Turkey, while significantly stronger than them.

Data on the sectoral distribution of employment point out that women get affected more heavily from the developments of recent years. During the period between the years 2004 and 2011, employment in agriculture sector declined to its relatively lowest level in the year 2008, and rose to its highest as of the year 2011. During the recovery period encompassing years 2008-2011, women's employment within the sector displayed an increase of 47,000 (8.4%). In the year 2012, women's employment within agriculture sector decreased by 17,000 employees, and the share of the sector within women's employment declined from its 2011 value of 19.2% to 14.8%. The share of industry sector within women's employment occurred to be 20.6%, and the share of services sector, which had declined significantly during the years affected by the crisis, rose by 4.6 points compared to the previous period, resting at 64.8% (TurkSTAT, 2012g). The increase observed in the number of women who work as unpaid family workers during the 2008-2011 period was partially compensated, and the share of unpaid family worker women within employment declined from the 19.4% level reached during the year 2011 down to 17.6% in the year 2012.

Developments observed in the sectoral distribution of men during the 2008-2011 period also display differences with that of the previous period. During this period, men's employment within agriculture increased by 43,000 (3.5 points). Despite an increase of 38,000 employees in industry and 50,000 employees in services, their employment ratios declined respectively by 0.9 and 2.6 points. In the year 2012, an employment loss of 17,000 employees was observed for men despite the rising trend in agriculture employment.

This loss was majorly compensated by a 16,000-employee industry sector employment and partially by a 6,000-employee services sector employment. Proportional changes on the sectoral distribution of employment based on gender are shown in Figure 34.



When the increase in employment is considered based on the employment status of employees; it is observed that the 208,000 people newly employed during the 2008-2011 period comprise of; 19.7% (41,000) unpaid family workers, 19.7% (41,000) employer or working for his own behalf, and 60.6% (126,000) salaried, waged or per diem workers. At this point, the increase in the number of unpaid family workers is in line with the increase observed in the share of agriculture within employment, albeit significantly higher. Year 2012 data show that unpaid family employment declined among both women and men, while it is striking that there are still over 100,000 people employed as unpaid family worker within İzmir.

3.a.3. Public Investments in İzmir

The amount allocated to İzmir from the public investment allowances listed by provinces in the Year 2012 Investment Programme is approximately 704.6 million TL.

The highest sectoral distribution share of this amount goes to transportation-communication sector (37%), followed by other public services (25%), education (15%), agriculture (10%), health (6%) and energy (6%) sectors (Ministry of Development, 2012a).

Information on some of the large scale investment projects of İzmir are summarised below:

İzmir-İstanbul Motorway: The project that will reduce the time required between İzmir and İstanbul to 3.5 hours shall be realised via Build-Operate-Transfer (BOT) model. Works on the project began on 29.10.2010.

İzmir-Ankara High-Speed Railway: With the completion of the double line route planned to be suitable for minimum 250 km/h speed, the travel time between Ankara and İzmir will drop to 3.5 hours, while carrying nearly 6 million people annually.

Adnan Menderes Airport Domestic Lines Terminal: With this investment that will increase the capacity of the domestic lines terminal currently running on 28,500 m² area to 204,500 m², the Airport will reach a capacity to address 25 million passengers a year. Works on the project began in the year 2011 and were completed at the beginning of 2014.

Northern Aegean (Çandarlı) Port: Jetty construction works of the seaport that is to be among the 10 biggest seaports of the world and serve as a main transit centre in the Mediterranean Sea were started in the year 2011. The project is planned to be commissioned after completion of infrastructure works in 2013 and superstructure works in 2015.

Cruise Port: Works towards the construction of an independent cruise port that will separate the passenger section of İzmir Port from the container section along with relevant service buildings were started via BOT model. When the project is completed, 5 cruise ships will be able to berth at the port at the same time.

Kemalpaşa Logistics Centre: When completed, the centre planned to be established on an area of 3 million m² shall be the largest logistics base of Turkey. The project's infrastructure works were initiated and superstructure works are planned to be built via BOT model. KOSBİ railroad access line shall also be completed within the context of the project.

Konak Tunnels: With this project of which ground was broken in the year 2011, an alternative route was planned to provide the traffic connection between Mustafa Kemal Coast Boulevard and Yeşildere Avenue. The route was designed as 2x2 lanes divided highway and tunnels along the route shall also be built as double tubes. The project is planned to be completed within the year 2014.

Buca-Yeşildere Access Road (Uçan Yol): Planned to ease Ankara Avenue and city exit, and to decrease the dense traffic along Yeşildere Avenue, the foundations of Buca-Yeşildere access road were laid at the end of the year 2012. This road is referred to as "Uçan Yol" (Flying Road) due to the viaduct of 35 metres height included within the project.

İzmir Bay Crossing: Construction of a tube crossing project is planned to connect the northern and southern ends of İzmir Bay under the sea.

Maritime Transportation Development Project: For the purpose of increasing the ratio of use of maritime lines for urban transportation, İBB shall realise construction of new ferry ports and procurement of new maritime vehicles.

Gaziemir Fair Complex: In this new fair site that is to be built by İBB for serving convention and fair tourism, there will be 6 halls, 93,000 m² closed and 31,000 m² open exhibition area, a 2,000 people capacity convention and concert hall, meeting halls and administrative offices.

Irrigation and Dam Projects: There are 4 dam projects (Ödemiş Rahmanlar, Ödemiş Aktaş, Bayındır Burgaz ve Kemalpaşa Yiğitler) and 8 irrigation projects (Ödemiş-Beydağ, Kınık Sağ Sahil, Dikili Harputlu, Menemen Emiralem, Kiraz, Tire Yenişehir, Ödemiş Bademli ve Kıranlı) that were put to procurement by DSİ and their construction works are underway.



3.a.4. Technology and Innovation Capacity of İzmir

Innovation means realising a new or significantly improved product (goods or service) or process, a new marketing method or a new organisational method for intra-enterprise applications, work place organisation or external relations. Innovation is mentioned as an important tool of competitiveness for both regional and national scales during the recent years.

In regions with high innovation capacity, ideas and knowledge transform to products and services, higher value added products are produced instead of traditional products, and companies increase their commercial performance and competitiveness via innovation. As a result of these, such regions and countries have lower unemployment ratios and high social welfare.

Institutional Capacity in R&D and Innovation

For R&D and innovation studies to flourish in a region, initially there should be a presence of institutional structures and networks that will steer and support such

Table 57: Top 20 Universities in the Entrepreneurship and Innovation Index 2013

Place	University	Total Score
1	Middle East Technical University	86
2	Sabancı University	85,8
3	İhsan Doğramacı Bilkent University	82,7
4	Boğaziçi University	76,3
5	İstanbul Technical University	72,5
6	İzmir Institute of Technology	68,1
7	Özyeğin University	67,4
8	Koç University	61,7
9	TOBB University of Economics and Technology	57
10	Hacettepe University	56,7
11	Selçuk University	55,2
12	Gazi University	54,9
13	Gebze Institute of Technology	54,7
14	Ege University	53
15	Yıldız Technical University	49,6
16	Anadolu University	47,9
17	Çukurova University	46,9
18	Yeditepe University	45,9
19	Çankaya University	45,8
20	Atılım University	44,6

Source: Ministry of Science, Industry and Technology, 2013

studies in the region. At the top of these structures come Universities, Research Centres, Institutes and Vocational High Schools as complement to such. İzmir has a science, technology infrastructure along with human capital as a city accommodating a total of 9 universities and is among important regions where industry is concentrated throughout Turkey. According to the Ministry of Science, Industry and Technology's Universities Entrepreneurship and Innovation Index 2013 Listing, İzmir Institute of Technology took the 6th place among the top 50 universities, while Ege University was ranked at the 14th place, Dokuz Eylül University was ranked at the 32nd place, and İzmir University of Economics was ranked at the 35th place. The study utilised parameters under the fields of universities' scientific and technologic research qualification, intellectual property pool, cooperation and interaction, entrepreneurship and innovation culture, economic contribution and commercialisation (Table 57).

Table 58: Population per University, 2012

	Turkey	İstanbul	Ankara	İzmir
Population(Person)	74.724.269	13.624.240	4.890.893	3.965.232
Number of Universities	165	37	14	9
Population per University (Person)	452.874	368.223	349.350	440.581

Source: İZKA and EBİLTEM, 2012a

Compared to other metropolises, İzmir is the region with the highest population per university. Population per university is 368, 223 for İstanbul, 346,350 for Ankara and 440,581 for İzmir (Table 58). Considering the young population structure, industrialisation state and potential, being the most socioeconomically developed city of its region and other aspects of attraction, İzmir is seen to be an attraction centre for new universities to be founded.

There are a total of 50 faculties in 7 universities that started education activities as of the year 2011⁶⁰, which house 20 different engineering departments, over 8,000 academicians and over 100,000 students (Table 59). The technical and researcher infrastructure of the engineering departments comprise the largest innovation potential of İzmir.

In addition to 16 academic institutes in İzmir (7 Physical Sciences, 3 Health Sciences and 6 SocialSciences Institutes), there are 11 institutes that conduct application-oriented research on energy, informatics and health fields and serve the industry.

⁶⁰ As of the year 2013, 9 universities house 66 faculties and 35 vocational colleges.

Table 59: Information on İzmir Universities *, 2011

Indicator	DEÜ	EÜ	İYTE	İEÜ	Yaşar Ü.	Gediz Ü.	İzmir Ü.	Total
Faculties	13	12	3	6	7	4	5	50
Institutes	10	8	1	2	2	2	2	27
Colleges	11	13	1	3	2	1	3	34
Lecturers (A)	3.373	3.424	523	441	341	57	123	8.282
Students (B)	43.185	44.471	2.088	5.973	4.013	1.198	1.354	102.282
Students per Lecturer (B/A)	13	13	4	14	12	21	11	12

Source: İZKA, EBİLTEM andTurkSTAT, 2012
* The tablecovers universities active as of the year 2011.

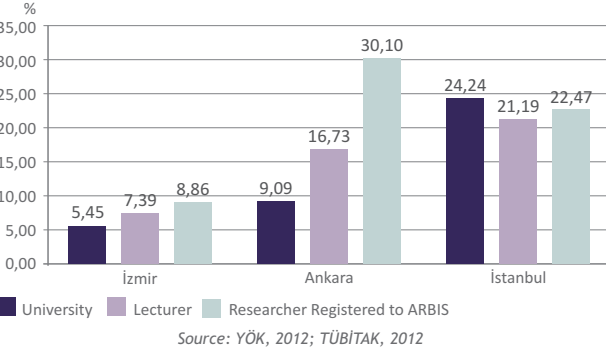
Further to these Institutes within university bodies, another 8 Institutes within jurisdiction of Ministries (Menemen Aegean Agricultural Research Institute, Bornova Agricultural Pest Control Institute, İzmir Olive Cultivation Institute, Bornova Veterinary Control Institute and Aegean Forestry Research Institute etc.) are also among places where business market applies to for their R&D and innovation efforts (İzmir Regional R&D and Innovation Capacity Analysis). Besides the institutes, the Research Centres supporting the development of innovation activities are also among institutions that directly contribute to technology production through both the studies they conduct on their own and the technical support and consultancy services they provide to enterprises. There are a total of 20 Research Centres within the body of universities. 4 out of 9 universities of İzmir have Interface Centres to provide cooperation with industry sector. Establishing interface centres that will aid in the commercialisation of the results of research in universities and provide an effective cooperation and joint projects with the industry sector is of importance (İZKA, EBİLTEM and TurkSTAT, 2012).

Intermediate staff are required to use the technology and aid in its conversion to economic asset for R&D and innovation to grow. 25 Vocational High Schools (two-year education) and High Schools (four-year education) functioning under different programmes within the universities in İzmir mostly satisfy this demand. It is important that these schools become specialised and create workforce as per the demands of the region.

Considering the total number of universities, and lecturers and researchers working in universities as of year 2010, İzmir ranks at the third place throughout Turkey. As of year 2011, there are a total of 81,674 active researchers registered under TÜBİTAK ARBİS in Turkey.

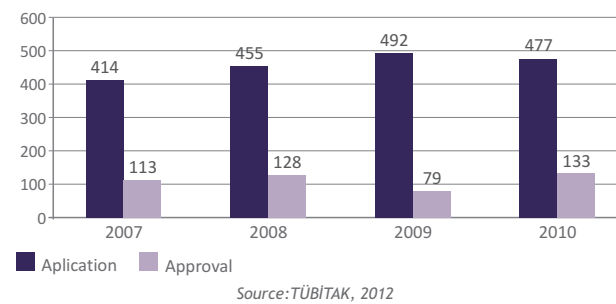
Regarding the distribution of these researchers within the three major regions, it is observed that there are 24,584 researchers in Ankara (30.10%), and 18,354 researchers in İstanbul (22.47%), followed by İzmir with 7,240 researchers that correspond to 8.86% of Turkey overall value (Figure 35). By directing the researcher capacity in İzmir towards the needs and priorities of the province, development of new technological products shall be realised in various fields.

Figure 35: University, Lecturer and Researcher Ratios, 2010



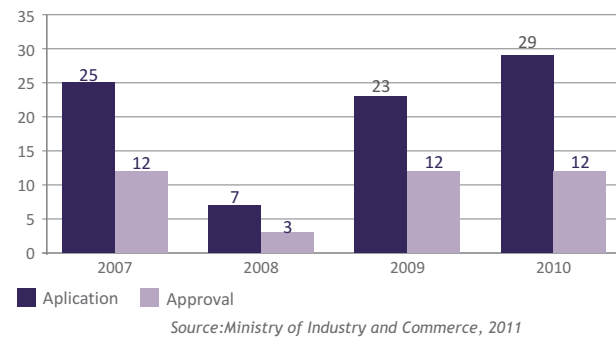
When the projects produced in the context of the TÜBİTAK project support most commonly benefitted by researchers in İzmir are examined, it is observed that only 6% of the researchers made project applications. The number of projects produced towards knowledge generation by researchers in İzmir during 2007-2010 period is 1,838. Project applications had a rising trend excluding year 2009 (Figure 36). The number of project applications was 2,208 in İstanbul and 2,882 was Ankara. On the other hand, there were 30 project proposals in İzmir, 16 project proposals in İstanbul and 12 project proposals in Ankara per 100 researchers. Although the actual number of project applications is lower, it is observed that the İzmir researcher power's potential to create projects is higher. The number of TÜBİTAK projects approved per 100 researchers is 8 for İzmir, and the ratio of approved projects within overall number of applications is found out to be approximately 1/3 in all three regions.

Figure 36: Number of Applications Made from İzmir to TÜBİTAK and Number of Approvals, 2007-2010



During the last 30 years, forming projects enabling the industry to directly produce technology has also become a duty of universities in addition to academic projects producing information towards scientific and practical means. University-industry mutual projects prepared and conducted to that purpose are supported under the San-Tez Programme of the Ministry of Science, Industry and technology. The total number of San-Tez projects applied from İzmir between years 2007 and 2010 is 84, of which 39 projects were approved (46%) and supported (Figure 38). These values are found out to be 165 applications, 84 approvals (51%) in Ankara, and 115 applications, 60 approvals (52%) in İstanbul.

Figure 37: Ministry of Industry and Commerce, 2011



The significantly low number of SAN-TEZ project actualisations point out that university-industry cooperation in İzmir is not adequate. Despite the strong researcher structure, 81% of the enterprises of İzmir are not in cooperation with the universities and research centres. Also, only 5% of the enterprises have pointed out the source of idea of their innovation projects as researchers in university.

Researchers in İzmir have produced a total of 7.6% (6,719 papers) of the overall papers produced in Turkey between years 2007 and 2010 (Table 60). Considering there are 7,240 active researchers in İzmir, it is observed that number of papers per researcher for the last four years is 0.9 in İzmir, which is also 0.9 in İstanbul and 0.8 in Ankara.

Patent is one of the R&D and innovation indicators of countries. And the most important source of patents is the projects produced and implemented. According to Turkish Patent Institute (TPI) data, the number of patent applications is 51 and the number of approved patents has been 11 in İzmir during 2007-2010 period, while the same values have been respectively 69 and 28 İstanbul, and 117 and 22 for Ankara (Figure 38).

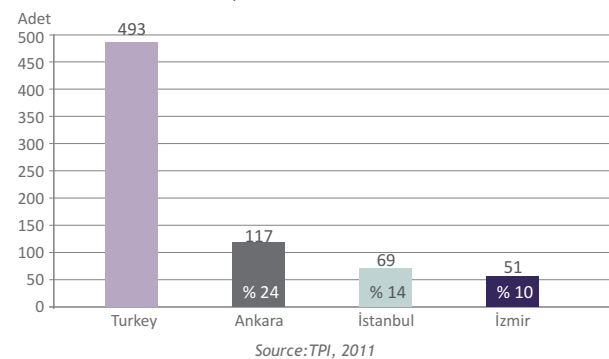
Table 60: Number of Papers in İzmir and Turkey, 2007-2010

Level	2007	2008	2009	2010	Total
İzmir	1.373	1.585	1.697	2.064	6.719
Turkey	17.788	21.317	23.687	25.513	88.305
İzmir/Turkey	7,72	7,44	7,16	8,09	7,61

Source: İZKA and EBİLTEM, 2012a

The low number of patents shows that researchers are unable to produce application oriented projects or that these project results could not be patented sufficiently.

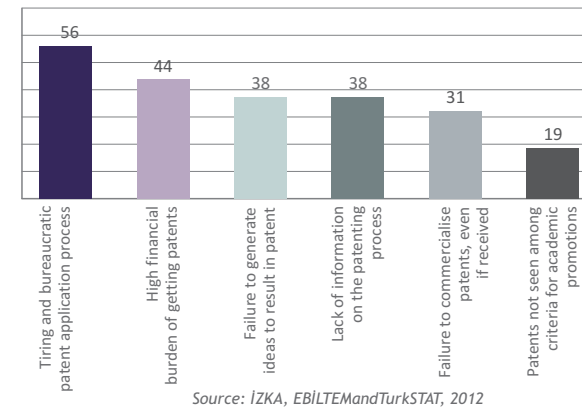
Figure 38: Regional Distribution of Applications of Patents and Utility Models Produced at Universities, 2007-2010



Considering the patent and utility model applications, the number per 1000 researchers on Turkey average is 6, which occurs to be 3.8 for İstanbul, 4.8 for Ankara and 7 for İzmir. Researchers of İzmir seem to generate higher performance compared to the other two major regions in getting patents too, similar to the case with proposing projects.

Universities indicated that the most important obstacles against academicians getting patents are; 64% - tiring and bureaucratic patent application process, 44% - high financial burden of getting patents, 38% - failure to generate ideas to result in patent and 38% - lack of information on the patenting process (Figure 39).

Figure 39: Obstacles against Universities Getting Patents, (%)



Infrastructure Supporting R&D and Innovation

For R&D and innovation studies to develop and rise to the desired level; it is necessary to provide a suitable environment, encourage and support efforts to that end, and most importantly to inform relevant institutions and organisations in an effective and correct manner to be included into these processes. For enterprises to achieve a more innovative structure, umbrella organisations' statuses regarding their communication capacity with the members, the supports provided, content and publicity of the supports, and their physical infrastructures play a definitive role.

There are numerous umbrella organisations in İzmir such as chambers, stock markets, associations, unions, federations and OIZ administrations (Table 61). Along with the functions they employ within the framework of laws these institutions strive to raise R&D and innovation awareness among their members to have them to produce and sell more innovative and technological products.

Table 61: Umbrella Organisations Interviewed within the context of İzmir Regional Innovation Strategy Study and Number of Their Members, 2011

Institution	Number	Number of Members
Association	5	1,130
Organised Industrial Zone	6	1,350
Federation Free Zone	2	8,500
Union	2	330
Chamber	2	147,000
Stock Market	1	5,000
Other	1	1,873
Total	1	0
	21	165,183

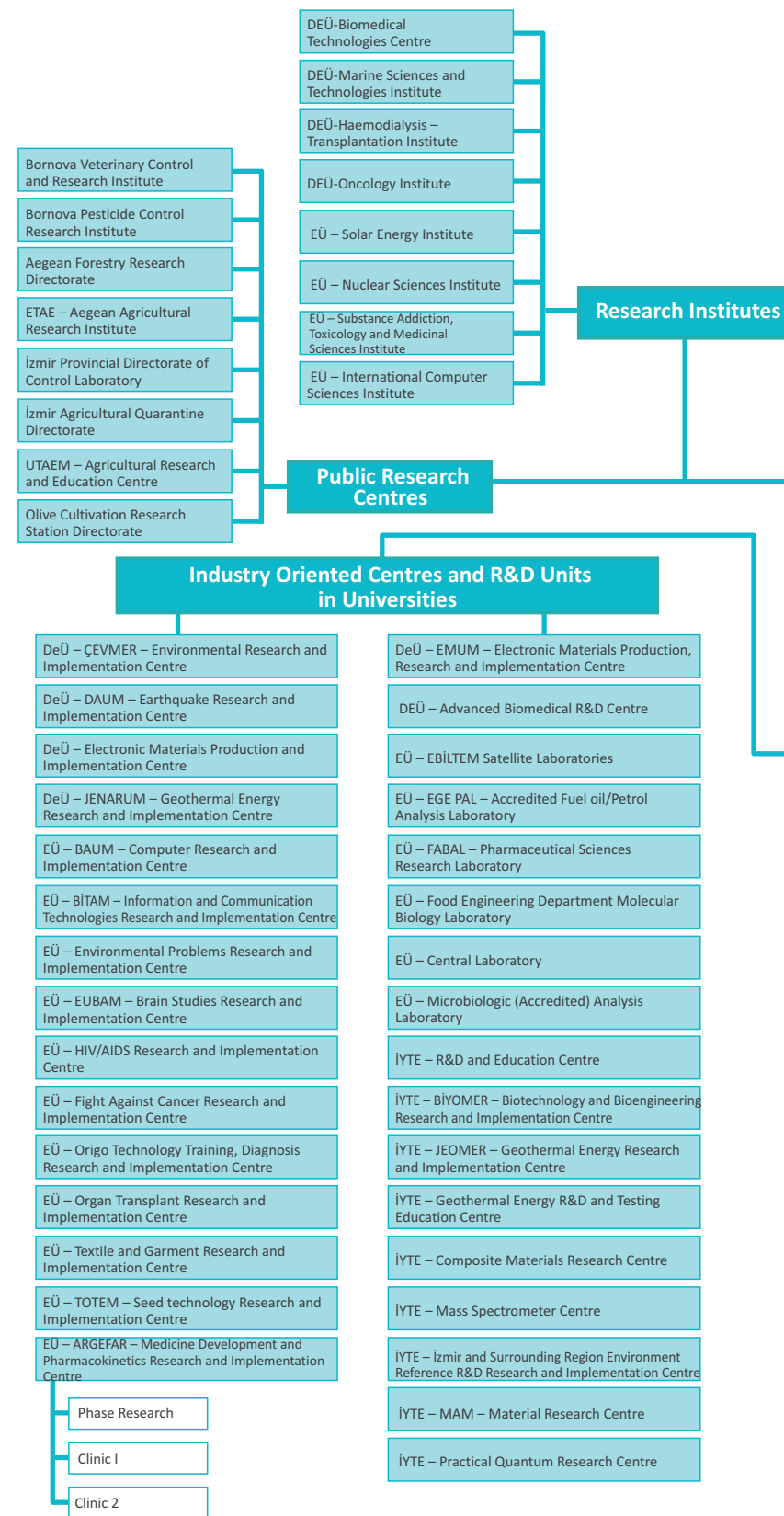
Source: İZKA and EBİLTEM, 2012b

The survey prepared and developed within research purposes has been applied to a total of 21 institutions related to industry that function in İzmir, comprising of chambers, associations, stock exchanges, unions, OIZs and free zones. While the cooperation of the umbrella organisations with universities in İzmir is at a certain level (60%), the organisations' cooperation and project designing level with their own member enterprises is considerably (35%) low. It is observed that only 30% of umbrella organisations have innovation policies where strategic innovation aims were stipulated, and 70% lack any such strategy or policy. 90% of the umbrella organisations have stated they do not have a system monitoring the innovation activities of their members, while 78% have confessed that they are in need of such a system. 95% of these institutions stated that their own members may not benefit effectively from said. These information point out that actions aimed towards directing companies to R&D and innovation, raise their knowledge and awareness, and develop companies' project writing skills are required in İzmir.

The primary support the umbrella organisations of İzmir provide for R&D and innovation is "direction and information" support. Almost all of the umbrella organisations supporting R&D and innovation provide information and direction services, while they fall behind regarding services related to other major activities of innovation ecosystem such as industrial property rights, project preparation and implementation, technology transfer and licensing. These services have to be developed.

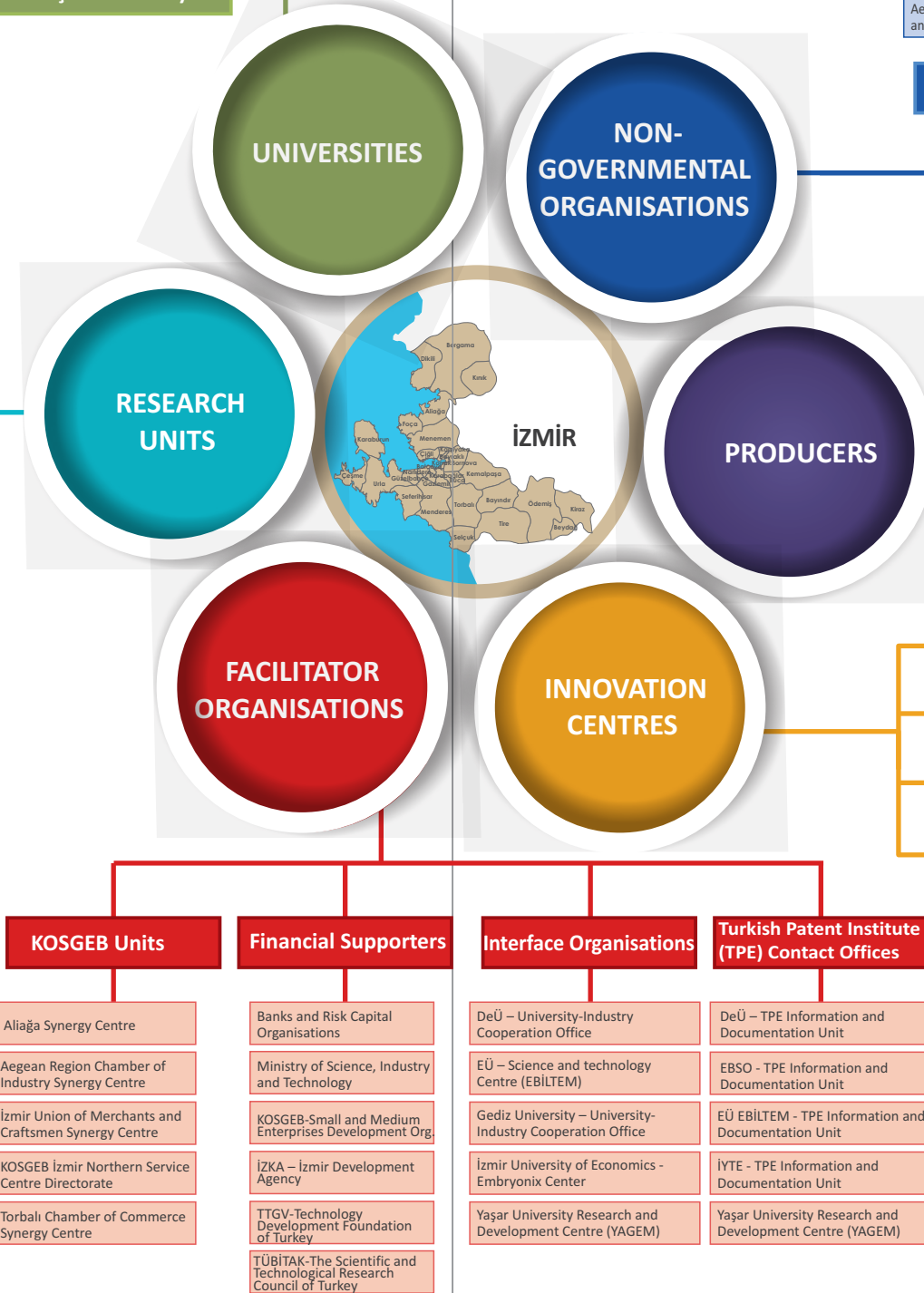
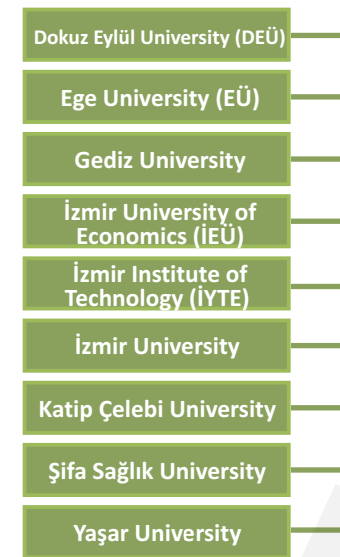
For innovation studies to be conducted and spread out, all segments from information generating organisations to technology production institutions should be in a conscious cooperation and coordination. Chambers, associations, unions and federation that exist in İzmir with their thousands of member enterprises are among places where awareness raising efforts towards R&D and innovation are/to be conducted. An active awareness work carried out by such structures, leading to awareness raising in their members and society, shall strengthen the foundations of the innovation ecosystem (Figure 40).

Information Generation



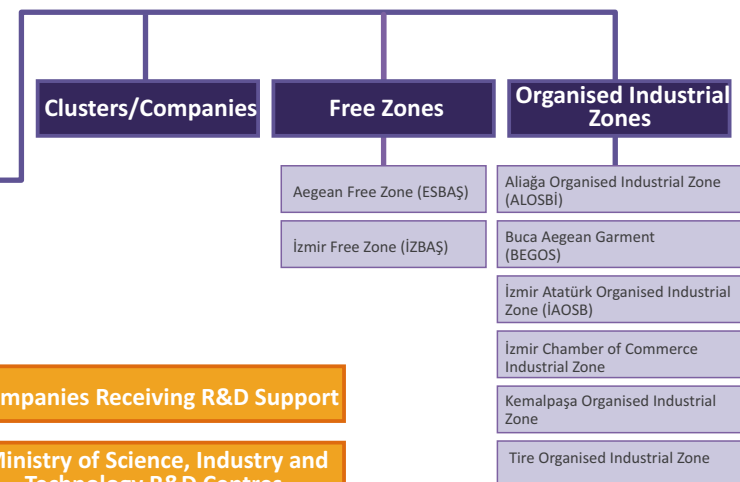
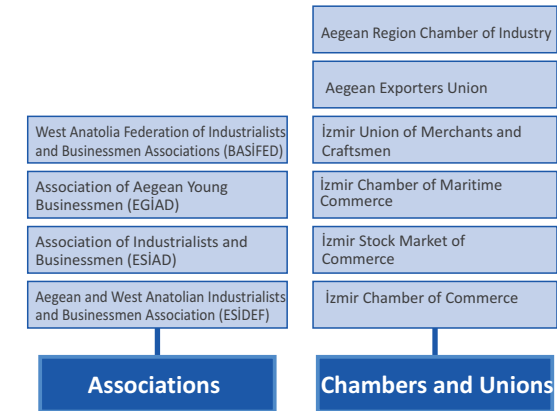
Technology Development

Figure 40: İzmir Innovation Ecosystem Map
Source: İZKA, EBİLTEM and TurkSTAT, 2012



Environment Formation

Awereness Raising



Innovative Production

İzmir Technology Development Zone (İZTEKGEB)⁶¹, KOSGEB-TEKMERS, R&D Centres established within the context of support received from the Ministry of Science, Industry and Technology, and other enterprises producing technology with government R&D support come at the top of the innovation centres in İzmir.

As centres functioning under the KOSGEB Southern Service Centre Directorate, Ege University Technology Development Centre (EÜ TEKMER) house 18 workshops, while Dokuz Eylül University Technology Development Centre (DEÜ TEKMER) house 12 workshops. These workshops provide significant support to the technology development processes of companies and increase the joint project design and implementation chances with the university segment.

There are 12 R&D Centres founded in İzmir with the support of the Ministry of Science Industry and Technology as per the Law on Supporting the Research and Development Activities no. 5746 as of year 2012. (Ministry of Science, Industry and Technology, 2012a). In this regard, İzmir shares the fourth place with Kocaeli, following İstanbul (32), Ankara (17) and Bursa(19). Considering there are 30 İzmir companies among the top 500 industrial enterprises of Turkey, it becomes obvious that the number of R&D Centres is inadequate. R&D Centres functioning under the Ministry of Science, Industry and Technology may only be established by large scale enterprises. The rate of small and medium scale enterprises employing independent R&D units within their bodies is around 15% (İZKA, EBİLTEM and TurkSTAT, 2012).

Innovation in Private Sector

Within the context of İzmir Regional Innovation Strategy, a field analysis study has been conducted for the purpose of determining private sector's innovation capacity. A survey was submitted to 760 companies within the framework of this field analysis conducted with the cooperation of İZKA, TurkSTAT İzmir Regional Directorate and EBİLTEM. The sectors pre-defined in line with previous analysis studies for field study are; renewable energy and environment technologies, processed fruits and vegetables, apparel industry, chemicals, biomedical, informatics, and industrial HVAC sectors. Results obtained at the end of the analysis were reported and published as İzmir Regional Innovation Strategy Field Analysis.⁶²

Innovation level of enterprises may be measured with different indicators. The most fundamental among these indicators is the existence of R&D units. An independent R&D unit within enterprise body shall increase the innovation level of the enterprise, therefore of the country, with the R&D and innovation studies it will conduct. The ratio of enterprises with their own R&D departments is at the considerably low level of 15% in İzmir.

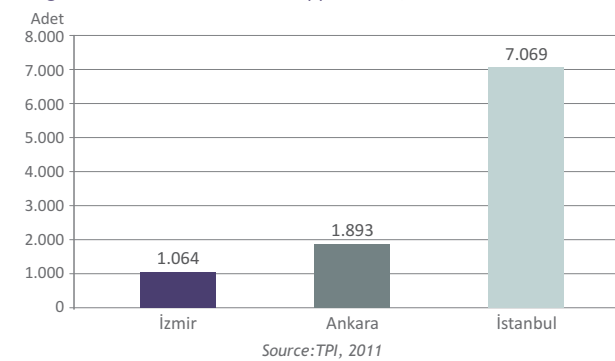
Provided by TÜBİTAK-TEYDEB, "Industry R&D Projects Support Programme-1501" and "SME R&D Starter Support Programme-1507", support programmes constitute the biggest financing (funding) source for R&D and innovation projects of companies. Between the years 2007 and 2010, a total of 416 companies from İzmir applied to benefit from TEYDEB R&D supports (1501 and 1507), of which 259 were approved to be supported. Success ratio of İzmir companies is at 62% and most of the applications were made by representatives of manufacture of machinery, chemicals and informatics sectors. 2,016 companies from İstanbul applied for the supports, out of which 1,212 companies benefitted from the supports, revealing a 60% benefitting success ratio, while for Ankara these values occurred to be respectively 932 applicant companies, 593 approvals and 64% success ratio. It is observed that İzmir is significantly behind İstanbul and Ankara in terms of both number of applicant companies and number of project applications, while there is no distinct difference among regions regarding benefitting success ratio.

The number of projects applied for TTGV supports occurred to be 26 for İzmir during the 24% of the projects supported throughout Turkey belongs to companies from İzmir. 27 companies from İzmir applied for KOSGEB programmes in the year 2010, of which 86% were approved. Considering that the number of enterprises dealing in manufacture industry, it is observed that the regional companies fall behind in regards to benefitting from R&D and innovation oriented public supports such as TEYDEB, TTGV and KOSGEB supports.

One of the most important outputs of R&D studies are patents produced. İzmir is behind İstanbul and Ankara not only regarding the number of university based patents but also total number of patents. According to TPI data, only 1,064 patent applications were made in İzmir between years 2007 and 2010, while this value occurred to be 1,893 for Ankara and 7,069 for İstanbul (Figure 41).

According to TurkSTAT year 2010 data, the average number of companies active in the manufacture industry sector between the years 2007 and 2010 is 28,173. Thus, İzmir produces 1 patent approximately for every 30 companies in terms of applications during the 2007-2010 period.

Figure 41:
Regional Distribution of Patent Applications, 2007-2010



The share allocated from turnovers by enterprises in İzmir to their R&D activities occurred to be 4.5% in year 2007, 4.3% in year 2008 and 4.8% in years 2009 and 2010. Four-year average of the share allocated to R&D from turnovers is 4.6%. In the same period, a total annual average of 824,772 Euros was spent by enterprises for R&D activities. Enterprises covered by the sectors defined within the context of the field survey made a total of 307 patent applications during the period of 2007-2010 (Table 62). According to this, it has been necessary for enterprises to spend an average of 10,746 Euro R&D expenditure to create 1 patent in İzmir (İZKA and TurkSTAT, 2012a).

Table 62:
R&D and Innovation Indicators of Enterprises

Year	Share Allocated to R&D (%)	Ratio of R&D Employees (%)	New Goods (Total)	New Services (Total)	Patent Applications (Total)
2007	4,5	2,7	344	72	70
2008	4,3	3,0	495	139	62
2009	4,8	3,5	627	189	57
2010	4,8	4,5	873	272	118

Source: İZKA and TurkSTAT, 2012a

According to the results of EBSO's study titled "Survey of Large Scale Industrial Establishments According to Their Sales From Production", 44 companies out of 100 largest companies registered under EBSO conduct R&D studies as of the year 2011.⁶³ R&D expenditures amounting to 87 million TL for 100 largest companies as of the year 2007

reached 136 million TL in the year 2011. These data support that significant increase has been made regarding R&D expenditures within İzmir industry.

Another one of the innovation indicators deemed important due to making enterprises more innovative is the number of R&D personnel. The ratio of people employed in the R&D departments within overall employees in the enterprises of İzmir occurred to be 2.7% in year 2007, which rose to 3% in 2007, 3.5% in 2009 and 4.5% in 2010. This constantly increasing ratio has born the result of increased number of patents and higher turnover for enterprises.

The total number of doctorate degree personnel employed in the prioritised sectors of İzmir is 45 as of year 2010. Considering that the total number of employed R&D personnel is 1,101 as of year 2010, it is observed that the ratio of personnel holding doctorate degree within overall R&D personnel is 4% (İZKA and TurkSTAT, 2012a).

Enterprises within the context of Regional Innovation Strategy Field Analysis created a total of 2,339 new or significantly improved goods and 672 new services between years 2007 and 2010. The ratio of enterprises that developed new goods and/or services is 25%. The share of innovative products (products that are new for both the company and the market) within overall turnover is 19%, while the same value is 13% for products new to the market, 26% for products new to the company, and 42% for products without innovation.

One of the main reasons behind this result is that only 7% of the enterprises use open innovation model, and a large part of them do not cooperate with their suppliers, clients and competitors within R&D and innovation processes. Weak cooperation between the university segment and industry segment is another factor at this point.

Innovation in Prioritised Sectors

In İzmir Regional Innovation Strategy, information is compiled on 7 sectors deemed to have high R&D and innovation potential, which have been defined as prioritised in 2010-2013 İzmir Region Plan, outstanding as per the number of companies they cover, their employment, export values or compatibility to regional resources in İzmir Rising Sectors Analysis and İzmir Clustering Analysis studies.

⁶¹ Detailed information on İZTEKGEB may be found under the section titled Organised Industrial Zones, Small Industrial Sites, Free Zones and Technology Development Zones of this analysis.

⁶² To access the İzmir Regional Innovation Strategy Field Study Report: http://www.izmiriplanliyorum.org/static/upload/file/izmir_bolgeisel_yenilik_stratejisi_altinnokta.pdf



⁶³ The survey study covers all companies within Aegean Region for the 2002-2009 period, while covering only members for the year 2010 and later. In the year 2011, 153 members of EBSO, which had sales from production values over 25 million TL, participated in the survey study. The production place is İzmir for 80% of the list.

These sectors are as follows:

- Informatics,
- Biomedical Industry,
- Industrial HVAC Devices,
- Processed Fruits-Vegetables,
- Chemicals (Plastic Raw Materials, Painting and Cleaning Substances)
- Textile,
- Renewable Energy (Wind, Solar, Biomass and Geothermal Energy) and Environmental Technologies.

Determined sectors have been examined with priority in this sense, and it is aimed to have the information and experienced gathered from this examination constitute an example for extending the study to cover other sectors in the future. The study that covered the 2007–2010 period and seven sectors revealed that there are differences in İzmir related to R&D and innovation at sector scale. Informatics companies are concentrated more so than

others in innovation centres such as Technoparks and TEKMERs. Other sectors are not observed to function in these environments. Enterprises making highest amount of R&D expenditure function within OIZs. Concentration of enterprises in sites such as OIZ, Free Zone, Technopark, TEKMER where they are together, have ease in information and experience sharing and benefit from external factors comes up as an important criteria.

Although there are enterprises employing independent R&D units within their bodies in all sectors, it is possible to increase them in number. Chemicals sector has been revealed to be the sector with the highest number of enterprises employing R&D units. Increasing the number of R&D units and the qualified personnel in such units shall serve towards both the university-industry cooperation and the development of R&D and innovation capabilities of companies. R&D expenditure, which is one of the main indicators of enterprises' R&D activities, display wide variances from sector to sector.

Table 63:
R&D and Innovation Indicators of İzmir, Ankara and İstanbul

Indicators	Source	İzmir	Ankara	İstanbul
Institutional Indicators				
Number of Universities (2012)	YÖK	9	14	37
Population per University (2012)	TürkSTAT, YÖK	440.581	349.350	368.223
Number of Researchers Registered to ARBİS (2010)	TÜBİTAK	7240	24584	18354
Number of Technology Development Zones (2010)	BSTB	1	6	5
Number of R&D Centres (Law no. 5746) (2012)	BSTB	12	17	32
AcademicIndicators				
Number of Scientific (SCI) Publications (2010)	YÖK	2.064	5.579	4.787
Ratio of Approval of Projects Submitted to TÜBİTAK % (Academic) (2007-2010 Avg.)	TÜBİTAK	25	31	29
Number of Projects Proposed per 100 Researchers (Academic) (2010)	TÜBİTAK	30	12	16
Number of Projects Approved per Researcher (Academic) (2010)	TÜBİTAK	8	4	5
Average Project Budget of TÜBİTAK Projects (Academic) (Thousand TL) (2010)	TÜBİTAK	152	196	180
Number of Applications for SAN-TEZ Programme (2007-2010 Total)	BSTB	84	165	115
Number of SAN-TEZ Programme Approvals (2007-2010 Total)	BSTB	39	84	60
Total Number of Patent and Utility Model Applications of Universities (2007-2010 Total)	TPI	51	117	69
Number of Patents and Utility Models per 1000 Researchers (2007-2010 Total)	TPI	7,0	4,8	3,8
Number of Projects Proposed to TÜBİTAK (Academic) (2010)	TÜBİTAK	1.838		
Number of Projects Approved by TÜBİTAK (Academic) (2010)	TÜBİTAK	453		
Industry Indicators				
Number of Companies Applied to TÜBİTAK-TEYDEB Supports (2007-2010)	TÜBİTAK	416	932	2.016
Number of Companies Granted TÜBİTAK-TEYDEB Supports (2007-2010)	TÜBİTAK	259	593	1.212
Approval Ratios of TEYDEB Project Applications (%) (2007-2010)	TÜBİTAK	58	57	57
TEYDEB Grant Value per Project (Thousand TL) (2007-2010)	TÜBİTAK	160	215	336
Average Duration of TEYDEB Projects (Month) (2007-2010)	TÜBİTAK	16	19	16
Number of Companies Supported by TTGV (2007-2010)	TTGV	23	81	53
Number of Patent Applications (2007-2010)	TPI	594	1.163	4.333
Number of Patent Registrations (2007-2010)	TPI	92	190	965
Number of Utility Model Applications (2007-2010)	TPI	868	1.019	5.313
Number of Utility Model Registrations (2007-2010)	TPI	638	620	3.757

Source: İZKA, EBİLTEM and TürkSTAT, 2012

It is hope encouraging that at least a certain level of R&D expenditure is made in all sectors. The sector that allocates highest share from turnovers is Informatics sector by 10%. The low level of R&D expenditures in Renewable Energy sector is striking.It is seen that significant differences form within sectors regarding cooperation with universities and many enterprises cooperate with universities on different topics. The sector that showed highest cooperation with Universities and Research Centres occurred to be Biomedical by 27%.

In terms of innovation performance, it has been observed that 31% of enterprises in Industrial HVAC sector, 29% of Biomedical and Chemicals sector, 26% of Informatics sector, 16% of Textile sector, 13% of Renewable Energy sector, and 10% of Processed Fruits and vegetables sector are able to provide new goods and services. Chemicals sector (90 patents) and informatics sector (65 patents) come foremost among others in terms of patent applications. It is striking that no patent applications have been made by Renewable Energy sector.Within the context of evaluating the R&D and innovation capacity of the industry of İzmir, inclusion and research of other sectors in different studies shall contribute to more information and thus to a wider sectoral perspective.

Basic R&D and innovation indicators of İzmir are listed below in comparison with the other two major regions.

Table 64:
Basic Indicators of R&D and Innovation in İzmir

Indicators	Source	İzmir
Number of Companies within Technology Development Zones (2012)	İZTEKGEB	84
Export Amount of TDZ Companies (Dollar) (2010)	İZTEKGEB	727.310
Number of TDZ Employees (2012)	İZTEKGEB	417
Total R&D Discount Value (Thousand Euros) (2007-2010)	Ministry of Finance	18.910
Number of Projects Supported by TTGV (2007-2010)	TTGV	26
Total Number of Enterprises Applied to KOSGEB (2007-2010)	KOSGEB	57
Number of Enterprises Supported by KOSGEB (2007-2010)	KOSGEB	49
Number of University-Industry Cooperation Centres (2011)	Universities	4
Number of Spin-Off Companies (2010)	Universities	2

Source: İZKA, EBİLTEM and TürkSTAT, 2012

3.a.5. Intersectoral Relations

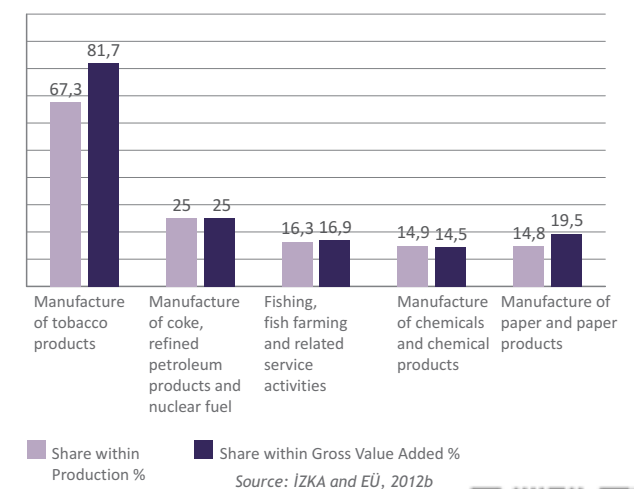
Within the context of İzmir Regional Input Output Analysis⁶⁴ study, the contribution of İzmir Region sectors on Turkey economy were examined in terms of production, gross value added, export, import, net taxes on product, payments to employees and net operating surplus aspects.

Regarding the share of sectors within overall Turkey production in the year 2008, manufacture of tobacco products is the sector with the highest share in İzmir with a value of67.3%.

81% of the value added in manufacture of tobacco products sector of Turkey is created in İzmir. “Manufacture of coke, refined petroleum products and nuclear fuel”, “manufacture of paper and paper products”, “Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing” and “manufacture of chemicals and chemical products” sectors are other outstanding sectors regarding both contribution in overall production value and contribution in Gross Value Added. “Manufacture of paper and paper products” resides within the top five sectors for all production shares, which has gotten ahead of “manufacture of chemicals and chemical products” and “manufacture of chemicals and chemical products” sectors in terms of contribution within the gross value added, taking the third place (Figure 42). This sorting of sectors is alike also regarding the payments to employees and net operating surplus aspects.

A total of 36 sectors were studied within the framework of İzmir Regional Input Output Analysis for the purpose of determining the sectors' relative sizes within İzmir economy and their relations with other sectors.According to the production shares of the sectors within İzmir Region, 17.7% of overall production is carried out by the land, sea, air transport and transport via pipelines sector. Other sectors with high production shares are wholesale and retail trade, other services, hotels and restaurants and manufacture of coke, refined petroleum products and nuclear fuel sectors (Table 65).

Figure 42:
Shares of Sectors within the Overall Production and Gross Value Added within İzmir and Turkey, 2008 (%)



⁶⁴ This section has been compiled based on the İzmir Regional Input-Output Table and Model Preparation and Analysis study that was conducted by İZKA and EÜ İİBF cooperation. Within this study completed in 2012, mixed methodology was applied to obtain the 2008 Turkey table from the 2002 Turkey Input-Output Table, and then the 2008 İzmir Regional Input-Output Table was created using these data. Study details may be accessed at: http://www.izmiriplanliyorum.org/static/upload/file/2014-2023_izmir_bolge_plani_ikincitaslak.pdf



In terms of GVA, the situation regarding the first five sectors does not vary much from the analysis based on production shares, except that “manufacture of coke, refined petroleum products and nuclear fuel” sector leaves the list and “agriculture, hunting and forestry” sector makes the list instead.

Table 65:
Production Shares of Sectors within İzmir Region, 2008

Sector	Share (%)
Land, sea, air transport and transport via pipelines and communication	17,7
Wholesale and retail trade	14,3
Other services	11,2
Hotels and restaurants	7,4
Manufacture of coke, refined petroleum products and nuclear fuel	6,1
Manufacture of food products and beverages	4,5
Base metal industry	4,2
Agriculture, hunting and forestry	4,0
Construction	3,8
Manufacture of chemicals and chemical products	3,6
Manufacture of tobacco products	2,7
Financial intermediation, including insurance and pension funding	2,2
Manufacture of motor vehicles, trailers and semi-trailers	2,0
Healthcare and social services	1,7
Electricity, gas, steam and hot water supply and distribution	1,6
Manufacture of machinery and equipment n.e.c.	1,4
Manufacture of plastic and rubber products	1,3
Manufacture of furniture; manufacturing n.e.c.	1,1
Manufacture of wearing apparel; dressing and dyeing of fur	1,1
Manufacture of fabricated metal products; except machinery and equipment	1,1
Manufacture of paper and paper products	1,0
Education services	1,0
Manufacture of other non-metallic mineral products	0,9
Manufacture of electrical machinery and apparatus n.e.c.	0,9
Manufacture of textile products	0,7
Mining, extraction of crude petroleum and natural gas	0,5
Printing and publishing; publishing, printing and reproduction of recorded media	0,4
Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing	0,4
Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear	0,3
Collection, purification and distribution of water	0,3
Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	0,2
Manufacture of medical, precision and optical instruments, watches and clocks	0,1
Recycling	0,1
Manufacture of other transport equipment	0,1
Manufacture of radio, television and communication equipment and apparatus	0,0
Manufacture of office machinery and accounting and information processing equipment	0,0
	100

Source: İZKA and EÜ, 2012b

The sector that creates the highest value added in İzmir occurs to be the “Land, sea, air transport and transport via pipelines and communication” sector with a 19.1% share (Table 66).

In terms of payments to employees, “other services” sector comes up as the sector that makes the highest workforce payment in İzmir with a share of 20%. Other four sectors that

Table 66:
Sectoral GVA Shares within İzmir Region, 2008

Sector	Share (%)
Land, sea, air transport and transport via pipelines and communication	19,1
Wholesale and retail trade	18,7
Other services ⁶⁵	16,8
Agriculture, hunting and forestry	5,1
Hotels and restaurants	4,8

Source: İZKA and EÜ, 2012b

come prominent regarding workforce payments are, respectively, “wholesale and retail trade”, “land, sea, air transport and transport via pipelines and communication”, “construction” and “education services” sectors. Differing from other analyses, it is striking that construction and education services outstand among other sectors regarding payments to employees (Table 67).

Table 67:
Net Operating Surplus Shares of Sectors within İzmir Region, 2008

Sector	Share (%)
Other services	21,0
Wholesale and retail trade	16,7
Land, sea, air transport and transport via pipelines and communication	10,7
Construction	5,4
Education services	5,4

Source: İZKA and EÜ, 2012b

The top five sectors that received the highest share within the overall net operating surplus in İzmir are listed under Table 68. In line with the gross value added shares of sectors, the sector with the highest net operating surplus share is the “land, sea, air transport and transport via pipelines and communication” sector, followed by “wholesale and retail trade” sector. “Other services”, “agriculture, hunting and forestry” and “hotels and restaurants” are other sectors with high net operating surplus.

Table 68:
Net Operating Surplus Shares of Sectors within İzmir Region, 2008

Sector	Share (%)
Land, sea, air transport and transport via pipelines and communication	20,9
Wholesale and retail trade	20,8
Other services	16,7
Agriculture, hunting and forestry	6,4
Hotels and restaurants	5,0

Source: İZKA and EÜ, 2012b

When the net sales made from İzmir region to the remaining parts of Turkey are examined, it is observed that the highest sale amount (7.2 million TL) belongs to the “land, sea, air transport and transport via pipelines and communication” sector. Other sectors that outstand regarding the net sales made to outside of region parameter are, respectively, “wholesale and retail trade”, “hotels and restaurants”, “manufacture of coke, refined petroleum products and nuclear fuel” and “manufacture of tobacco products” (Table 69).

Table 69:
Net Sales Made from İzmir Region to Turkey, 2008

Sector	Share (million TL)
Land, sea, air transport and transport via pipelines and communication	7,2
Wholesale and retail trade	6,4
Hotels and restaurants	5,9
Manufacture of coke, refined petroleum products and nuclear fuel	4,3
Manufacture of tobacco products	2,1

Source: İZKA and EÜ, 2012b

Industrial Interdependence within İzmir Region

As a focus point of the intersectoral intermediate goods exchange among sectors, input-output model also reveal findings related on what kind of interdependence exists or how much of importance the sectors are to one another. These findings are based on forward and reverse connections along with Hirschman categories.

Economic revitalisation to emerge in one sector impacts not merely that sector but also other sectors due to intermediate input exchanges. This impact is called “reverse connection” effect. On the other hand, how much of a sector’s overall output is used as intermediate goods is an indication of the degree of importance of that sector for other sectors. This impact is called “forward connection” effect (Aydoğuş, O. 2011). According to this, the five sectors that hold the highest overall forward connection effect in İzmir are as follows:

In the light of these information, it may be mentioned that a one-unit (for instance, 1 million TL) increase of final demand increase in all sectors would lead to 6.872 (6,872,000 TL) production increase in the wholesale and retail trade sector. With the same final demand increase scenario; the production increase would be 6.727 units for other services sector; 5.075 units for base metal industry sector, 4.860 units for transportation and communication sector and 4.538 units for manufacture of chemicals and chemical products (million TL) (Table 70).

⁶⁵ Sectors covered by the “other services” sector are sewage and refuse disposal, sanitation and similar activities; activities of membership organizations n.e.c., recreational, cultural and sporting activities; other service activities; service works in households

Table 70:
Five Sectors with the Highest Overall Forward Connection Effect in İzmir, 2008

Sector	Overall Forward Connection Index
Wholesale and retail trade	6,872
Other services	6,727
Base metal industry	5,075
Land, sea, air transport and transport via pipelines and communication	4,860
Manufacture of chemicals and chemical products	4,538

Source:İZKA and EÜ, 2012b

Sectors with the highest overall reverse connection effect and the most effective sectors that lay beneath the overall reverse connections of these sectors are presented in Table71. Manufacture of motor vehicles, trailers and semi-trailers outstands regarding overall reverse connection effects. Occurrence of a one-unit increase in the final demand of this sector leads to an overall production increase of 2.87 units within the regional economy. The sector that has the highest contribution to this impact is itself with 1.04 unit followed by base metal industry with 0.48 unit.

Sectors distinguished regarding both forward and reverse connection indices calculated (1st Hirschman Category) are, respectively, as follows:

- Manufacture of coke, refined petroleum products and nuclear fuel
- Manufacture of chemicals and chemical products
- Basemetal industry
- Recycling
- Electricity, gas, steam and hot water supply and distribution

Table 71:
Sectoral Overall Reverse Connection Effects in İzmir

Manufacture of motor vehicles, trailers and semi-trailers		Recycling		Base metal industry		Manufacture of furniture; manufacturing n.e.c.		Manufacture of fabricated metal products, except machinery and equipment	
Manufacture of motor vehicles, trailers and semi-trailers	1.04	Recycling	1.24	Base metal industry	1.49	Manufacture of furniture; manufacturing n.e.c.	1.02	Manufacture of fabricated metal products, except machinery and equipment	1.05
Base metal industry	0.48	Base metal industry	0.38	Recycling	0.36	Base metal industry	0.45	Base metal industry	0.52
Manufacture of fabricated metal products, except machinery and equipment	0.22	Wholesale and retail trade	0.29	Mining, extraction of crude petroleum and natural gas	0.18	Wholesale and retail trade	0.23	Wholesale and retail trade	0.20
Wholesale and retail trade	0.18	Other services	0.24	Wholesale and retail trade	0.13	Other services	0.16	Other services	0.14
Electricity, gas, steam and hot water supply and distribution	0.14	Land, sea, air transport and transport via pipelines and communication	0.16	Other services	0.12	Land, sea, air transport and transport via pipelines and communication	0.14	Recycling	0.13
Overall Reverse Connection Effect		2.87		2.83		2.73		2.60	

Source:İZKA and EÜ, 2012b

These sectors create relatively high production increases in the event of any expansion of regional economy, while also trigger higher production increases within other sectors in the event of a final demand increase of their own.

Multipliers of İzmir Region

Multiplier analyses display the amount of increase to occur in the regional economy's production, income, employment, tax and import in case of a one-unit increase in the final demand of a certain sector. In this section, the sectoral production, income, employment, tax and import multipliers calculated for İzmir Region are studied based on the five sectors with the highest multiplier coefficient.

The sector with the highest production multiplier effect for the economy of İzmir is the “manufacture of motor vehicles, trailers and semi-trailers” sector. One-unit increase to occur in the final demand of this sector would cause 2.87 units of increase for the regional economy (Table 72).

Other sectors with high production multipliers are, respectively, “recycling”, “base metal industry”, “manufacture of furniture; manufacturing n.e.c.” and

Table 72:
Sectors with the Highest Production Multiplier in İzmir Region, 2008

Sector	Production Multiplier
Manufacture of motor vehicles, trailers and semi-trailers	2,87
Recycling	2,83
Base metal industry	2,73
Manufacture of furniture; manufacturing n.e.c.	2,60
Manufacture of fabricated metal products, except machinery and equipment	2,58

Source: İZKA and EÜ, 2012b

“manufacture of fabricated metal products, except machinery and equipment” sectors. In the event of a one-unit increase in final demand, these sectors cause the highest production increase within İzmir.

Multiplier analysis based on workforce income increase displays that the income increase to be caused by one-unit of final demand increase within İzmir would be the education sector.

A one-unit increase to emerge in the final demand of education services sector would cause a total of 0.706 unit workforce income increase in the region (Table 73). Workforce income increase occurs to be high also in the healthcare and social services sector and financial intermediation, including insurance and pension funding sector. Construction and other services sectors are also of importance in terms of income multiplier.

Table 73:
Sectors with the Highest Income (Workforce Income) Multiplier in İzmir Region, 2008

Sector	Income Multiplier
Education services	0,706
Healthcare and social services	0,460
Financial intermediation, including insurance and pension funding	0,315
Other services	0,303
Construction	0,295

Source: İZKA and EÜ, 2012b

Another multiplier covered in the study enables observations to be conducted on employment. The sector that creates the highest employment increase in İzmir is the “manufacture of furniture; manufacturing n.e.c.” sector. One-unit of increase in the final demand of this sector would cause a workforce demand for 42 people within the regional economy (Table 74).“Manufacture of wearing apparel; dressing and dyeing of fur” is the second sector that creates the highest relative employment. Other sectors with the ability to create high employment are “Manufacture of medical, precision and optical instruments, watches and clocks”,“Manufacture of fabricated metal products, except machinery and equipment”and “Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials” sectors. At this point, it is observed that manufacture industries relatively outstand in terms of employment creation.

Table 74:
Sectors with the Highest Employment Multiplier in İzmir Region, 2008

Sector	Employment Multiplier
Manufacture of furniture; manufacturing n.e.c.	42
Manufacture of wearing apparel; dressing and dyeing of fur	34
Manufacture of medical, precision and optical instruments, watches and clocks	33
Manufacture of fabricated metal products, except machinery and equipment	32
Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	32

Source:İZKA and EÜ, 2012b

“Agriculture, hunting and forestry” and “manufacture of coke, refined petroleum products and nuclear fuel” sectors outstand among others regarding tax generation. One-unit of increase in the final demand of these sectors would cause a tax increase of 0.209 unit within the regional economy (Table 75).These sectors are followed by “mining, extraction of crude petroleum and natural gas”,“tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear”and“land, sea, air transport and transport via pipelines and communication”sectors. As is the case with employment, it is observed that manufacture industry comes foremost compared to others regarding tax generation.

Table 75:
Sectors with the Highest Tax Multiplier in İzmir Region, 2008

Sector	Tax Multiplier
Agriculture, hunting and forestry	0,209
Manufacture of coke, refined petroleum products and nuclear fuel İmalatı	0,180
Mining, extraction of crude petroleum and natural gas	0,180
Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear	0,161
Land, sea, air transport and transport via pipelines and communication	0,157

Kaynak: İZKA ve EÜ, 2012b

When the impact of one-unit final demand increase on import is considered, it is observed that “recycling”sector particularly outstands among others.

Table 76:
Sectors with the Highest Import Multiplier in İzmir Region, 2008

Sector	Import Multiplier
Recycling	16,248
Base metal industry	5,010
Manufacture of office machinery and and information processing equipment	2,896
Manufacture of medical, precision and optical instruments, watches and clocks	2,518
Manufacture of other transport equipment	2,478

Source:İZKA and EÜ, 2012b

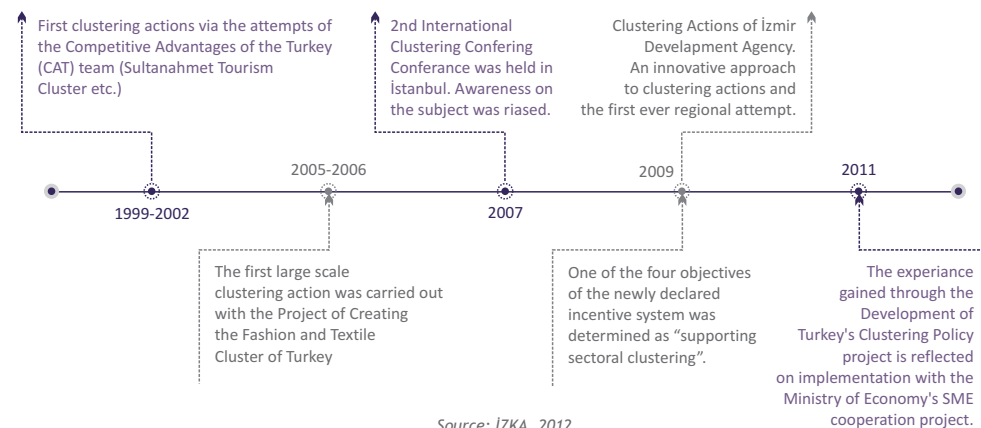
One-unit of increase in the final demand of this sector would cause an import increase of 16.248 units within the regional economy (Table 76).

“Base metal industry”, “manufacture of office machinery and accounting and information processing equipment”, “manufacture of medical, precision and optical instruments, watches and clocks” and “manufacture of other transport equipment” are also sectors that generate relatively high import. Dominance of manufacture industry is observed also regarding import.

3.a.6. Clustering

Industrial clusters, which have different definitions in literature, are defined in general as groups that are comprised of a group of companies in geographical proximity with each other along with non-business intermediary institutions such as non-governmental organisations, universities and development agencies and have positive impacts on the competitiveness of each company. Buyer-supplier relations, shared technology, shared buyer and distribution channels along with shared workforce pools keep a clustering together but the main factor that keeps the companies in a cluster together may be said to be the economic benefit of the companies within the cluster.

Figure 43:
Milestones of Clustering Experiences in Turkey



Source: İZKA, 2012

Trust and cooperation among companies in clusters is of vital importance for the sustainability of clusters.

Clustering brings competitiveness advantage to enterprises within the cluster by increasing productivity and supporting innovation. It also provides advantages in regards to access to information, technology and to enterprises that contributed to production and encouraging development, while also supporting the formation of an experienced workforce pool. Companies take the leading role for the development of cluster formations, while private sector institutions, universities, education institutions, research institutes, support organisations, local administrations and development agencies are other actors that play important roles throughout this process.

Clustering efforts began gaining momentum in Turkey with the Turkey Clustering Policy Development Project conducted by the Undersecretariat of Foreign Trade between years 2007 and 2009, within which national scale large sized clustering studies have been carried out. With the foundation of development agencies in 26 NUTS 2 regions, clustering approach played an important role as one of the tools towards the economic development of regions. Milestones of clustering works realised in Turkey and the historical course they took are shown in figure 43 (İZKA, 2012).

In spite of projects, supports for clustering and widespread presence of clustering initiatives, Turkey does not yet have a national strategy directly focused on clustering. However, clustering is covered within the context of different policy fields in the 9th National Development Plan, thematic strategy documents and institutional strategic plans.

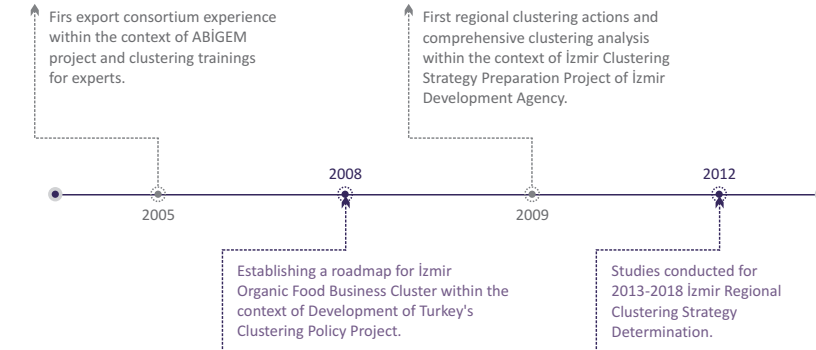
İzmir may be said to come at the top of the regions with the most experience in clustering policies and implementations throughout Turkey. The beginning of clustering efforts in İzmir goes back to ABİGEM project that initialised as an EU project and the first export consortium trials realised in year 2005. Through trainings organised in the same year with the subject of clustering, efforts were made for creating a specialist regional employee basis in the region.

In continuation of these works, İzmir Organic Food Clustering study was conducted within the context of Turkey Clustering Policy Development Project.

2009, and comprehensive clustering analyses were conducted in this framework. Developing and supporting clustering were promoted until this day also at regional level as one of the strategic priorities, namely “Creating Clusters and Ensuring Organised Industrialisation”, within 2010-2013 İzmir Regional Plan under the strategic development axis of Competitiveness in Enterprises.

As a result of these efforts that gained momentum since 2005, institutions in the region, particularly İzmir Development Agency and Aegean Exporters Associations, acquired significant experiences (Figure 43).

Figure 44:
Clustering Experiences in İzmir



Source: İZKA, 2012

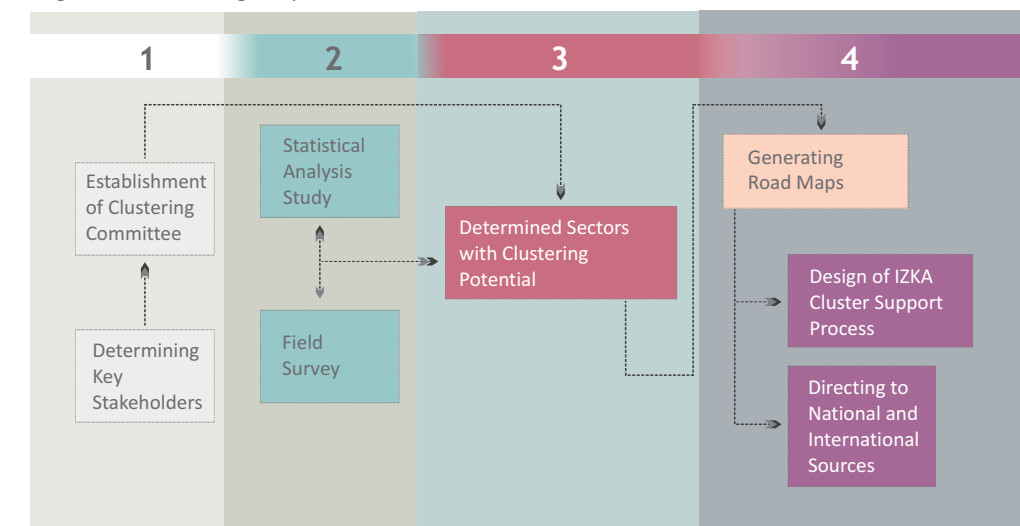
In this study carried out under the umbrella of Aegean Exporters Associations, workshops were held for the İzmir Organic Food Cluster and a cluster roadmap was prepared. Following these studies realised in year 2008, Turkey's first regional clustering strategy works were initiated by İzmir Development Agency within the context of İzmir Clustering Strategy Preparation Project in year

In conclusion of the experiences gained through these actions, the awareness and implementation capacity on clustering has been raised (İZKA, 2012).

3.a.6.a. İzmir Clustering Analysis

İzmir Clustering Analysis studies were initialised with the formation of İzmir Clustering Committee by İZKA in the year 2009 (Figure 45).

Figure 45:
Stages of İzmir Clustering Analysis



İzmir Clustering Committee

İzmir Clustering Committee comprises of representatives of institutions and organisations with knowledge and experience on the subject with a consideration to balanced distribution of universities, industry and commerce chambers, other private sector organisations, relevant non-governmental organisations, public institutions and local administrations (Figure 46).

The second stage of the process for generating the İzmir Clustering Strategy consists of research studies aimed at determining the clustering potential of the province. The purpose of these research studies is determining the sectors with existing clustering potential in İzmir. Research studies cover Statistical Analysis and Field Survey steps.

Şekil 46:
Distribution of İzmir Clustering Committee Members

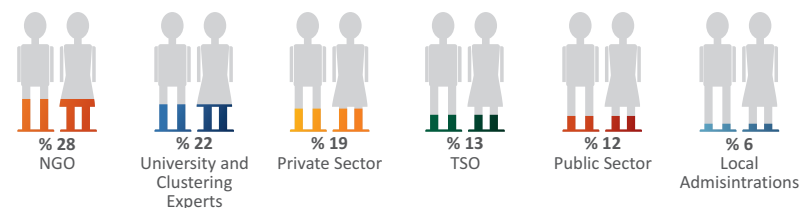


Table 77:
14 Sectors Received 3 Stars in Statistical Analysis and Relevant Indicators

NACE REV 1.1. CODE	Description	Employment (2008)	The share of sector's employment in İzmir within the sector's employment in Turkey (%) (2008)	Number of companies (2008)	Contribution to the export of İzmir (%) (2008)	The share of sector's employment in İzmir within the sector's employment in Turkey(%) (2008)	The share of İzmir R&D investment discounts within overall Turkey discounts (%) (2008)
15	Manufacture of food products and beverages	29.004	8,91	2.205	4,30	11,33	9,90
18	Manufacture of wearing apparel; dressing and dyeing of fur	41.161	9,80	3.082	2,59	6,13	0,00
24	Manufacture of chemicals and chemical products	7.535	9,65	288	11,03	23,33	9,52
27	Base metal industry	29.325	7,53	2.187	14,14	9,06	0,00
28	Manufacture of fabricated metal products, except machinery and equipment	6.629	14,52	383	0,94	3,12	0,00
29	Manufacture of machinery and equipment n.e.c.	27.284	11,18	2.909	2,21	3,34	7,91
34	Manufacture of motor vehicles, trailers and semi-trailers	24.821	10,41	2.039	3,74	5,06	1,19
36	Manufacture of furniture; manufacturing n.e.c.	19.536	8,43	2.229	0,70	1,12	0,05
51	Wholesale trade and commission trade, except of motor vehicles and motorcycles	55.297	8,15	11.712	28,83	5,23	0,17
52	Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	37.071	8,10	10.662	4,91	7,14	0,52
60	Land transport; transport via pipelines	38.032	8,13	6.694	2,59	3,99	0,00
63	Supporting and auxiliary transport activities; activities of travel agencies	19.787	9,71	1.501	1,13	1,73	0,00
92	Recreational, cultural and sporting activities	8.342	9,67	707	0,01	0,78	0,00
93	Otherservice activities	7.093	11,80	1.112	0,14	10,10	0,00
Total of 14 Sectors		350.917	-	47.710	12.801.233.650	-	9.282.358
		658.225	-	88.039	16.568.361.462	-	16.255.746
		53,31	-	54,19	77,26	-	57,10

Source: İZKA, 2010a

Statistical Analysis

Mainly the three-star analysis was used within the context of this statistical analysis⁶⁶. Also, innovative performance indicators such as change in export, change in overall sales, change in number of companies and change in brand registrations were used alongside the three-star parameters (size, dominance, specialisation) for the assessment of collected data, and the study was conducted as to cover not only province level but also the district of İzmir. In conclusion of the analyses conducted over 195 sector sub-activity fields and 51 activity fields as per NACE (Rev.1.1) classification; sectors that acquired 3 stars in terms of dominance, size and expertise parameters were taken into consideration as sectors with clustering potential. 14 sectors of 2-digit NACE codes were found to display clustering potential for overall İzmir territory at the end of the analysis. These sectors and year 2008 data related to these sectors are summarised under Table 77.

Within the context of İzmir Province Potential Investment Fields Study, also a statistical clustering analysis study was conducted that utilised up-to-date data. Within the context of this study conducted exclusively on manufacturing industry sectors by using 2009 Annual Industry and Service Statistics, number of establishments and amount of revenues parameters were also used in three-star analysis in addition to employment. In results of these analyses, findings that occur to be in line with the İzmir Clustering Analysis –published in the year 2010- study were determined.

Table 78:
Sectors Assessed Within the - Field Survey

Main Activity Group	NACE Rev.1.1. Code	Name of Activity	Potential Cluster Group
Manufacture of food products and beverages (15)	1533 - 1587	Processing and preserving of fruit and vegetables n.e.c.; manufacture of condiments and seasonings	Processed Fruits and Vegetables
Manufacture of chemicals and chemical products (24)	2412-2416-2451	Manufacture of dyes and pigments; manufacture of soap and detergents, cleaning and polishing preparations; manufacture of plastics in primary forms	Chemicals: Painting and Plastic Raw Materials Sector
Manufacture of machinery and equipment (29)	2923-2924	Manufacture of non-domestic cooling and ventilation equipments; manufacture of other general purpose machinery n.e.c.	Industrial HVAC Devices Sector
Manufacture of land vehicles (34)	3420-3430	Manufacture of parts and accessories for motor vehicles and their engines; manufacture of bodies (coachwork) for motor vehicles	Vehicle-Mounted Equipments Sector
Land transport (60)/ Supporting transport activities (63)	6311-6021-6321-6024	Cargo handling; other scheduled passenger land transport; other supporting land transport activities; freight transport by road	Logistics Sector
Manufacture of wearing apparel and fur (18)	1810-1821-1822	Manufacture of leather clothes; manufacture of workwear; manufacture of other outerwear	Wedding Dresses, Evening Gowns and Circumcision Clothes Sector

Source: İZKA, 2010a

⁶⁶ The 3-stars analysis method that studies the size, dominance and specialisation values of a certain sector is one of the methods used for determining industrial concentrations. Size parameter for İzmir province level was calculated through proportioning employment in İzmir generated by each sector to the employment generated by the same sector throughout Turkey. Dominance parameter was calculated by proportioning the employment in İzmir generated by a sector to the overall employment generated by all sectors in İzmir, while the specialisation parameter was calculated by proportioning the dominance value of a sector in İzmir to the dominance value of a sector throughout Turkey. Sectors that scored higher points than the predetermined thresholds regarding all three indicators were considered to receive three stars.

At the result of 3 different analyses realised during the field survey stage of İzmir Clustering Analysis, namely Business and Demand Analysis, Cluster Dynamics Analysis and Clustering Level Analysis; studied activity fields have been classified as per their clustering potential levels and their sectoral demands and social networking relations have been determined.

At the conclusion of the statistical analysis study and the field survey that included interviews with key actors in the

Table 79:
Prioritised Cluster Categories

Context	1st Group	2nd Group			3rd Group	
Cluster	Industrial HVAC Devices	Processed Fruits and Vegetables	Chemicals: (Plastic Raw Materials, painting and cleaning agents)	Vehicle-Mounted Equipments	Land and Sea Freight and Warehousing Services	Weddingand Evening Gowns
Policy Recommendation	Roadmap preparation process should be initialised for determining cluster demands in further detail	1. Programmes towards developing cooperation should be issued			1. Trainings towards increasing management capacity should be held	
		2. Clustering trainings should be held			2. Clustering trainings should be held	
		3. Membership to sectoral associations should be encouraged			3. Institutionalisation and departmentalisation should be encouraged	
		4. Educational programmes for developing the quality of human resources should be arranged			4. Internationalisation programmes should be issued	
	Programmes promoting University-Industry cooperation should be established					

Source: İZKA, 2010a

region, three cluster categories were defined for İzmir region. These categories and the prioritised policy recommendations revealed for each cluster group are summarised under Table 79 (İZKA, 2010b).

Conducting Roadmaps

In conclusion of the summarised analysis studies, it has been decided to establish roadmaps for the potential cluster sectors of “Processed Fruits and Vegetables” and “Industrial HVAC Devices”, which had the highest clustering potentials and actions towards that end were thus initialised in these sectors. During the process of establishing roadmaps; detailed statistics on clusters were revealed, foreign cluster managers of same sectors were invited to exchange information, and clusters were promoted at regional, national and international platforms.



Roadmaps were designed as to also cover the preliminary feasibility study that includes 3-year cluster activity plans, activity budgets, relevant and responsible organisations and supports (İZKA, 2010c; İZKA, 2010d).

3.a.6.b. Clusters in İzmir

This section provides information on the clusters that display a certain level of development and offer sufficient information (İZKA, 2012)

İzmir Organic Food Cluster

İzmir Organic Food Clustering Project is a study that will cover all parties in micro sense, ranging from organic

food sector production to manufacture, from certification to export, and from retail sale to final consumers. The purposes of the project are increasing the sector's national and international competitiveness and innovation capacity, ensuring implementation of the model to be created at micro level also throughout Turkey in the medium term; and contributing to the development of a Turkey clustering policy in macro sense. The project was realised through the cooperation of Aegean Exporters Union and Ecologic Agriculture Organisation Association and the support of İZKA. This clustering project aims for İzmir to become a respected and competitive organic raw material and food supplier. The transition from the regional base agricultural produce production to supply of branded organic food products for consumers with developed consumption trends within the domestic market was set as objective.

İNOVİZ Health Cluster

İNOVİZ is a communication and cooperation platform established for the purpose of conducting studies on the field of biomedical, which is considered as the “sector of future” for İzmir. The platform was set up towards the end of creating an İzmir that produces new technological products and thus steer the technology in the field of biomedical via cooperation on pre-competition fields in the sector, especially by ensuring the biomedical sector to carry out joint projects with universities and research centres.

İNOVİZ has set purposes such as creation of international project partnerships, providing R&D supports, ensuring promotion of new technologies at international markets, and drawing investments to the region. İNOVİZ aims to establish a communication platform among academic institutions functioning in the relevant fields, increase the cooperation between industry and academy, socioeconomically trigger sectoral clustering towards increasing performance and contribute to the concentration of knowledge, skills and qualification in the sector. Within the context of this objective, the platform strives towards establishing a suitable environment for technology and information exchange in biomedical field, creating education and learning opportunities, contributing to market launch activities, and supporting the internationalisation of companies.

İAOSB Machinery Metal Casting Cluster

İAOSBMachinery Metal Casting Cluster is a clustering example, which was established for the purposes of enabling widespread use of more cutting-edge and developed technologies by enterprises that deal in machinery, metal and casting sectors in their production and supporting the skills and capabilities of companies for marketing and product developing through a clustering approach. Actions carried out in these sectors were initially started with the support of İAOSB Clustering Project by İZKA within the context of the SME Financial Support Programme conducted in the year 2008. İAOSB Machinery Metal Casting Cluster aims to become a cluster that keeps track of knowledge, market info and technologies that will provide competition and promotion power to its members, addresses problems in a fast manner, with a high brand power, environmental sensitivity and honest trade understanding.

Aerospace Cluster

Aerospace Cluster is a clustering example, which was established for the purposes of providing the support required by the sector for the development of our country's aerospace industry, contributing to the national contribution share and export opportunities in the sector, making attempts towards bringing investments and production technologies to our country, establishing national and international cooperation initiatives, making/aiding in the making of agreements to develop the existing fields, and assisting the sector for developing innovative products and processes. The Aerospace Cluster aims for supporting the sector in its global integration studies regarding production, engineering, design and R&D issues for the Turkish aerospace industry to become a centre of excellence that produces original designs based on advanced technology and high quality at global scale.

Processed Fruits and Vegetables Cluster

İzmir Processed Fruits and Vegetables Cluster has been established for the main purposes of raising the awareness of companies in the sector regarding financial tools, forming the sectoral organisation structure, and conducting activities towards promoting the registered (formal) production. Increasing the healthy and quality product awareness within target group and chain markets, providing research support to public institutions that conduct actions for eliminating non-tariff obstacles applied for export, highlighting regional aspects and create cluster image during participation to international expositions, enabling procurement of raw materials and auxiliary substances at the desired cost, amount and quality, establishing an R&D coordination centre that serves the processed fruit and vegetable sector, and increasing the sector's awareness on the presently available R&D supports are also among the cluster's objectives. The vision of İzmir Processed Fruits and Vegetables Cluster was defined as “producing and marketing highly prestigious İzmir branded products that offer safe and genuine foods with a traditional and superior taste, contribute to raising healthy generations, preferred by conscious consumers throughout the world”.

Industrial HVAC Cluster

Industrial Heating Ventilation and Air Conditioning Cluster is a clustering example, which was established for the purposes of having a say in the national and international markets as a solution-oriented and environment-friendly cluster that uses energy efficiently, designs, produces and implements technological products and systems based on a flexible structure. The sector aims to develop cooperation with abroad sectoral organisations, and thus increase the international competitiveness of the companies in the sector. Recent analyses also show that the cluster carries on with its actions towards these purposes in an effective manner.

3.a.6.c. İzmir Clustering Strategy

2013-2018 İzmir Clustering Strategy prepared within the second half of the year 2012 under the coordination of İzmir Development Agency is the base strategy document that brings together the shared priorities of clustering actions in İzmir and reveals the fundamental objectives. This study, which constitutes the base of 2014-2023 İzmir Regional Plan on clustering field, is a document that supplements all stages that have been actualised since the year 2008, and intersects all proposals on sectors and sub-sectors brought up until today. Within the context of İzmir Clustering Strategy that was prepared with the participation of representatives from 23 institutions and organisations functioning relevant to the subject within İzmir put forth 26 action proposals under three priorities and seven objectives (İZKA, 2012).⁶⁷



⁶⁷ The study may be accessed at: <http://www.izmirkumelenme.org>

3.a.7. Investment Environment in İzmir

In a comprehensive manner, investment environment is considered together with the indicators and criteria developed in reference to determining aspects such as the political, economic and legal conditions in the relevant country or region, access to incentives and financing (funding), local market potentials, workforce market, ease of execution during business processes, tax and customs conditions, development level of the infrastructure and quality of living within the environment in question. Taking into consideration the purposes and limitations of this analysis, an approach was adopted that would reveal the investment environment of İzmir based on the issues open to intervention at local scale and fields of problem as indicators. The basic sources of data for the analysis comprises of the opinions and evaluations regarding the issue at hand obtained from the companies who invested in the region through two separate studies conducted by İZKA⁶⁸.

3.a.7.aSpecial Investment Zones in İzmir

The problems reported to be experienced by the special investment zones of İzmir, reasons lying beneath the emergence of such problems and the intervention and solution proposals deemed to be required for their elimination vary based on the region type and the specific development status of each region⁶⁹. According to the findings obtained from the Special Investment Zones Survey, the field of problem most mentioned by these zones in question may be said to be “problems due to legislation”. Following this, administrations mentioned that they experienced problems related to the publicity and marketing of their zones. Quantity and quality incompetency of zone administration personnel, difficulties faced when communicating with foreign investors, and problems experienced with other institutions and organisations at central and/or local scale regarding resolution of various issues were other fields of problems reported by zone administrations.

The problems faced by the not fully activated Ödemiş, Torbalı, Menemen and Bağyurdu OIZs in this stage of their development process are also comprised mostly by problems due to legislation. The province's relatively disadvantageous situation compared to nearby neighbouring provinces based on the new incentive system, the obligation to start production within three years as per Article 108 of the “Organised Industrial Zones Governing Regulation”⁷⁰, and being listed within developed regions category in regards to access to loans offered by the Ministry of Science, Industry and Technology (required for being utilised in infrastructure and treatment plant construction) are prioritised legislation-based problems of mentioned by the abovementioned OIZs' administrations. These problems make it difficult for OIZs to satisfy their infrastructural demands and create funding sources. Aside from such deepened problems, financial deficits and lack of qualified personnel are considered as other significant problems.

In zones such as Buca and Kemalpaşa OIZs that were industrialised prior to be granted OIZ status, there are problems that arise due to past implementations and constitute obstacles against generating solutions within the existing legal framework. Such problems that may similarly be related to legislation bring along implementation difficulties regarding issues like granting permits and licences.

The top places among infrastructure improvement demands prioritised by special investment zone administrations are occupied by transformation-transporting, waste management, energy infrastructure, social facility and environment quality issues (Table 80). Development of facilities and implementation infrastructure towards vocational education is also among the OIZ demands that require development and improvement.

The need for financial support to satisfy the demands of zones regarding internal access roads and other transportation facilities along with the needs for support

⁶⁸ Within the first of these studies, the results of the surveys and in-depth interviews applied to the administrations of the Organised Industrial Zones, Free Zones and Technology Development Zone in İzmir within the context of the “Study on Determining the Demands of Special Investment Zones” were assessed. Within the other study titled “Research on the Investment Environment of Foreign Direct Capital Enterprises”, the opinions of the foreign capital enterprises in İzmir on the region's investment environment were taken. The state of İzmir's investment environment that is to be evaluated based on the findings of these two studies cover rather the investment on manufacturing industry with an approach that particularly aims for the improvement of the physical and social infrastructure. As significant infrastructural components of the investment environment capacity, regional transportation, logistics and warehousing aspects are also taken into consideration.

⁶⁹ The determinations and assessments included in this section are based on the information, which was compiled from the administration of nine organised industrial zones that are presently active, four organised industrial zones that are planned to be active in the near future, two free zones, and one technology development zone through the survey and in-depth interview studies conducted by İZKA on the special investment zone administrations, on the problems they face, shortcomings and required supports along with the actions they carry out and their future plans. The findings of the studies in question reflect the capacities, problems and needs of the special investment zones as places where the investments that are of the characteristics and size suitable to generate significant employment and value added in the region are directed to as priority, rather than concentrating on a company based assessment.

⁷⁰ Due to the mentioned legislation article; in the event the investor does not start production within 3 years on the land assigned to him, the assigned site has to be reclaimed against money returnby the OIZ administration. OIZs not strong enough financially faces difficulty in satisfying this article and thus fail to complete necessary infrastructure investments due to this reason.

Table 80:
Prioritisation of Areas of Improvement Required by Special Investment Zones for Their Physical and Social Infrastructures

Area of improvement required by the zone for its physical and social infrastructure	1st place frequency	2nd place frequency	3rd place frequency	4th place frequency	Total Score*
Transportation, logistics and freight infrastructure	8		3		38
Waste storage and treatment plants	3	4	1	1	27
Energy and alternative energy infrastructure	2	4		1	21
Social infrastructure and facilities		4	1	1	15
Landscape and environment quality		2	3	1	13
Vocational education infrastructure and facilities	1	1		2	9
Existing structures and their furnishing			1	2	4
Feasibility and research studies	1				4
Quality control, analysis and test laboratories			1		2

Source: İZKA, 2013
* Total scores were calculated by multiplying the frequency to be ranked at 1st place by 4 points, the frequency to be ranked at 2nd place by 3 points, the frequency to be ranked at 3rd place by 2 points, and the frequency to be ranked at by 1 point.

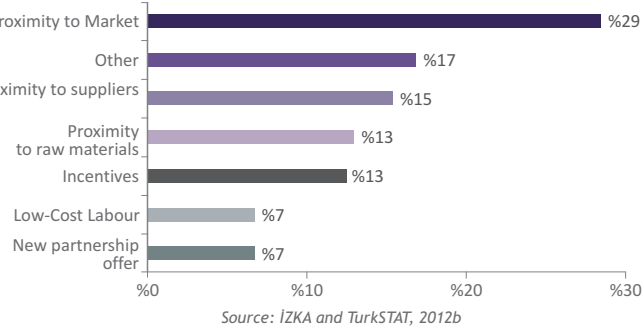
from relevant institutions towards satisfying their demands regarding external access roads and transportation system come foremost for the zones to make progress in their determined areas. Besides transportation, “cooperation with other institutions” is considered to be the type of support required due to the service suppliers relevant to improvement of energy infrastructure, social facilities and implementation infrastructure being public institutions and organisations. Therefore, it is revealed that the zones facing this type of problems have to be provided with facilitation in their communication with relevant institutions.

Investment zones that have completed their physical and social infrastructures and display relatively stable growth performances work to satisfy specialised demands such as benefitting from information technologies for providing more effective communication and cooperation with the member companies, holding activities towards increasing the region's international recognition, and designing and implementing training programmes in the fields required by the enterprises. These zones may define target investment and investor types and go into action in this direction towards the purposes of benefitting from sectoral clustering advantages, maximising value added, and increasing qualification and learning capacity in enterprises. It is considered that the development and universalisation of the implementations covered by the mentioned framework will be of great contribution to better utilisation of the potential of İzmir industry.

The attraction of İzmir to be preferred for investment region and the trends of companies presently active in İzmir towards remaining in the region, carrying their existing investments or realising new investments abroad under the conditions set by the new incentive system were queried. It is observed that particularly foreign capital enterprises do not consider the investment environment of İzmir as significantly adverse regarding incentives.⁷¹ According to the results obtained from the “Direct Foreign Capital Enterprises Investment Environment Evaluation Survey” study conducted by İzmir Development Agency, 16% of the 793 interviewed foreign capital enterprises mentioned that they plan to make further investments in Turkey.⁷²

79% of the enterprises with new investment plans consider benefitting from the new incentive system in these investments of theirs, and -despite the relatively disadvantageous position of İzmir regarding

Figure 47:
Underlying Reasons Behind Selection of the Province Set for New Investment



⁷¹ OIZ administrations mention proposals such as implementing the same incentive regime for the entirety of organised industrial zones, regulating incentives based on sector types and determining incentive conditions by a classification based not on provinces but districts in order to eliminate the relatively disadvantageous state conferred by the new incentive system.

⁷² Evaluations on the investment environment of İzmir are based on the findings of “Direct Foreign Capital Enterprises Investment Environment Evaluation Survey” that was conducted through the cooperation of İZKA and TurkSTAT.

incentives- 82% plan to implement these investments in İzmir, followed by 5% in İstanbul and 3% in Manisa. The priorities of importance for enterprises when choosing new investment region are reported to be proximity to market, to supplier companies and to raw materials (Figure 47).

3.a.7.b Foreign Capital Enterprises in İzmir

Market launch methods of the foreign capital enterprises in İzmir comprise 46% of direct investments, 32% of joint ventures and 22% of acquisition. Joint ventures have slightly more weight in manufacturing industry sector, in which these values are reflected as 41% for direct investments, 37% for joint ventures and 21% for acquisition. 33% of the enterprises covered in this study function in the manufacturing industry sector. Also, it has been observed that these enterprises tend to expand their initial establishments with new investments following their starter investment (İZKA and TurkSTAT, 2012b).

3.a.7.b.1 Important Factors in Investment Site Selection

Main factors that are effective on the decisions of foreign capital enterprises in İzmir to invest in Turkey are geographical position, size of market, positive economic indicators and proximity to market. The most important factors that cause foreign capital enterprises to particularly invest in İzmir are listed as İzmir Port (20%), living quality (14%), proximity to important international markets (13%) and qualified and cheap workforce (12%). It strikes attention that living quality was ranked at the second place among the reasons to choose İzmir, revealing that this factor is an important urban marketing aspect.

Specifically for the foreign capital enterprises dealing in manufacturing industry sector; the most prominent factors towards determining Turkey as an investment region are observed to be geographical position, size of market, proximity to market and qualified workforce. The most important factors that lead the companies to invest in İzmir are listed as İzmir Port (22%), qualified and cheap workforce (16%), proximity to major international markets (14%) and proximity to raw materials (13%).

The main factors that occurred to be determinant for the mentioned enterprises to notice İzmir for the first time are new partnership offers, internet searches and consultant recommendations. 30% of the investors mentioned being invited to the region as the most important factor for preferring İzmir.

Methods considered to be effective in reaching the foreign investor who will give the decision of investment location are exposition (fair) participations, meetings with abroad chambers of commerce and industry on investors, and international organisation hosting.

3.a.7.b.2 Important Factors in Determination of Investment Sites in İzmir

When determining the site to invest within İzmir, enterprises dealing in manufacturing sector tend to prefer setting up at special investment zones due to cheap land procurement, various infrastructure advantages, references of other, previously invested companies and relative ease in procedural processes. District preferences for investment are formed in line with the investment conditions of special investment zones.

Factors that affect the selection of investment site of direct foreign capital enterprises at district level are proximity to city centre, proximity to seaport, strong physical infrastructure, and living quality of the district. The districts preferred most commonly by the companies dealing in manufacturing industry sector are, respectively, Çiğli, Gazimир, Kemalpaşa, Bornova and Torbalı.

3.a.7.b.3 Difficulties Faced by Enterprises During Their Setting Up Stage

Foreign capital enterprises experience significant institutional and physical difficulties during their founding stages within İzmir. Determination of these difficulties will enable elimination of some of them in the briefest time possible with adequately planned actions, and taking the others that could not be eliminated (if any) into consideration within the investment promotion strategies.

At the top of the institutional difficulties faced by foreign capital enterprises based on the site of activity during founding stage comes heavy bureaucracy, followed by difficulties faced when trying to receive licences and work permits for foreign employees. 42% of the enterprises reported that they have not faced any physical difficulties at their founding stage. However, procurement of suitable investment area (16%), lack of adequate transportation infrastructure (15%), and lack of adequate communication and online services (15%) were

mentioned as physical difficulties experienced by the enterprises. Specifically for the foreign capital enterprises dealing in manufacturing industry sector; the lack of adequate transportation infrastructure takes the first place among difficulties, followed by procurement of suitable investment area, and lack of adequate communication and online services. The districts most preferred as investment site by enterprises dealing in manufacturing industry sector, Çiğli, Torbalı and Kemalpaşa, attract attention due to difficulties related to procurement of suitable investment area, while transportation related difficulties seem to concentrate in Gazimир, Kemalpaşa and Bornova districts.

3.a.7.b.4 Basic Needs of Enterprises

Determination of difficulties faced by enterprises during their setting up phase is of importance for the studies aimed at bringing new enterprises to the region, while determination of the existing needs and expectations and satisfaction of these expectations within the bounds of possibility increase the competitiveness of enterprises settled in İzmir and enable them to scale-up, steer to new investments, and affect new investment decisions through positive feedback to foreign enterprises with the potential to invest in İzmir. Fundamental needs of the enterprises in İzmir comprise of demands for funding, qualified personnel and expansion area.

In terms of manufacturing industry sector, it is observed that qualified personnel demand comes foremost, followed by demand for funding. Heavy bureaucracy, constantly shifting legislation and lack of adequate transportation infrastructure are other fields of problem that strike attention in this sector.

3.a.7.c Important Regional Infrastructure Projects that will Improve the Investment Environment in İzmir

The strategic logistics capacity of our region is estimated to be brought to much higher levels in the upcoming period with the completion of important regional infrastructure investments, particularly İzmir Seaport used both as a cruise port and largest export port of our country, that are at project design or implementation stages. In addition to the infrastructure investments that will have international and regional scale impacts such as İzmir-İstanbul Motorway, İzmir-Ankara High Speed Railway, Adnan Menderes Airport Domestic Lines Terminal, Northern Aegean (Çandarlı) Seaport and

Cruise Port İzmir-İstanbul Highway, İzmir-Ankara High Speed Railway, Adnan Menderes Airport Domestic Lines Terminal, Northern Aegean (Çandarlı) Seaport, Cruise Port, it may be estimated that the competitiveness of the investment environment of İzmir will increase considerably also through infrastructure projects that will improve intracity transportation. Kemalpaşa Logistics Centre and Gazimир Fair Complex are other important infrastructure investments that will directly impact the region's investment environment.

3.a.8. Region's Development Potential and Proposed Fields of Investment

Within the context of İzmir Province Potential Investment Fields Study prepared by the cooperation of İZKA and Development Bank investment fields of İzmir were examined while taking into consideration the resources of the region, utilisation potential of such resources and the existing incentive system, and the fields of agriculture, manufacturing industry, tourism, renewable energy and logistics were prioritised in line with the findings (İZKA and Development Bank, 2012).

While initially taking into consideration the resources of the province and utilisation potential of such resources within the context of the study, also input-output analyses that consider the sectoral investment trends, clustering analyses, sectoral performance, sectoral production structure and intersectoral interaction criteria were utilised especially for determining investment recommendations for manufacturing industry.



Sectoral performance measurement has been conducted for 23 two-digit NACE Rev. 2 main sectors of manufacturing industry and 78 three-digit sub activity fields (that have accessible data) separately.⁷³ Establishment location factors⁷⁴ analysis was also used for the assessment of investment subjects.

At the conclusion of this study, recommendations on investment fields, which are seen to be feasible at short and medium term and capable of creating new employment areas in İzmir, were developed. In result of the assessment (by establishment location factors) of 78 three-digit investment fields based on NACE Rev.

Table 81:
Most Suitable Investment Fields for İzmir Based on Establishment Location Factors

AA	Processing and preserving of fruit and vegetables
	Manufacture of dairy products
	Manufacture of knitted and crocheted articles
	Manufacture of articles of cork, straw and plaiting materials
	Manufacture of rubber products
	Manufacture of plastic products
	Manufacture of steel tubes, pipes, profiles and similar connector parts
	Manufacture of metal structures and parts of structures
	Manufacture of tanks, reservoirs and containers of metal
	Manufacture of steam generators, except central heating hot water boilers
	Forging, pressing, stamping and roll forming of metal; powder metallurgy
	Manufacture of wire products
	Manufacture of machinery and equipment
	Manufacture of parts and accessories for motor vehicles
	Manufacture of furniture (office, kitchen and other furniture)
BA	Production and preserving of meat, production of meat and poultrymeat products
	Manufacture of other textiles
	Manufacture of agricultural and forestry machinery
	Manufacture of other metalworking machine tools
CA	Manufacture of bodies (coachwork) for motor vehicles; Manufacture of trailers and semi-trailers
	Manufacture of wearing apparel, excpet fur
	Manufacture of other machinery and equipment
A	Manufacture of other special purpose machinery
	Growing annual plant products
	Growing perennial plant products
	Animal production
	Fishing
	Quarrying of sand and clay
	Manufacture of military defence vehicles
	Passenger and freight transport services by road
	Sea and coastal water transport
	Storage and warehousing
	Other supporting transport activities
	Hotels and similar accommodation facilities
	Holiday and other provision of short-stay accommodation
	Camping sites, including caravan sites
	Other provision of lodgings
	Catering and other food services

Source: İZKA and Development Bank, 2012

⁷³ Sectors related to two-digit performance assessment were analysed based on Production Index, Capacity Utilisation Ratios (CUR), Foreign Trade Competitiveness (FTC), Export, Employment Index, Efficiency per Employed Person Index, Revenue and Price Increases (PPI) criteria for the 2005-2011 period, and each sector's performance ranking throughout the period was calculated via the annual changes it displayed based on such criteria, and all sectors were listed from the highest performance sector to the lowest performance sector. Regarding three-digit performance listing; sectors were ranked as per sectoral performance by use of Production Index, Capacity Utilisation Ratio, Employment Index, Foreign Trade Competitiveness and Efficiency Indexes for the same period. This performance listing made on three-digit basis constitutes the main reference point for the determination of potential manufacturing industry investment fields in İzmir with a sectoral basis.

⁷⁴ Establishment location factors Encompasses all locational features to be effective on the cost, sales revenue and capital structure of the production unit in the event the said production unit is established at a certain geographical location. Selection of the establishment location generally covers a process to determine the site where operating costs are at the lowest and operating incomes are at the highest levels.

2 nomenclature conducted while taking into consideration the region's natural, social and economic conditions along with potential development axes, 38 of the activity fields were sorted under group A and 40 of the activity fields were sorted under group B. Group A presents investment fields that display the highest suitability for the region regarding establishment location factors, while group B presents investment fields secondarily most suitable for the region.

15 of the investment fields scored A regarding both performance assessment and establishment location factors (AA); 5 of the investment fields scored B regarding performance assessment and A regarding establishment location factors (BA); and 3 of the investment fields scored C regarding performance assessment and A regarding establishment location factors (CA). 15 other investment fields could not be given any performance note because the enterprises deal out of manufacturing industry sector and no performance assessment could be conducted on them; however, they received A according to establishment location factors (Table 81).

Defined investment fields merely represent recommendations and their feasibility has to be defined separately through feasibility studies. Actualisation ratios of investment recommendations in question depend on the motivating potential investors to invest in İzmir region and channelling savings adequately to such investments.

Within the context of the İzmir Region Input-Output Analysis prepared with the cooperation of İZKA and Ege University İİBF, five sectors with high values of both forward and reverse connection were revealed to be “manufacture of coke, refined petroleum products and nuclear fuel”, “manufacture of chemicals and chemical products”, “base metal industry”, “recycling” and “electricity, gas, steam and hot water supply and distribution”. These sectors will create relatively high production increases in the event of any expansion of regional economy, while also trigger higher production increases within other sectors in the event of a final demand increase of their owns (İZKA and EÜ, 2012b).

Incentive System and İzmir

With the incentive system issued as per the Board of Ministers Decree effectuated with date 15.06.2012 and no. 2012/3305, İzmir province was considered to fall within the first grade regions along with Ankara, Antalya, Bursa, Eskişehir, İstanbul, Kocaeli and Muğla provinces. Sectors that may benefit from regional incentives were listed as below:

- Integrated livestock investments including integrated breeding livestock investments
- Aquaculture (including roes and caviar)
- Manufacture of food products and beverages
- Manufacture of luggage, handbags, saddlery, harness and footwear
- Manufacture of wood and of products of wood and cork, except furniture; Manufacture of articles of straw and plaiting materials
- Manufacture of pulp, paper and paper products
- Manufacture of chemicals and chemical products
- Manufacture of ceramic sanitary fixtures, Manufacture of ceramic insulators and insulating fittings, Manufacture of ceramic tiles and flags
- Base metal industry and metal casting industry, except iron steel
- Manufacture of machinery and equipment
- Manufacture of computers and other information processing equipment
- Manufacture of electrical machinery and apparatus
- Manufacture of radio, television and communication equipment and apparatus



⁷⁵ Published on OJ with date 19.06.2012 and issue no. 28328.

- Manufacture of medical, precision and optical instruments
- Motor land vehicles subsidiary industry
- Maintenance and repair of aircraft and motors
- Manufacture of motorcycles and bicycles
- Manufacture of furniture (except those Manufactured only from metal and plastic)
- Hotels
- Dormitories
- Cold storage services
 - Licenced warehousing
- Education services (including preschool education services, excluding adult learning and other education activities)
- Hospital investments, nursery homes
- Waste recovery or disposal facilities
- Greenhousing

In the new incentive system, investments made in the prioritised fields listed below shall benefit from fifth region supports without regard to the region of investment:

- Tourism investments to be realised within Culture and Tourism Protection and Development Zones defined by Board of Ministers Decree,
- Mining investments,
- Investments at freight or passenger transport via rail or sea,
- Certain medicine and defence industry investments over 20 millionTL,
- Test centres, wind tunnel and similar investments (those for automotive, space or defence industry),
- International fair investments with a minimum of 50,000 m2 closed space,

- Primary, secondary and high school education investments of private sector.
- Investments made for the production of goods obtained in result of R&D projects supported by the Ministry of Science, Industry and Technology.

In addition, large scale investments of the following fields that will increase the technology and R&D capacity, and provide competitive superiority at international arena may benefit from incentives:

- Manufacture of chemicals and chemical products investmtns
- Manufacture of refined petroleum products investments
- Transport via pipelines investments
- Motorland vehicles base industry investments
- Motor land vehicles subsidiary industry investments
- Railroad and tramway locomotives and/or train car investments
- Seaport and seaport service investments
- Electronics industry investments
- Manufacture of medical, precision and optical instruments investments
- Manufacture of medicine investments
- Manufacture of aircraft and spacecraft and/or parts investments
- Manufacture of machinery (including electrical machinery and apparatus) investments
- Manufacture of metal investments

When the sectors that outstand within the context of İzmir Province Potential Investment Fields Study and İzmir Region Input-Output Analysis are compared with the sectors to be promoted within the framework of the new incentive system, it is observed that the two lists generally overlap with each other.

3.a.9. Entrepreneurship

Entrepreneur is defined as the person who sees the opportunities in the market, allocates his resources and produces value (UNCTAD, 2012).

And the concept of entrepreneurship may be defined in a general sense as the act of producing economic value through developing new products, services, processes or markets (İZKA and TEPAV, 2012). Global Entrepreneurship Monitor (GEM) defines entrepreneurship as “the attempt to form a new enterprise by a person, team or existing business by itself, through founding new business or expanding current business” (GEM, 2012).

Development of entrepreneurship is closely related to different policy fields of economic development such as industry and SME, innovation and clustering. Also, development of entrepreneurship for segments requiring special policies may be considered as a social policy tool. In this context, entrepreneurship is thought of as one of the significant factors of regional development due to its contribution to emergence of new jobs, development of innovation and increase of income and employment.

Recently, policies in Turkey related to entrepreneurship have been taking form and implementations towards entrepreneurship have been increasing. Although development of entrepreneurship is a newly forming policy field, it has become a national priority quite rapidly. Entrepreneurship became the subject for various strategies and objectives in the 9th Development Plan (2007-2013). Universalization of entrepreneurship trainings, encouraging entrepreneurship based on technology development, and encouraging entrepreneurship at rural areas and regions with low development along with enhancing the entrepreneurs' access to funding are among the strategies determined within the 9th Development Plan. Within the framework of 10th Development Plan (2014-2018) preparation studies, “Specialised Commission on Development of Entrepreneurship” was formed for the first time.

Within the context of İzmir Local Entrepreneurship Ecosystem Strategy Study⁷⁶, which was conducted by İzmir Development Agency at the end of year 2012, the advantages and disadvantages İzmir possesses regarding the framework conditions related to entrepreneurship such as human resource, innovation infrastructure, economic activity, and geographical and cultural aspects were defined as follows:



⁷⁶ İzmir Local Entrepreneurship Strategy Document was finalised within the context of entrepreneurship activities carried out by İzmir Development Agency in cooperation with Turkey Economy Policies Research Foundation (TEPAV) in December of the year 2012: http://www.izmiriplanliyorum.org/static/upload/file/izmir_girisimcilik_ekosisteminin_gelistirilmesi_stratejisi.pdf



Advantages

- There is a powerful human resource with above average education. This human resource encompasses those living in İzmir along with a strong diaspora distributed throughout Turkey and important centres of the world.
- As a historical centre of commerce, İzmir has a wide economic base and commerce culture.
- As a Mediterranean city within Turkey, İzmir attracts attention with its high quality living style and its cultural structure open to innovations.
- Following İstanbul, it is one of the cities with the most developed airline, highway and seaport connections.



Disadvantages

- İzmir is not a primary centre of attraction such as İstanbul according to its historical development and its existing economic and social situation within Turkey.
- The province's innovation infrastructure performance is relatively weak. In line with that, it falls behind compared to country average regarding the developing advanced technology sectors.
- There is also weakness in the cooperation culture. Innovative acts usually occur to develop individually.

In conclusion of the analysis of framework conditions, entrepreneur profile assessment and stakeholder meetings, the following findings were observed to define the existing state of the entrepreneurship ecosystem in İzmir:

- The tools for determining entrepreneurs are quite limited. There is no inclusive business plan competitions with high impact organised at local scale. Participation from İzmir to business competitions held nationally and generally centred in İstanbul is also considerably limited.
- It is observed that interest towards entrepreneurship is growing within non-governmental organisations where businessmen associations and chambers actively participate, which bring together experienced businessmen and managers who may be mentor or investor. However, the mechanisms that connect these to entrepreneurs to whom they may aid as mentor or investor are absent.

• Activities and spaces that physically bring together entrepreneurs are limited.

• It is seen that there are stakeholders in the local media who are interested in the subject of entrepreneurship. However, access to news in this subject is also limited.

• Although angel investing potential is high, there are no platforms such as an angel investor network to reveal and direct such kind of people.

• Practical entrepreneurship trainings of KOSGEB have widespread implementation within education field. Regarding formal education, many universities offer, although in a scattered manner, courses regarding entrepreneurship.

• Although entrepreneurship is an issue in which many organisations have an interest, communication and cooperation between organisations are limited. The lack of a platform to bring together these organisations is felt.

6 strategic priorities and 18 objectives have been designated for the purpose of rapidly activating the ecosystem, in the light of the analyses and assessments conducted within the context of İzmir Local Entrepreneurship Ecosystem Strategy on İzmir entrepreneurship ecosystem framework conditions, stakeholders and entrepreneur profile.

The priorities and objectives of the strategy constitute the base approach of 2014-2023

İzmir Regional plan on the issue of entrepreneurship (İZKA and TEPAV, 2012).

3.a.10. Assessment

İzmir historically resides among the most important provinces of the country in terms of basic economic indicators. With a long term assessment, it is observed that the province's 1987-2001 period overall economic performance occurred to be high compared to that of overall country. The prominent reason behind the province ranking among the top third in regards to many economic indicators is the economic and commercial relations based on strong and historical roots, while the basic reason why the province managed to maintain this position of its throughout long years has been its relatively high economic performance. However, the developments observed in the last decade point out to the necessity of further care in order for İzmir to maintain this advantage.

The GVA increase rate occurred in İzmir falling behind that of Aegean Region and Turkey and the relative performance loss regarding industry sector GVA regarding different aspects during the 2004-2010 period are indicators that must be addressed with care. The fact that İzmir resides only at the last place within the listing of regions without medium income trap risk also reflects the region's state in terms of economic performance.

Regional economic performance of İzmir calculated over 2004-2010 period GVA increase fell behind the performance of Aegean Region and of the country. Thus, the share of İzmir within Aegean Region and Turkey declined. According to the most up-to-date data, İzmir ranks at the third place in terms of (2010) GVA amount following İstanbul and Ankara; while taking the 23rd place among 26 NUTS 2 regions in terms of 2004-2010 GVA increase rate. The fact that İstanbul and Ankara took higher places in this listing gives an idea of the state of the performance loss in İzmir compared to other metropolises. In terms of GVA value per capita that relates the generated value added to the region's population, it is observed that İzmir again falls behind the other metropolitan regions in the NUTS 2 regions listing, ranking at the sixth place.

The underlying reason to the relatively inadequate GVA performance of İzmir is the relative performance loss in its industry sector.

An analysis of the shares of sector within national GVA illustrates that there are limited fluctuations in agriculture sector without major effects, while services sector also maintains its share. However, it is observed that the share of the industry sector of İzmir within national GVA declined regularly throughout the years and dropped from its year 2004 value of 7.3% to 6.3% as of the year 2010. With this decline rate, İzmir became the second region with the highest industry GVA decline following İstanbul and ranked at the fifth place in the listing of regions by their sectoral GVA shares (following İstanbul, TR41 Bursa, Eskişehir, Bilecik, TR 42 Kocaeli, Sakarya, Düzce, Bolu, Yalova and Ankara regions). At the same time, İzmir was the second NUTS 2 region with the highest decline of the industry's share within regional GVA, following TR42 Kocaeli, Sakarya, Düzce, Bolu, Yalova region in the 2004-2010 period. On the other hand, the share of industry sector within regional GVA increased by 0.8 points in the year 2010 despite the constant declining trend during the 2004-2009 period. That same year, the highest GVA increase rate among NUTS 2 regions was reported in İzmir. Actions aimed towards ensuring the continuity of this positive development should be strengthened.

When analysing the medium-long term declination indicators in İzmir economy, external developments that have adverse reflections in the region also have to be taken into account. 2008 global economic crisis (especially in the European countries that include important target countries regarding the export of İzmir) and the following recession, adverse effects of the low foreign exchange rate implementation on foreign trade, and the reflections from regional incentive implementation should be taken into consideration within this framework. The reflections of the medium and long term economic trends and above mentioned developments in İzmir on the economy of the province have to be discussed and revealed during participative processes that bring together the segments of science and business where this and any other problems experienced are to be addressed in a comprehensive manner.

Taking into consideration that some data mentioned herein are not adequately up-to-date and some others possess certain limitations, the presence of this necessity is felt strongly.

When the relatively low performance reported for the foreign trade volume and export during the 2002-2011 period and the fact that the region became a net importer are analysed together with the developments related to GVA, it may be said that the competitive advantage of İzmir has partially declined. On the other hand, certain economic indicators belonging to the recovery period following the global crisis in the year 2008 hint that this period may be turned into an opportunity for İzmir. İzmir having ranked at the fourth place among 200 metropolitan regions according to the Global Metro Monitor economic performance indicators based on the income per capita and employment data belonging to the 2010-2011 period points out that the opportunity in question also offers the possibility to increase both the region's and Turkey's global competitiveness.

Special investment zones that have the potential to offer significant opportunities to investors in İzmir experience certain difficulties, dominantly of legislative nature.



By gaining these OIZs of which obstacles may be eliminated through small interventions it is estimated that İzmir will provide a more suitable investment environment for existing and new investors and also develop its competitiveness in this respect within the upcoming period. With the commissioning of four more OIZs and two more technology development zones in addition to the existing capacity in the near future, it will be possible to see more diversified and well-structured investment zones in İzmir.

İzmir needs a comprehensive capacity building study in line and programmed with the region's economic development perspective. Especially realisation of spatial planning suited to the development of industry sector and development of supplemental infrastructure

arrangements have to be included among prioritised subjects. Through these studies, the question of how the investment size demands of different sectors and sizes could be satisfied will be clarified and actions made towards directing investments to correct fields will become more effective.

On the other hand, a shared result of numerous economic analyses conducted is that the region possesses a significant economic potential due to its human resources, natural resources, cultural heritage and being a trade centre of historical importance. Another fact that İzmir is the province with the highest self-sufficiency regarding input supply throughout the world underlines a significant opportunity for local and foreign investors as a cost-diminishing feature of the regional economy.

The process for actualising economic potential has to be carried out with the coordination of economic actors and in a planned manner. In this framework, it is vital that the sectors and investment fields with high development potential according to forward and reverse connection effects and certain parameters in İzmir, which shows a multi-sectoral structure due to being a metropolitan city with a diversity of resources. There are very valuable scientific analyses that have already been conducted for İzmir in this framework (details may be found under Methodology section).

Assessment and adoption of the analysis results by all interested parties, especially actors leading the business world will be great gains made for empowering positive trends and reversal of negative trends in İzmir economy.

Implementation of well-designed projects under collaboration of related institutions in appropriate investment zones, which are determined according to intersectoral relations and direct and indirect effects of sectoral developments to production, employment and import, will have great contribution to strengthen the regional economy. In addition to the actualisation of these projects; development of workforce in line with the sectors' demands and thus increasing efficiency is a supplemental aspect for increasing the region's gross value added and competitiveness. Closely monitoring global developments and trends, developing effective entrepreneurship in newly developing fields that are suited to İzmir's potentials and creation of new jobs will make it possible for the region to take its place within the global markets. Sectoral diversity, qualified workforce, R&D and innovation potential, industry infrastructure and export experience offer suitable conditions for transition into a service and industry production with higher value added and making a leap regarding qualified goods-services export.

₺6,3 billion

2011 yılı itibarıyla
İzmir ili tarımsal
üretim değeri

7.767 tons

The total fishery
export from İzmir
as of 2011

140

The number of organic
product varieties
produced in İzmir
as of 2011

3.b. AGRICULTURE SECTOR

Rio +20 summit underlined the need for supporting and universalising sustainable agriculture within agriculture sector. In the summit, the aspects of making the marketing and trade system effective, developing international cooperation, increasing the public and private sector investments towards sustainable agriculture, land management and rural development and thus increasing the global sustainable agricultural production were underlined. The objective has been set to achieve an agricultural sector structure that preserves soil, water, plant and animal gene resources, biodiversity and ecosystem while increasing the resistance of such resources against climate change and natural disasters.

The most important fields of investment and support related to sustainable agriculture may be listed as rural infrastructure, storage structures, R&G for sustainable agriculture technologies, strong cooperatives and supply chain development, and improvement of rural-urban connections. Within Rio+20 Turkey report, agriculture sector was highlighted to be of strategic importance for food safety and rural development despite its declining share within the economy.

Due to rich soil resources, biological diversity, suitable climatic and geologic conditions, agriculture has always been a leading sector for Turkey. It is observed that the interest of private entrepreneurs to make investment in agriculture sector increased in recent times. Agriculture sector satisfies the food demand of the majority of population and prevents Turkey to become dependent on foreign sources, while also realising raw material supply for other agriculture based sectors and play an important role in the social and economic development of Turkey (YDTA, 2010).

On the other hand, agriculture sector suffers from the following problems;

- Climate change, drought and diminishing water resources,
- Use of agricultural lands for other purposes and the pressure of other sectors on agriculture sector,
- Insufficiency in market regulation and control mechanisms,
- Lack of awareness regarding input utilisation,
- High input costs,
- Lack of a comprehensive information system and traceability,
- Insufficient effectiveness of sectoral organisations,
- Informal production,
- Dominance of small and fragmented enterprises and low competitiveness of enterprises (TKB, 2010).

In the year 2010, prices of products increased by an average of 20%, while input prices increased by an average of 26%. While it was possible to buy 0.23 litre of diesel oil against 1 kilogram of wheat in the year 2000, it is possible to buy only 0.17 litre of diesel oil against 1 kilogram of wheat as of the year 2010. Purchase power of wheat producer declined by 24% during this period. A similar situation is present regarding fertiliser, and purchase power declined between 12% and 14% depending on the type of fertiliser during the same period (TZOB, 2010).

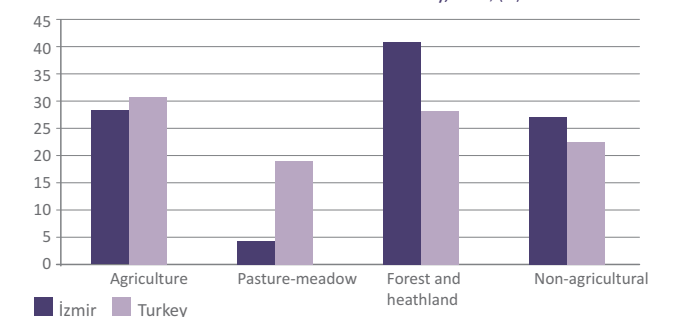
Usual structure of the agricultural enterprises in Turkey comprise of small scale family enterprises at the threshold between subsistence and semi-subsistence. The small and fragmented structure of agriculture fields occurs to be the most important problem also in İzmir similar to the entire country. This situation complicates information and technology use at enterprise scale, reduces workforce efficiency, and obstructs accumulation of sufficient capital (TKB, 2011). Average enterprise size of 61 decares in Turkey is already 2.7 times lower than EU average of 167 decares (TRGM, 2010). This value is even below Turkey average in İzmir with 37 decares.

With a climate allowing for product diversity, fertile lowlands, water resources, consumers with higher awareness compared to country average and organisational structure, İzmir has a high potential in terms of agriculture. Generally, the province's agricultural production yield and quality is above Turkey averages.

The share of agriculture within İzmir economy is relatively low, and agriculture's share within GDP is also on the decline as years pass by. The share of agriculture within GDP that was 10.4% as of year 1987 declined to 7.5% in year 2001. Likewise, the share of agriculture sector within GVA that was 6% as of year 2004 declined to 4.8% in year 2008. The share of agriculture sector of İzmir province is 20.4% within the agricultural GVA of Aegean Region and 3.7% within the agricultural GVA of Turkey, and the province ranks at the 13th place among 26 NUTS 2 regions regarding sector size (İZKA and Development Bank, 2012). Similar declines were observed in the same period in terms of employment within the agriculture sector. The employment parameter declined from 10.8% in the year 2004 to 7.5% in the year 2008. Displaying increase every year following 2008 in both İzmir and throughout Turkey, agriculture sector employment occurred to be 12.6% for İzmir and 25.5% for Turkey as of the year 2011. In terms of agriculture workforce efficiency, it is observed that İzmir has a significantly more favourable position compared to Turkey. GVA per capita (per employed person) in agriculture occurred to be 9,277 TL throughout Turkey, while it is 17,767 TL for İzmir as of the year 2004. This value increased to 14,409 TL throughout Turkey, while it reached 30,708 TL in İzmir in the year 2008.

According to the year 2011 data of İzmir Provincial Directorate of Food, Agriculture and Livestock (İGTHİM), İzmir provincial lands that cover a total of 1.2 million hectares area consist of 28.2% agriculture land, 4.2% pasture and meadow land, 40.6% forest and heathland, and 27% non-agricultural land.

Figure 48:
General Distribution of Land in İzmir and Turkey, 2011, (%)



Source: İGTHİM, 2012; TurkSTAT, 2012i.

Table 82:
İzmir -Agricultural Production Values by Years, 2006-2011, (TL)

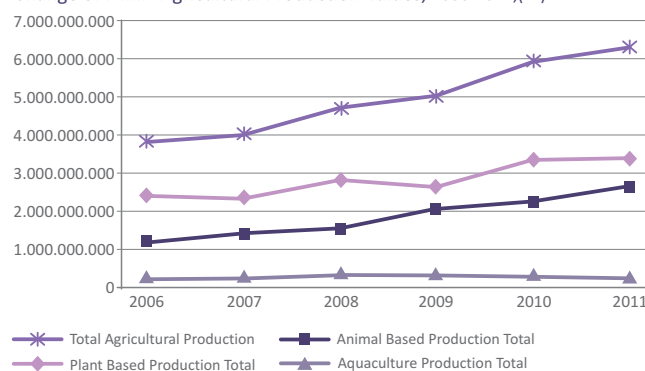
Ürün Grupları	2006	2007	2008	2009	2010	2011
Field Products	612,253,140	642,863,499	696,039,862	811,353,162	1,030,890,690	1,047,611,848
Vegetables	781,013,944	833,533,943	928,291,492	862,452,340	1,038,766,748	1,047,037,855
Fruits	917,687,160	745,712,910	1,088,161,150	859,183,850	1,191,140,500	1,193,934,990
Ornamental Plants (Cut Floriculture)	103,419,080	118,899,355	118,899,355	116,935,559	91,715,538	117,319,693
Plant Based Production Total	2,414,373,324	2,341,009,706	2,831,391,859	2,649,924,911	3,352,513,475	3,405,904,386
Meat (Red Meat + White Meat)	565,085,900	565,436,845	703,291,962	1,111,337,110	1,308,780,450	1,356,079,753
Milk (Cattle, Sheep, Goat)	512,293,084	640,211,636	645,846,913	769,545,019	801,933,496	1,050,906,828
Egg	100,020,960	209,112,500	194,260,655	163,074,200	123,402,450	225,173,840
Honey, Beeswax	20,596,462	12,476,850	15,078,365	23,602,704	41,681,002	47,944,517
Fleece, Hair	797,168	774,100	682,437	730,571	698,449	1,459,471
Animal Based Production Total	1,198,793,573	1,428,011,931	1,559,160,331	2,068,289,604	2,276,495,847	2,681,564,408
Sea Fishes	47,934,585	55,840,440	59,537,725	57,078,745	56,505,033	32,925,623
Other Sea Products	5,190,000	5,868,000	6,184,585	9,081,435	11,960,165	10,301,826
Inland Water Fishes Culture	190,526	209,851	206,713	205,305	198,830	81,975
Fishes	166,039,400	186,894,568	264,449,135	255,912,963	232,458,839	188,987,074
Aquaculture Total	219,354,511	248,812,859	330,378,158	322,278,448	301,122,867	232,296,498
Total Agricultural Production	3,832,521,408	4,017,834,496	4,720,930,348	5,040,492,963	5,930,132,188	6,319,765,292

Source: İGTHİM, 2012

The ratio of forest and non-agriculture areas are observed to be higher, while that of the pasture-meadow area and agriculture areas are observed to be lower than Turkey average (Figure 48). Due to the pressure of settlements, industry and other factors, a limited decline of agriculture and forest lands, a higher decline of pasture lands and a significant increase of non-agricultural lands may be observed within İzmir in the recent years. One of the reasons of the decline in the official area of pastures is the update made with new pasture lands determination and restriction works.

Agricultural production values data for İzmir province between the years 2006 and 2011 are given in Table 82.

Figure 49:
Change of İzmir -Agricultural Production Values, 2006-2011,(TL)



Source: İGTHİM, 2012

As of the year 2011, a total of 6.3 billion TL agricultural production value was obtained throughout the province, which consists 53.9% of plant based production, 42.4% of animal based production and 3.7% of aquaculture.

Compared to the year 2006, animal based production increased by 120%, plant based production increased by 40%, aquaculture production increased by 6%, and the total agricultural production increased by 65% (Figure 49). According to TurkSTAT data, İzmir produced 4.6% of overall Turkey agricultural value in the year 2007, while this ratio declined to 3.9% as of the year 2011 (TurkSTAT, 2011a).

When the shares of product groups building up the overall agricultural production value are examined, it is observed that the share of plant based production displays a declining trend while the share of animal based production displays a rising trend. The share of plant based production within overall agricultural production value declined by 14.5% especially due to the proportional decrease seen in the production value of fruits and vegetables during the 2006-2011 period. On the other hand, the share of animal based production within overall agricultural production value rose by 35.6% within the same period due to the proportional increase seen in the production value of meat and milk. The share of aquaculture products is observed to trace a fluctuating graph by years, declining by 35.4% as of the end of the period in question (Figure 49).

As of the year 2009, 62% (5.3 million hectares) of the total 8.5 million hectares of economically irrigable lands in Turkey have been opened to irrigation. Through transition to irrigated agriculture, the income obtained from unit area increases by 5 times. The utilised irrigation system is also of vital importance. With pressurised (sprinkling and drip) irrigation systems, 30-80% water saving, 20-50% yield increase, along with 50% fertiliser and 30% pesticide saving may be obtained compared to surface irrigation (Türker ve Gençel, 2010). However, 93% of the irrigated land throughout Turkey is irrigated by surface irrigation methods (furrow, check, flooding). Use of sprinkling irrigation method is limited to 6% and drip irrigation method is limited to 1% (Tuğay, 2012).

Total irrigable agricultural lands in İzmir cover an area of 280,000 hectares, corresponding to 82% of overall agricultural land. Irrigable area within overall agricultural area in İzmir corresponds to 53%, of which only 64% is irrigated. Total irrigated agricultural lands throughout the province cover 179,547 hectares, comprising 44% of government-irrigated agricultural lands and 56% of public-irrigated agricultural lands (İGTHİM, 2012).

Works aimed at opening irrigable lands of İzmir to irrigation are still underway. Güzelhisar Downstream Lowlands Irrigation was completed in the year 2011, opening 923 hectares of land to irrigation. Projects such as Kınık Right and Left Bank Irrigation, Beydağ Irrigation are still continued (Ministry of Forestry and Water Affairs, 2013). Widespread use of pressured irrigation systems should be ensured, education actions towards having farmers adopt such systems should be increased and supports for irrigation should be continued.

There are a total of 310 cooperatives of agricultural purpose in İzmir, comprising of 163 agricultural development cooperatives, 100 irrigation cooperatives, and 47 aquaculture cooperatives. The number of cooperative members is 41,160. There are four higher cooperative unions in the province. Regarding producer unions, as a different type of organisation, there are a total of 26 unions and 2,746 members of various production types. When compared to countries such as Finland, Netherlands, Switzerland and France, it is observed that cooperatives of our country display lower performance in terms of number of members, activity, contribution to economy, market and share within sales. The following may be mentioned among the reasons of this situation;

- Lack of adequate cooperative culture and awareness within the society,

- Low social capital throughout the society, including values such as “trust, solidarity and joint business culture between persons”,
- Presence of numerous non-active cooperatives waiting for dissolution,
- Lack of adequate education, inspection, consultancy, technical and legal services for cooperatives,
- Lack of adequate higher organisation, failure to realise cooperation between cooperatives at sufficient degree at all levels,
- Constant funding access and guarantee deficiency problems,
- Lack of knowledge and experience regarding business management of cooperative managers, failure to employ professional managers, absence of an education and certification prerequisite for becoming administrative board members (KOGM, 2012).

Within the context of Programme for Supporting Rural Development Investments (KKYDP) carried out by the Ministry of Food, Agriculture and Livestock in İzmir, a total of 18.6 million TL grant was awarded for 92 projects through 6 stages within the 2006-2011 period. Projects are based on fields such as processing, packaging, storage of plant and animal based products, and alternative energy greenhouses and the share of İzmir throughout Turkey occurred to be 2.5%. Awarding grants to 100 Economic Investment Projects is aimed for the second term between the years 2011 and 2015. With the Programme for Supporting Machinery and Equipment Procurements that have been implemented since the year 2007 again within the context of KKYDP, a total of 10.9 million TL grant support was provided for 1956 machines during the 2007-2012 period. The share of İzmir throughout Turkey occurred to be 1%. Awarding grants to 3,400 machines and equipments is aimed to be realised during the second term covering the period of 2011-2015 (İGTHİM, 2012).

“Aegean Sultani Grape”, “Aegean Cotton”, “Aegean Fig” and “Ödemiş Potato” and “Bergama Kozak Pine Nut” are agricultural products that were registered with geographical indication in İzmir. In İzmir, which provides a high local product diversity, geographical indication registration applications were made also for “İzmir Boyoz”, “İzmir Gevrek”, “İzmir Lokma”, “İzmir Şambali”, “İzmir Tulum Cheese”, “İzmir Kumru Bread” and “Turkish Coffee” products (TPI, 2013).

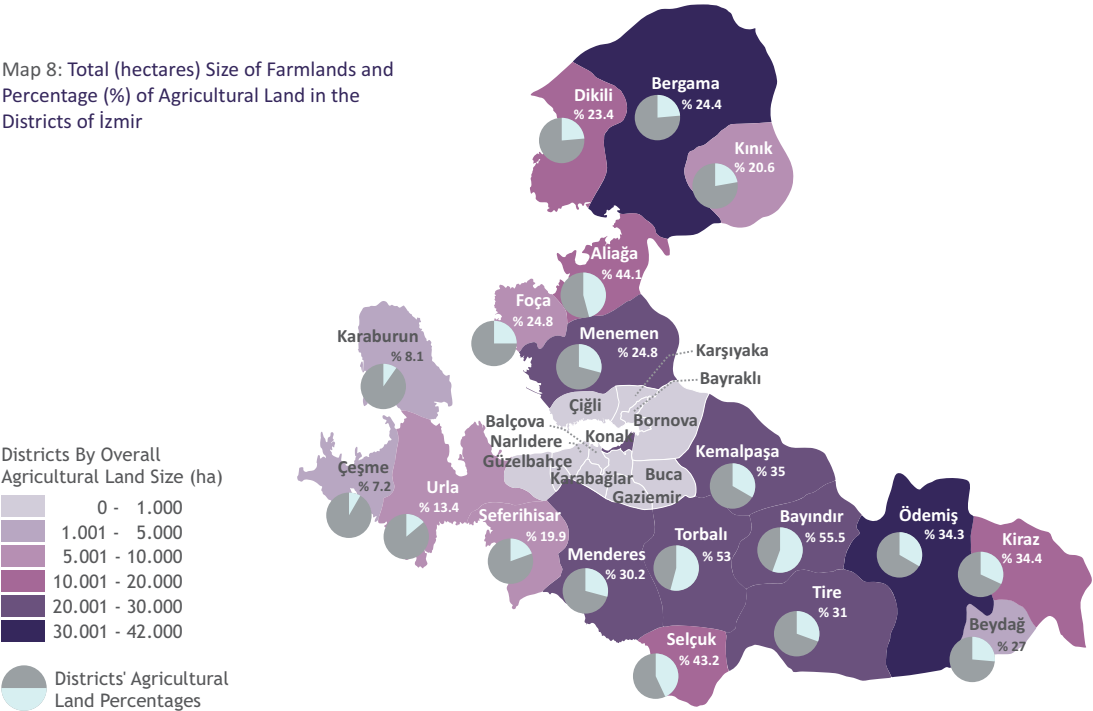
3.b.1 Plant Based Production

Turkey's total agricultural land area that was 26.8 million hectares back in year 1995 declined to 24.4 million hectares as of year 2010. 2.5 million hectares of agricultural lands were placed out of production due to especially domestic, industrial and touristic utilisations (Tuğay, 2012). According to year 2011 data, 1,648.7 hectares of agricultural land in İzmir are being used for purposes other than agriculture; especially for domestic purposes, followed by mining, industry and tourism purposes (Topçu, 2012). Due to the decline of fertile lands suitable for plant based production and the rise of population, the amount of agricultural area per capita is on the decline. In addition to this, soil resources, which constitute the fundamental source of plant based production, face problems such as salinization, alkalisation, acidification, mineral nutrient element deficiencies, pollution, erosion, compression and organic substance loss in result of both natural processes and incorrect soil and water management.

Within the context of İzmir Provincial Land Classification Project carried out by the partnership of İzmir Special Provincial Administration, Ege University, İGTHİM, İzmir Metropolitan Municipality and İzmir Regional Directorate of Forestry, lands of İzmir province are classified as follows according to the Law no. 5403 on Soil Preservation and Land Use.

Within the context of the same project, it has been determined that a total of 31,062 hectares area is prone to desertification (arid land) problem, comprising of

Map 8: Total (hectares) Size of Farmlands and Percentage (%) of Agricultural Land in the Districts of İzmir

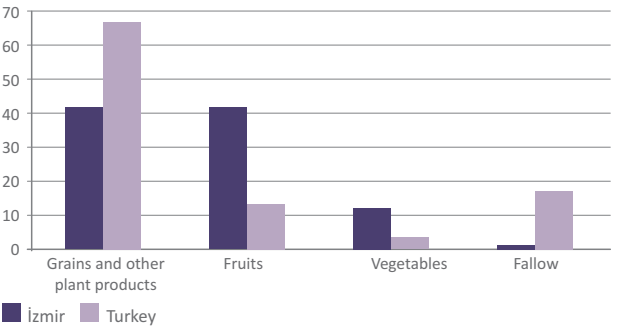


• Marginal Farmlands	353.918 hektar
• Prime Farmlands	171.161 hektar
• Special Product Lands	14.405 hektar
• Planted Farmlands	163.816 hektar

23,038 hectares saline-alkaline, 285 hectares alkaline, 2,829 hectares saline and 4,910 hectares mildly saline soil. It has also been determined that there are problems relevant to drainage on a total of 81,428 hectares of land, causing severely insufficient drainage on 19,734 hectares of land and insufficient drainage on 61,694 hectares of land. Arid lands are concentrated dominantly in Menemen and metropolitan districts, while those with drainage problems are concentrated dominantly in Menemen, Torbalı, Bergama, Dikili, Ödemiş, and Selçuk districts.

Of İzmir's agricultural land (total of 341,119 hectares), 41.5% is used for grains and other plant products, 41.5% is used for fruit cultivation and 12% is used for vegetable cultivation. The ratio of fallowed lands is 1.2%. When İzmir and Turkey data are compared, it is seen that the ratio for fruit and vegetable fields is higher and the ratio for grains

Figure 50: Distribution of İzmir and Turkey Farmlands by Type of Land Use, 2011, (%)



Source: İGTHİM, 2012; TurkSTAT, 2012i.

and other plant products and fallowed lands is lower in İzmir than Turkey (Figure 50).

The district with the highest ratio of agricultural land use occurs to be Bayındır with 55.5%, followed by Torbalı district with 53% in the province. The districts with the lowest agricultural lands within overall lands occur to be Karaburun (8.1%), Çeşme (7.2%) and metropolitan districts. Besides proportional values, the districts with the highest overall agricultural land area occur to be Bergama, Ödemiş, Bayındır, Torbalı, Tire, Menderes, Kemalpaşa and Menemen districts (Map 8; Table 83).

Field products and vegetable products and particularly fruit products have a major dominance within the plant products production of İzmir province. The overall plant based production value in the year 2011 comprises of 35.1% fruit products, 30.8% field products, 30.7% vegetable products and 3.4% ornamental plant products (İZKA and Development Bank, 2012).

In terms of total plant based production value among all provinces, İzmir took the fourth place in the year 2009, third place in the year 2010, and fifth place in the year 2011, following Antalya, Mersin, Konya and Şanlıurfa. The province's share within total national production is 4.1% (TurkSTAT, 2011a; TurkSTAT, 2012i).

Overall fruit production amount of İzmir increased by 28% during the 2005-2011 period. The province had a share of 3.7% within overall Turkey fruit production in the year 2011 (TurkSTAT, 2011a). The 141,548-hectare fruit cultivation lands that corresponds to 41.5% of total agricultural lands of İzmir comprises 68% of lands used for olive production, 9% of grape production, 3% of citrus production and 20% of cherry, fig, peach and other fruits production. An observation of the structure of fruit products production value reveals that the overall fruit production was comprised of 60.1% stone fruits, 17% berry fruits, 9% citrus, 6.5% nuts and 6% subtropical climate fruits as of the year 2011 (İGTHİM, 2012).

Particularly olive, and then grapes, cherry, tangerine, fig and peach are fruit products that come foremost within the overall fruit products cultivation of İzmir province. As of the year 2011, the production value of these six product types occurred to be 1.1 billion TL, corresponding to 89% of overall fruit products production value.

Table 83: Distribution of Agricultural Lands by Land Use (hectare)

Districts	Farmlands			Vegetable Area	Fruit Area	Poplar Grove	Ornament Plants	Vacant Land	Total Agriculture Land	Agriculture Area Ratio %
	Planted	Fallow	Total							
Merkez	1.391	795	2.186	414	3.994	0	95	3.515	10.203	12
Aliağa	5.764	290	6.054	242	5.036	5	2	735	12.074	44,1
Bayındır	10.070	0	10.070	1.600	17.818	400	65	0	29.954	55,5
Bergama	25.013	75	25.088	4.776	11.959	135	0	0	41.957	24,4
Beydağ	1.515	13	1.528	216	3.209	12	0	0	4.965	27
Çeşme	268	107	375	726	629	0	0	120	1.850	7,2
Dikili	6.894	145	7.039	217	4.677	0	0	0	11.932	23,4
Foça	2.094	460	2.554	307	1.729	0	0	500	5.090	24,8
Karaburun	271	100	371	138	3.257	0	42	100	3.908	8,1
Kemalpaşa	2.532	94	2.626	870	18.677	90	13	650	22.926	35
Kınık	6.247	20	6.267	2.005	911	0	0	9	9.192	20,6
Kiraz	10.202	0	10.202	1.101	4.519	90	29	2.600	18.541	32,4
Menderes	11.458	0	11.458	1.887	9.140	0	135	814	23.434	30,2
Menemen	12.045	50	12.095	3.883	3.837	10	6	406	20.237	29,2
Ödemiş	16.000	775	16.775	7.208	10.501	350	55	0	34.889	34,3
Seferihisar	355	124	479	270	6.877	0	27	39	7.692	19,9
Selçuk	1.435	1.200	2.635	506	11.682	12	40	430	15.305	43,2
Tire	12.538	0	12.538	6.800	8.206	35	28	0	27.608	31
Torbalı	14.055	0	14.055	6.182	9.414	15	57	220	29.943	53
Urla	1.437	0	1.437	1.624	5.477	5	141	738	9.421	13,4
Total	141.583	4.248	145.831	40.971	141.548	1.159	735	10.875	341.119	28,2

Source: İGTHİM, 2012

Olive is observed to be the most important product within agricultural production of İzmir. Constituting 65% of the stone fruits production value as of the year 2011, olive's production value corresponds to 39% of the overall fruit produce production (Figure 51). Although olive cultivation is realised in all districts of İzmir, Bayındır, Bergama, Selçuk, Torbalı, Ödemiş, Kemalpaşa, Urla, Seferihisar and Menderes are the districts with the highest production.

Figure 51:
Production Amounts of Most Commonly Cultivated Fruits in İzmir and Share of İzmir within Turkey Overall Production, 1991-2011

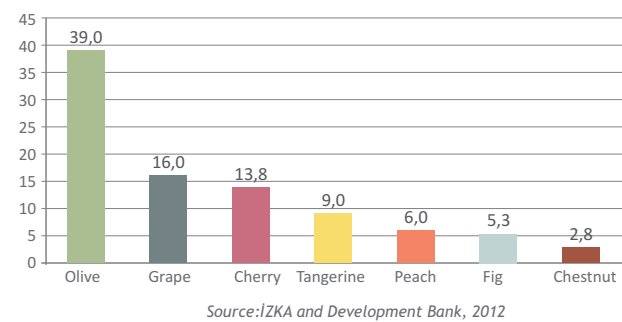
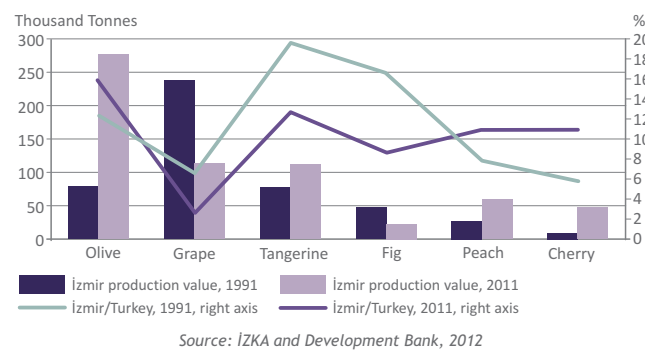


Figure 52:
Production Amounts of Most Commonly Cultivated Fruits in İzmir and Share of İzmir within Turkey Overall Production, 1991-2011



According to the production amounts in the years 1991 and 2011, the share of İzmir that corresponded to 12.3% of overall olive production of Turkey in the year 1991, while this value went up to reach 15.8% as of the year 2011 (Figure 52).

Another product of importance within İzmir fruit cultivation is grapes. Constituting 16% of the overall fruit produce production of the year 2011, grape's production dominantly comprises of table grapes (64%) and dried grapes (20%), while the share of wine grapes is 16%. Cultivation of grapes is dominantly realised over Kemalpaşa, Menderes, Bergama, Torbalı, Menemen and Bayındır districts. Grape production declined in time regarding both cultivation area and production amount, and the share of İzmir within overall country production that had been 6.6% as of the year 1991 dropped to 2.6% in the year 2011.

The production value of cherry, which is also within the group of stone fruits, corresponded to 13.8% of the overall fruit produce production value as of the year 2011. Cherry production is dominantly realised over Kemalpaşa district. Kemalpaşa meets 87% of the total cherry production in the province.

Cherry production constantly increased by years and the share of İzmir within overall Turkey production increased in line with this. Cherry production increased by 4.5 times during the 1991-2011 period to reach 48,000 tonnes/year, and the share of İzmir within overall Turkey production rose from 5.8% to 10.9% (Figure 52).

The production of peach, another stone fruit, also increased significantly during the 1991-2011 period. The share of İzmir within overall Turkey production of peaches rose from 7.8 to 10.9% between the years 1991 and 2011.

Peach production is concentrated especially in Selçuk district, followed by Tire, Kemalpaşa and Torbalı. These four districts meet 87% of the total peach production in the province.

One of the subtropical climate fruits, fig is produced dominantly in Ödemiş, Kiraz and Tire districts, and constitutes 5.3% of the overall fruit produce production value as of the year 2011. The share of İzmir within overall Turkey production of figs declined from 16.5% to its half between the years 2000 and 2011.

Production of tangerines that outstands in terms of fruit production value and constitutes approximately 9% of fruit production value as of the year 2011 is realised dominantly in Menderes, Seferihisar and Selçuk. The tangerine production increase in İzmir during the 1991-2011 period fell behind that of Turkey. The share of İzmir that occurred to be 19.6% in the year 1991 declined to 12.7% as of the year 2011. Production of tangerines in the province, which comprises almost entirely of satsuma type, coincides with 20.9% of overall satsuma tangerine production throughout the country.

According to year 2011 data, İzmir takes up the second place following Aydın regarding the cultivation area and production amount of chestnuts and corresponds to 15% of overall Turkey production (TurkSTAT, 2012i).

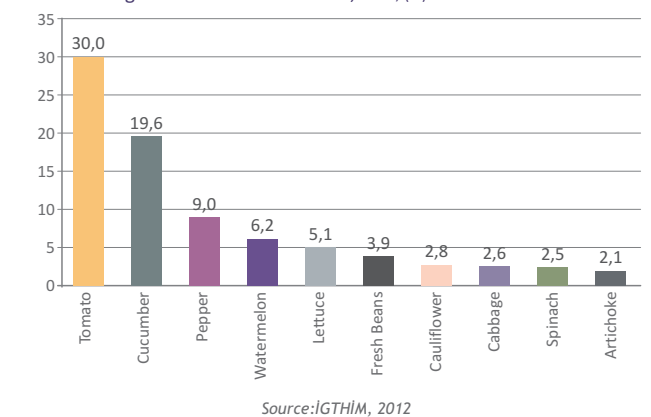
According to İGTHİM data, a total of 8,197 decares area was utilised by 1,848 farmer families throughout the province for greenhouse vegetable-fruit cultivation as of the year 2011. Cucumber (74.5%) is the most commonly cultivated produce in greenhouse farming, followed by lettuce and tomato cultivation. According to TurkSTAT 2011 data, greenhouse farmlands increased by 13% compared to year 2007, and the greenhouse production of vegetables-fruits also increased by 16% and reached 167,090 tonnes.

Greenhouse production is dominantly carried out in plastic greenhouses and production in glass greenhouses, high and short tunnels is considerably limited (TurkSTAT, 2011a). 69 villages where greenhouse production of vegetables-fruits is realised consist of 19 in Menderes, 17 in Torbalı and 9 in central districts.

Production of vegetable produce has a significant share of 30.7% within overall plant based produce production value of İzmir province. Realised over a total area of 40,971 hectares, vegetables production may be observed in all districts and is concentrated in Ödemiş, Tire, Torbalı, Bergama and Menemen.

Overall vegetables production in İzmir rose by 4% between the years 2005 and 2011. The share of İzmir within overall Turkey vegetables production occurred to be 6.1% in the year 2011 (TurkSTAT, 2011a). As the year 2011, 30% of the vegetable produce production value (including greenhouse production) consists of tomato production. Other products of importance regarding vegetables production were reported to be cucumber (19.6%) and pepper (9%) (Figure 53). The production value belonging to these three products corresponds to approximately 60% of the vegetables production in İzmir (İGTHİM, 2012).

Figure 53:
The Shares of Most Commonly Cultivated Vegetables in İzmir within Overall Vegetables Production Value, 2011, (%)

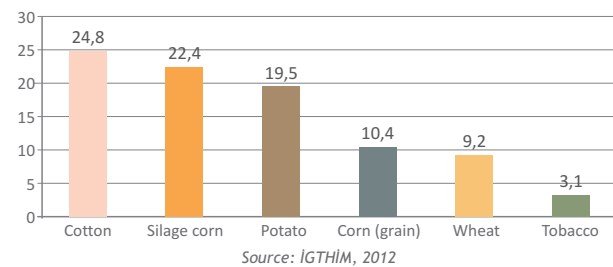


The field produce production value that was reported to be 1 billion TL as of the year 2011 comprise 28.1% of industrial plants, followed by forage plants with a share of 27.5%, grains with a share of 23.9% and tuberous crops with a share of 20%.

Particularly cotton, followed by silage corn, potato, corn (grain), wheat and tobacco, comprise the foremost products within the field crops production of İzmir province.



Figure 54:
The Shares of Most Commonly Cultivated Field Crops in İzmir
within Overall Field Crops Production Value, 2011, (%)



The production value of these six produce correspond to 962 million TL as of the year 2011, constituting 92% of the field crops production value (Figure 54).

The most important product within industrial plants production of İzmir province is cotton. Cotton production corresponded to 88%, a major portion of overall industrial plants production value (295 million TL), and 24.8% of overall field crops production value. Despite a decline of 55% of lands allocated to cotton production during the 20-year period that covered the years 1991-2011, yield occurred to increase by 112%, thus resulting in only a 5% decline for unginned cotton production in the same period. Although the share of cotton production of İzmir within overall Turkey cotton production decreased by half during the 1991-2011 period and rested at 5.6% as of the year 2011, the increase of cotton premiums have led to an increase of 60% in the production amount and cultivation area since the year 2009 (İZKA and Development Bank, 2012).

The area designated for tobacco production in İzmir declined by 78% due to national policies during the 20-year period covering the years 1991-2011 and reached 4,398 hectares, while the production amount declined by 66% and rested at 2,820 tonnes at the end of the period. During the same period, tobacco cultivation areas throughout Turkey declined by 66% and tobacco production amount declined by 81% (İZKA and Development Bank, 2012). Tobacco import of Turkey increased heavily in the same period, while export values declined. Tobacco import that was 10,984 tonnes in the year 1991 increased to 66,308 tonnes in the year 2011, and tobacco export that was 137,366 tonnes in the year 1991 decreased to 68,686 tonnes in the year 2011. Turkey has become a net importer regarding tobacco according to these values.

The most prominent products within the overall grains production of İzmir province are corn and wheat. The overall grains production value that occurred to be 250 million TL as of the year 2011 comprised 44% of corn and 38% of wheat production.

During the 20-year period covering the years 1991-2011, wheat cultivation areas declined by 33% and wheat production amount declined by 38%. Because fields previously holding wheat were used for corn, the cultivation area for corn increased by 4.4 times and corn production increased by 9.2 times within the same period. The yield level for wheat and corn production in the region is over the Turkey and Aegean Region average values (İZKA and Development Bank, 2012).

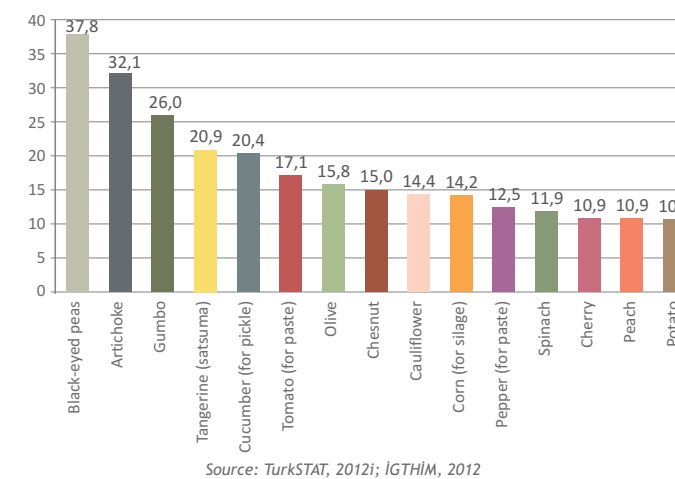
Because livestock farming is an important activity within the agricultural production of İzmir, silage plants production takes up a significant place within plant based production. Silage plants production corresponds to 27.5% of the overall field crops production value. As the most important produce among silage plants, silage corn constitutes 81% of the overall silage plants production.

Ornamental plant production area in Turkey increased from 1,392 hectares to 3,359 hectares between the years 2001 and 2009. It has a share of 7 per mille within the worldwide production regarding ornamental plant production. According to the year 2009 data, İzmir ranks at the first place among all regions in regards to total ornamental plant production area with a share of 24% and land surface of 802 hectares, followed by Sakarya, Antalya, Yalova and Bursa. Considering that 448 hectares area (28%) was used for ornamental plant production in the year 2006, it is observed that the area of cultivation has increased. Antalya and İzmir are the most prominent provinces regarding cut flower production. Cut flower production realised in İzmir is concentrated rather towards local market, while Antalya region realises an export-oriented production, dominantly in greenhouses (OAİB, 2012).

According to TurkSTAT 2011 data, İzmir comes up as the second in terms of cut flower production area (34.9% share), following Antalya. In terms of production amount, the province provides 32.7% of overall Turkey production with 341,397,480 flowers, again coming as second following Antalya province. Cut floriculture is realised over a total (indoors and outdoors) area of 397 hectares in İzmir province, dominantly in Urla, Menderes, Bayındır, Balçova and Karaburun districts. Roses, gerberas, chrysanthemums and daffodils have the highest share regarding cultivation area and production value.

Vegetables of which shares within overall plant based production of İzmir are low but provide İzmir with a high share within countrywide production are revealed to be black-eyed peas, artichoke and gumbo. İzmir provides 37.8% of overall countrywide production with 7,539 tonnes of black-eyed pea production, 32.1% of overall countrywide production with 10,738 tonnes of artichoke

Figure 55:
The Share of the Production Amounts of Certain Plant Based Products of
İzmir within Overall Turkey Production Amount, 2011, (%)

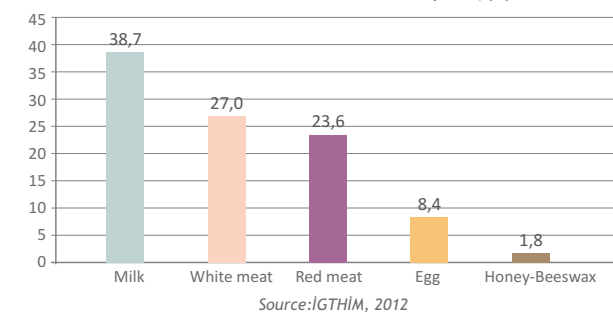


production, and % 26 of overall countrywide production with 9,529 tonnes of gumbo production (Figure 55).

3.b.2 Animal Based Production

Possessing suitable features for livestock farming, İzmir is one of the important livestock farming centres of both the region and Turkey. The numbers of ovine and bovine animals per enterprise in İzmir are higher than that of both the Aegean Region and Turkey (İZKA and Development Bank, 2012). İzmir took the second place among all provinces in terms of animal based production value in the years 2009 and 2010, while it declined to the fourth place following Konya, Balıkesir and Sivas as of the year 2011. The province's share within overall Turkey animal based production value is 1.23% (TurkSTAT, 2011a; TurkSTAT, 2012i). The share of animal based production within the overall agricultural production of İzmir rose from its 2006 value of 31.3% to 42.4% as of the year 2011. 38.7% of the provincial animal based production value comprises of milk, followed by white meat with a value of 27% and red meat with a value of 23.6% (Figure 56).

Figure 56:
The Shares of Most Commonly Produced Animal Based Products in
İzmir within the Total Animal Based Production, 2011, (%)



The number of cattle that was 323,000 in the year 1991 increased to rest at 433,000 as of the year 2011. The share of İzmir that housed 1.9% of the cattle assets of Turkey in the year 1991 rose to 3.5% as of the year 2011. Following certain actions, the ratio of culture races⁷⁷ increased from 58.8% to 71%. Turkey average of this parameter occurs to be 39%. Bovine livestock farming is concentrated dominantly in Ödemiş, Bayındır, Tire, Kiraz and Bergama districts (İZKA and Development Bank, 2012).

Regarding the province's ovine livestock farming, both sheep and goat assets displayed a constant declining trend throughout the years. The number of sheep in İzmir declined from 512,000 in 1991 to 415,000 in 2011, while the number of goats in İzmir declined from 209,000 to 165,000 within the same period. These declines occurred more severely at national scale (İZKA and Development Bank, 2012).

The ratio of the number of poultry animals in İzmir throughout Turkey occurred to be 6.5% as of the year 2011. Ovine livestock farming is concentrated in Kemalpaşa, Torbalı and Foça districts (TurkSTAT, 2011a). White (poultry) meat production in İzmir developed rapidly and increased its production amount by more than 4 times during the 2007-2011 period, while the share of white meat production value within overall animal based production value also increased from 12.8% to 27%. Again in the year 2011, 8.4% of overall animal based production value was met through egg production, which increased by 35% compared to the year 2007 (İGTHİM, 2012).



⁷⁷ Cattle race rehabilitated in terms of yield characteristics.

⁷⁸ Cold chain indicates the chain of processes where the cold storage of milk is ensured without interruption during the period between the production of milk and consumption including storage and transport.

As of the year 2009, a total of 39,099 tonnes red meat was produced within İzmir, of which 84% was obtained from bovine animals. The amount of red meat produced within İzmir in the year 2009 is 70% higher than that of year 1991, and corresponds to 8.5% of overall Turkey production and 44.1% of overall Aegean Region production (İZKA and Development Bank, 2012).

Cow milk corresponds to 96.5% of all milk production and 37.2% of the animal based production value within İzmir by itself. Production increased by 21% between years 2007 and 2011 and reached 647,458 tonnes, corresponding to 4.3% of overall Turkey production. Turkey's overall milk production increased by 22% and reached 15,056,180 tonnes during the same period (TurkSTAT, 2012i). According to TurkSTAT year 2010 data, İzmir resides at the third place following Balıkesir and Konya regarding overall milk production and at the second place following Balıkesir regarding cow milk production. Again according to year 2011 TurkSTAT data, İzmir provides 2.67% of Turkey's overall honey production with a provincial production amount of 2,521 tonnes.

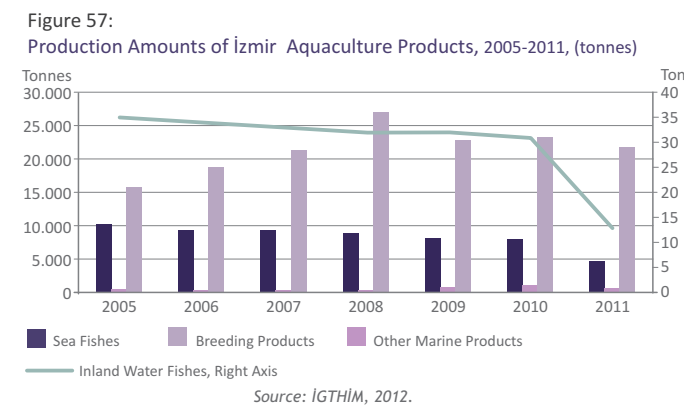
Through the Cold Chain Management of Milk Project⁷⁹ initialised under the leadership of the Provincial Directorate of Food, Agriculture and Livestock and with the contributions of Provincial Special Administration and suppliers and private sector, nearly all the milk produced in İzmir was ensured to be included into the cold chain.

3.b.3 Aquaculture⁷⁹

Worldwide aquaculture production reached 154 million tonnes in the year 2011, comprising 59% of hunting and 41% of breeding. The share of breeding within the worldwide aquaculture production increased from its year 2000 value of 27% to 41% as of the year 2011.



Although Turkey's aquaculture breeding production displayed increase in the recent years, it corresponds to merely 0.3% of global production according to the year 2010 data of United National Food and Agriculture Organisation (FAO). With 167,721 tonnes of production, Turkey resides at the 24th place throughout the world in this regard, while ranking at the 30th place regarding hunting production with a production of 485,939 tonnes corresponding to 0.5% of global hunting. Turkey resides at the sixth place among European countries in regards to aquaculture products sector, with a 5% share in hunting and 6.5% share in breeding. Turkey takes the first place throughout Europe regarding trout breeding and has a 25% share within the seabream and seabass market (İZKA and İKÇÜ, 2012).



While all of the aquaculture production was met through hunting in Turkey back in the year 1985, breeding production initialised in the year 1986 constantly increased through the years and rested at 188,790 tonnes in the year 2011, providing a quarter of the overall production. Species most commonly hunted in marine fishing comprise particularly of European anchovy, along with sprat, sardines, white sand mussel and horse mackerel. Mainly bred species include trout (inland waters), seabream, seabass and sea trout. According to data belonging to the year 2011, 66,738 tonnes of aquaculture products corresponding to 664 million TL were exported, while 65,698 tonnes of aquaculture products corresponding to 291 million TL were imported.

According to the data of İzmir Provincial Directorate of Food, Agriculture and Livestock, hunting based production within overall İzmir aquaculture production declined from 40.8% to 20.4%, while the share of breeding based production rose from 59.2% to 79.6% during the 2005-2011 period.

In İzmir that has 17 of 30 districts connected to sea shore, aquaculture breeding production increased by 16%

compared to year 2006 and reached 21,847 tonnes. According to year 2011 data of TurkSTAT, İzmir provides 12.6% of Turkey's overall breeding based aquaculture production with 23,753 tonnes of provincial production and resides at the second place among all provinces, following Muğla. Most common species bred in this respect are bass (57.3%), seabream (39.3%) and trout. Residing at the first place in terms of number of fishers realising marine hunting, İzmir also is the province with the highest number of fishing boats. However, the hunted aquaculture products correspond to only 1.1% of Turkey's overall aquaculture based on hunting which has a value of 514,755 tonnes. It is observed that the number of sea fishes declines with the passing years. Sardines, anchovy and bogue are the foremost fish species for fish hunting (İZKA and İKÇÜ, 2012).

Aquaculture production value increased by only 5.9% between the years 2006 and 2011 and constituted 3.68% of the overall agricultural production value (Table 82; Figure 57). Culture fish production value constitutes 81% of the overall aquaculture production value.

According to the data from the General Directorate of Fishing and Aquaculture, there are 2,163 aquaculture breeding facilities throughout Turkey, comprising of 1,791 inland water and 372 marine fish farms with a total capacity of 404,634 tonnes/year as of the year 2012. Although the number of breeding establishments in İzmir (65) corresponds to 3% of the total number of breeding establishments throughout Turkey, their project capacity within national total is 14.8%. The province houses 58 marine fish farms out of the total 372 (15.6%), corresponding to a third of total project capacity (33.2%). Housing four out of seven tuna fish farms throughout Turkey, İzmir provides two thirds of the overall project capacity (66%) by itself. Likewise, 7 out of 17 marine hatcheries throughout the country are located in İzmir. There are 27 fish processing facilities in İzmir. 16 of these along with one processing ship make export to EU. In the year 2011, a total of 7,767 tonnes of aquaculture products export was made from İzmir, corresponding to 11.6% of our country's overall aquaculture products export.

It is vital that aquaculture breeding farming facilities are planned by taking the marine and coastal ecosystem into carefully consideration. Along İzmir coasts, Dikili Bademli Adalar site, Karaburun shores, western banks of the Yarımada (Peninsula), south of Urla, Mersin and Sığacık Bay have been designated as potential aquaculture areas through the contributions of relevant institutions under the coordination of the Governorship.

Currently, there are fish farms offshore of Denizköy, around Karaada and Kızkulesi Isle, western shores of Karaburun peninsula, offshore of Mordoğan açıkları and Gerence Cove, Balıklıova Cove, offshore of Ildırı, around islands area and Mercan Strait, southern shores of Urla, Gülbahçe, Sığacık and Mersin Bays (Ministry of Environment and Urbanisation, 2013).

According to FAO data, fish consumption per capita throughout the world is 18.6 kg as of the year 2011, which is only 6.9 kg in Turkey. Increasing aquaculture products consumption in İzmir and throughout the country to bring it to European levels is of vital importance for healthy nutrition of the people and meeting protein requirements.

Construction of logistics facilities and coastal structures is also of importance for satisfying the physical infrastructure demand of aquaculture sector. In addition to the currently existing 28 fishing ports, the construction of Güzelbahçe Yalı Fishing Port is underway, along with plans for building fishing ports in Doğanbeyli, Ahmetbeyli, Çeşme Fenerburnu, Urla Güzelbahçe, Urla Demircili Village and Zeytineli.

Employing a significant aquaculture potential with a 584 km Aegean Sea coast and inland water sources, İzmir province still faces various problems in regards to its aquaculture sector. These problems may be listed as lack of sufficient R&D studies and planning, lack of qualified personnel, prejudice on culture fishing, marketing issues, lack of infrastructure and experts on fish diseases, issues with other sectors regarding area and resource utilisation, random fish hunting instead of hunting based on stock determination, surplus fishing fleet, lack of adequate physical, logistical and breeding based infrastructure, illegal fishing, lack of adequate control, and low institutional capacity.

3.b.4 Forestry

Most of the mountainous regions of İzmir are covered with forests, with forests and heathlands covering a total of 474,517 hectares according to year 2012 data, which corresponds to 39.5% of the overall provincial lands and thus İzmir exceeds the Turkey average of 27.6%. 52% of Turkey's forests are considered productive forest land⁸⁰, while the ratio of productive forests in İzmir is 43%. Although the ratio of forest land is high, İzmir remains partially behind Turkey average values in terms of productive forest lands. Within the context of Forestation and Erosion Mobilisation Action Plan, reforestation actions were planned over 2,300,000 hectares of land between the years 2008 and 2012, of which actualisation occurred above expected at a ratio of 105.5%, providing reforestation over 2,420,000 hectares of land throughout Turkey.

⁷⁹ This section was compiled over the data provided through the study of "Establishing İzmir Aquaculture Products Strategy" conducted with the cooperation of İzmir Development Agency and İzmir Katip Çelebi University Faculty of Aquaculture for producing input to 2014-2023 İzmir Regional Plan.

⁸⁰ Productive (normal) forest defines forests where the top foliage layer of trees have a coverage between 11% and 100% over the land. Unproductive forest defines forests where the top foliage layer of trees cover the land at a ratio lesser than 10%.



The programme proposed for 33,400 hectares of land in İzmir province within the context of the same Action Plan considerably exceeded the Turkey average (132%), covering 44,035 hectares. Every year, 1 million saplings are distributed free of charge to our people at open air venues by the Regional Directorate of Forestry, keeping the love of nature alive. Between the years 2008 and 2011, private forestation permit was granted for 2,583 hectares of land and a sum of 5,329,982 TL loan support was provided until this day (Ministry of Forestry and Water Affairs, 2013).

Significant amounts of industrial products are also produced from the forests. Production amount of industrial wood (coniferous and deciduous) throughout Turkey increased by 6% in the year 2012 compared to the previous year (13,582,462 m3)and occurred to be 14,424,365 m3. Most commonly produced products are, respectively, fibre-chip wood (38), log (35%), paper wood (17%) and industrial wood (15%) (OGM, 2013). According to İzmir Regional Directorate of Forestry, PVBB (Planted Volume of Body including Bark)value displayed an increase of 5% in the year 2012 compared to the year 2011 within the Regional Directorate borders (İzmir and Manisa provinces) and exceeded 1 million m3for the first time. Forestry products production realised in İzmir province occurred to be 475,458 m3, producing 355,800 m3industrial forestry products and 110,476 m3ster fuel wood. The most produced industrial forestry products are listed respectively as fibre-chip wood (45%), logs (21%), paper wood (17%)and industrial wood (17%). Production performance is close to country average in general.

There are 59 recreation areas and 1 Urban (City) Forest in İzmir. 648,000 citizens used the recreation areas and urban forest for their rest, recreation and sports needs in the year 2012.

There are a total of 542 forest villages in İzmir, comprising of 191 villages inside forests and 351 villages adjacent to forests.



Approximately 246,000 people live in these villages. This value corresponds to 3.48% of the overall population living in the forest villages of Turkey (Ministry of Forestry and Water Affairs, 2013).The income levels of farmers living in villages inside and adjacent to forests but no alternative income channels could be created. Due to insufficient sources of income, migration to big cities has become widespread.

For the purposes of increasing the income level of forest villagers, prevent immigration to cities, and support the villagers to continue living at the natural environment various projects are prepared by the General Directorate of Forestry and Village Relations on subjects such as livestock, viniculture, apiculture, handicrafts. A total support of 1,338,000 TL was provided to forest villagers through these projects in the year 2012. As an alternative income source, natural foraging type production is realised in the forest villages in İzmir, of more than twenty species and varieties of medical-aromatic plants, such as thyme, sage, laurel. In addition to trainings provided by the Regional Directorate of Forestry on the production of medical-aromatic plants, these plants are also recorded into inventory.

Cooperative initiatives come as the foremost example of organisational structure in forest villages. However, cooperatives could not yet been brought to the desired level towards improving the income level of forest villagers. 48-50% of all cooperatives throughout Turkey are found in forest villages. Within the forest villages of İzmir, there are 22 cooperative organisations with 4,712 members in the form of agricultural development and irrigation cooperatives. Already established cooperative organisations have difficulty in providing effective services due to their problems. The competitiveness of cooperatives has to be improved, alternative solutions have to be produced and actions in this regard have to be supported for uplifting forest villagers (TZOB, 2010).

3.b.5 Organic Agriculture and Good Agricultural Practices

Embodying purposes such as preserving soil and water resources, enabling sustainable agriculture, increasing added value and facilitating access of consumers to healthy foods, organic agriculture is implemented on a total of 37.2 million hectares of land throughout the world as of year 2009. In case also natural gathering areas (41.9 million hectares) are considered, this value reaches 79.1 million hectares. According to this, 0.9% of all of world's agricultural fields utilise organic production. This ratio is 4.7% for EU states and 2.6% for Turkey. Countries that come foremost regarding the area of organic agricultural production are Australia, Argentine, USA, China, Brazil and Spain, respectively.

The number of countries that include higher than 5% share of organic agriculture within their overall agricultural lands is 24 as of the year 2009. The rapidly growing organicagriculture market reached 54.9 billion Dollars in the year 2009 (GTHB, 2012).Worldwide trade volume of the sector is estimated to rise to 100 billion Dollars within the upcoming decade.

Organicagriculture activities throughout Turkey have been first initialised in İzmir. Due to most of the product processing facilities being located in İzmir and most of the produced goods are exported from İzmir Seaport, central offices of almost all organic agriculture sector organisations such as organisation facilities, control and certification companies are housed in İzmir (İZKA and Development Bank, 2012). 9 out of 19 organic agriculture and certification organisation authorised by TKB are located in İzmir. Furthermore, 158 out of 769 enterprises that deal in organic agriculture products throughout the country (export, production, import, marketing etc.) are located in İzmir (BÜGEM, 2012a). In addition to these, the first ever certified organic open market of Turkey with quarantine system, “Eco Market (Eko Pazar) İzmir; Bostanlı” was opened in the year 2010 (İGTHİM, 2012).

Organicagriculture has been continuing its development in Turkey with certain acceleration in the recent years. However, TurkSTATdata illustrate that significant proportional declines were noted in İzmir's share within Turkey and Aegean Region in regards to both number of farmers dealing in organic agricultural products and production area.

Table 84: Development of Organic Agriculture in İzmir, Aegean Region and Turkey, 2007-2011

	2007	2008	2009	2010	2011
İzmir					
Number of Farmers	1.702	1.459	1.369	1.505	1.409
Production Area (hectares)	35.564	25.624	19.705	20.767	14.086
Production (tonnes)	25.376	49.201	47.437	44.873	45.593
Aegean Region					
Number of Farmers	5.608	5.084	5.845	7.822	8.783
Production Area (hectares)	64.164	49.075	60.445	61.625	80.232
Production (tonnes)	148.351	141.946	142.090	152.260	217.055
Turkey					
Number of Farmers	16.276	14.926	35.565	42.097	42.460
Production Area (hectares)	174.283	166.883	501.641	510.033	614.618
Production (tonnes)	568.128	530.224	983.715	1.343.737	2.905.755
İzmir/Aegean Region Share (%)					
Number of Farmers	30,3	28,7	23,4	19,2	16,0
Production Area (hectares)	55,4	52,2	32,6	33,7	17,6
Production (tonnes)	17,1	34,7	33,4	29,5	21,0
İzmir/Turkey Share (%)					
Number of Farmers	10,5	9,8	3,8	3,6	3,3
Production Area (hectares)	20,4	15,4	3,9	4,1	2,3
Production (tonnes)	4,5	9,3	4,8	3,3	1,6

Source: TurkSTAT, 2012i

The province's share in terms of the number of farmers dealing in organic agricultural production within Aegean Region decreased from 30.3% to 16% and the same value within overall Turkey decreased from 10.5% to 3.3% between years 2007 and 2011. The share of organic agriculture lands in İzmir within that of Aegean Region declined from 55.4% to 17.6% and the same share within overall Turkey value declined from 20.4% to 2.3% (Table 84).

İzmir took the first place in the year 2008 regarding overall organic production area; declining to the sixth place in the year 2009, seventh place in the year 2010 and twelfth place in the year 2011 (Organic Agriculture Information System, 2012). It has been observed that the main reason behind the decline in the area allocated for production was the decrease of the area used for foraging from nature. These declines were not reflected at the same extent on the production amount due to the low yield within the foraging area.

Besides a partial increase in the share of İzmir within Aegean Region regarding production amount, the province's share within overall Turkey declined from 4.5% to 1.6%. Still, İzmir has had higher values than Turkey average in terms of the ratio of area used for organic agriculture within overall agricultural area. This value corresponds to 2.6% throughout Turkey, and 4.1% for İzmir. These data show that İzmir has achieved a certain saturation in regards to primary organic agricultural production, and further, İzmir has transformed into a centre of processed organic food and control and certification organisations. Districts of İzmir with the most organic agriculture lands are Menderes, Tire, Bergama, Karaburun and Beydağ, respectively.

As of the year 2011, production of a total of 140 organic products (134 plant-based and 6 animal-based) were realised. Foremost products in organicproduction are particularly corn, followed by grape, olive, cotton, fig, tomato and pine nuts (İZKA and Development Bank, 2012). A total of 1,720,996 TL funding was provided to 920 enterprises dealing in organic agricultural production within the context of agricultural supports in the year 2012 (İGTHİM, 2012). Training, support and inspection actions on organicagriculture should be continued with increased vigour.



Within the framework of Good Agricultural Applications (GAA), which is defined by FAO as an agricultural production system that is socially feasible, economically profitable and efficient, protecting human health with importance given to animal health and prosperity along with the environment, production was realised by 4,540 producers on 78,174 hectares area in 48 provinces throughout Turkey (BÜGEM, 2012b). In İzmir, 88 producers worked on 1,104 hectares area on 30 products as of year 2011. (İGTHİM, 2012). Although there is an increase more than four times considering that production activities were carried out on 258 hectares of land in the year 2007, it is also observed that the number of producers is significantly low.

Within the context of Integrated and Controlled Product Management (EKÜY - Entegre ve Kontrollü Ürün Yönetimi) project initiated by İGTHİM for the purpose of realising production of fruits and vegetables that contain less residue than the limits defined under Turkish Food Codex for domestic and international markets, agricultural production was realised on an area of 2,312 hectares by a total of 866 producers during years 2010 and 2011.

3.b.6. Assessment

As the most important problem of agriculture sector, the small and fragmented structure of farmlands reduces efficiency and surfaces as the greatest obstacle against modern agricultural applications. Therefore the agricultural infrastructure has to be improved as to increase the efficiency and competitiveness of agricultural businesses. To that end, land consolidation works have to be accelerated, agriculture field development services have to be provided and existing greenhouses have to be modernised.

Considering that water resources have gotten diminished and İzmir is classified among water-poor provinces, pressurised irrigation systems –particularly drip irrigation method) have to be universalised to use water more effectively and efficiently regarding agricultural irrigation, trainings aimed at having farmers adopt such methods have to be increased and irrigation supports have to be continued. Production of high value added products oriented towards the demands of industry sector has to be increased. Agriculture-food sectoral integration has to be realised.

İzmir has a strong infrastructure for agricultural R&D with its universities and research institutes. Private sector-university-public sector cooperation in R&D studies has to be improved, the qualification of R&D personnel has to be increased and agricultural technology production has to be prioritised.

One of the phenomena that threaten food safety is a declining trend in biological diversity. Preservation of plant gene sources and diversity is among the most prioritised issues of the future. Preservation, characterisation and cultivation of gene sources towards transforming into economic benefits are of significance. Presence of one of the only two plant gene banks working on this issue in our country, National Gene Bank, within İzmir is thus of importance. There are more than 55,000 seed samples kept in the National Gene Bank. National Gene Bank should be used more effectively, improvement process success rates should be increased and improvement period should be shortened. To that end, National Gene Bank has to be modernised as to enable molecular characterisation of stored gene resources.

Awareness and education level of producers is insufficient; due to which, traditional agricultural methods are widespread rather than modern agricultural techniques. Irrigation, fertilisation and pesticide use done not conforming to appropriate technique and senselessly adversely impacts product quality and yield, while also causing environmental pollution. Utilisation of environment-friendly and traceable production techniques such as good agricultural applications and organic agricultural applications has to be made widespread. Farmer training and demonstration activities have to be increased for raising the knowledge and implementation level on input utilisation and for universalisation of modern agricultural techniques.

In line with 'from field to table' food safety approach, systems where all processes beginning from production and input utilisation are traceable should be made widespread. For developing the infrastructural capabilities in plant based production and animal based production, licenced warehousing applications should also be universalised.

Although İzmir is at a better place compared to Turkey average; market-oriented economical production cannot be realised and problems are experienced for providing adequate health and welfare services due to the small scale structures of livestock farming establishments.

Agricultural organisations (cooperative, union etc.), which bear a great deal of importance regarding agricultural production and marketing, do not function at desired levels. Cooperative initiatives face problems regarding administration and funding access. Professional management has to be encouraged in order to have individuals with the adequate knowledge, experience and skills to manage these organisations.

Infrastructural demands of aquaculture sector such as fishing ports, and culture fish farming organised logistics zone have to be satisfied. Promotion and marketing actions have to be carried to increase domestic consumption and export. Points of sale of fishes have to be increased and small fish bazaars have to be built in order to increase fish consumption. Certain fish species are bred in İzmir and throughout our country. Establishment of an R&D infrastructure is of importance for enabling production of new species and for realisation of studies required by the sector. In addition, supports aimed at R&D, production and capacity-building have to be increased. Determination of zones subject to vaccination, fish-grading and inventory processes and regulation of coastal sea cages permits are important in this regard.

Up-to-date and detailed agricultural structure data on our country are required for the determination of agriculture policies at local and central levels. The last agricultural census was executed in the year 2001; agricultural census should be renewed at certain intervals while including more detailed data at region scale. There are various monitoring systems implemented by the Ministry

of Food, Agriculture and Livestock such as OTBİS (Organic Agriculture Information System - Organik Tarım Bilgi Sistemi), SUBİS (Aquaculture Information System - Su Ürünleri Bilgi Sistemi), GGBS (Food Safety Information System - Gıda Güvenliği Bilgi Sistemi), TÜRKVET (Turkish Veterinaries Database - Türk Veteriner Veri Tabanı), ÖKS (Greenhouse Registry System - Örtü Altı Kayıt Sistemi), Plant Passport System, ÇKS (Farmer Registry System - Çiftçi Kayıt Sistemi). Areas of use for agricultural data and information system should be expanded, utilisation of information and communication technologies that also cover agricultural remote sensing and geographical information systems should be made widespread as to also be used in fields such as business management and yield estimation.

Use of renewable energy should be made widespread in agriculture. In this context, geothermal greenhouse production should be developed especially in Dikili, Bayındır and Seferihisar districts, and use of biomass energy should be encouraged in Ödemiş, Bayındır, Tire, Kiraz, Beydağ, Bergama, Kemalpaşa, Torbalı, Menderes and Foça districts that have developed livestock breeding sectors.

On the other hand; increase of the number of conscious consumers, better understanding of (and actions towards) food safety, rising interest of private sector in agriculture, and universalisation of high-quality seeds with certification and resistance against diseases come up as positive developments in agriculture sector.

It is observed that the support received by İzmir within the framework of KKYDP is low. Actions aimed towards publicity, training, project preparation capacity-building have to be strengthened for increasing this ratio.



23.749

The number of manufacturing industry firms in İzmir province

% 28

the rate of manufacturing industry among total employment

% 15

installed wind capacity in İzmir to Turkey ratio

3.c. INDUSTRY SECTOR

3.c.1. Manufacturing Industry

3.c.1.a. Manufacturing Industry throughout the Province

As of the year 2008, the gross value added (GVA) of the industry sector in İzmir province had a 6.4% share within Turkey's overall industry sector GVA. This share that was around 7.3% as of year 2004 declined with the passing years (Table 85).

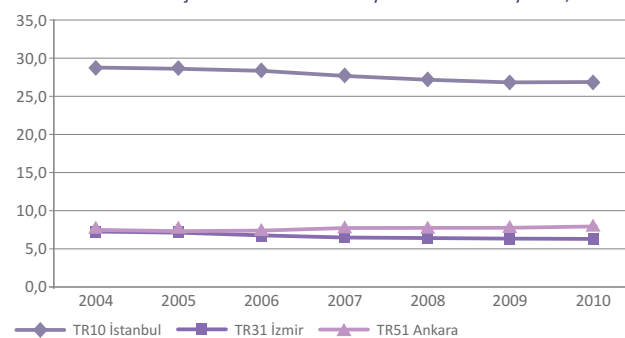
Table 85:
Development of İzmir Industry Sector GVA and Its Share throughout Turkey,
2004-2010 (Current Prices, million TL)

	2004	2005	2006	2007	2008	2009	2010
İzmir	10.164	11.521	12.741	13.853	14.942	13.864	16.315
Turkey	138.412	160.331	188.647	209.515	232.475	218.623	259.022
İzmir/Turkey (%)	7,3	7,2	6,8	6,6	6,4	6,3	6,3

Source: TurkSTAT, 2012j

During the 2004-2010 period, the share of İzmir and İstanbul within national industry GVA declined, while the share of Ankara rose (Figure 58).

Şekil 58:
Shares of Three Major Cities within Turkey Overall Industry GVA, 2004-2010



Source: TurkSTAT, 2013

İzmir industry sector's GVA contribution declined from 30.4% in the year 2004 to 25.8% as of the year 2010. This decline in favour of services sector caused İzmir to constitute the second region with the highest decline of GVA industry share among NUTS Level 2 regions following TR42 Kocaeli, Sakarya, Düzce, Bolu, Yalova region.

The number of local enterprises housed by the manufacturing industry sector of İzmir province is 20,372, corresponding to 5.9% of all enterprises dealing in Turkey, and the number of employed people correspond to 6.8% of overall employment, with a value of 176,534 employees. 12.1% of all enterprises and 28% of total employment in İzmir are covered by the manufacturing industry⁸¹ (TurkSTAT, 2009b).

Industrial businesses in İzmir comprise 34% of micro scale companies, 50% of small scale companies, 14% of medium scale companies and 2% of large scale companies (İzmir Provincial Directorate of Science, Industry and Technology Provincial Directorate of Science, Industry and Technology, 2012)

Although the share of industry sector declined through the years, İzmir is still the second province represented by the highest number of companies in the Top 500 Large Scale Industrial Businesses of Turkey (İSO 500) that has been prepared by İstanbul Chamber of Industry (İSO), following İstanbul. This situation may be mentioned to arise from absence of primary industry branches in İzmir and the existing incentive system. In spite of all these problems, industry sector of İzmir province has a significant place within Turkey's industry sector (İZKA and Development Bank, 2012).

The industry is based especially on metal goods, food products, clothing apparel, furniture, leather, motor land vehicles, chemicals, plastic, manufacture of machinery and equipment, wood products, paper products and tobacco. Distribution of manufacture industry establishments by their respective sub-sectors are sorted below based on employment values (Table 86).

Five most prominent sectors in İzmir in terms of number of enterprises are manufacture of fabricated metal products (19.09%), manufacture of furniture

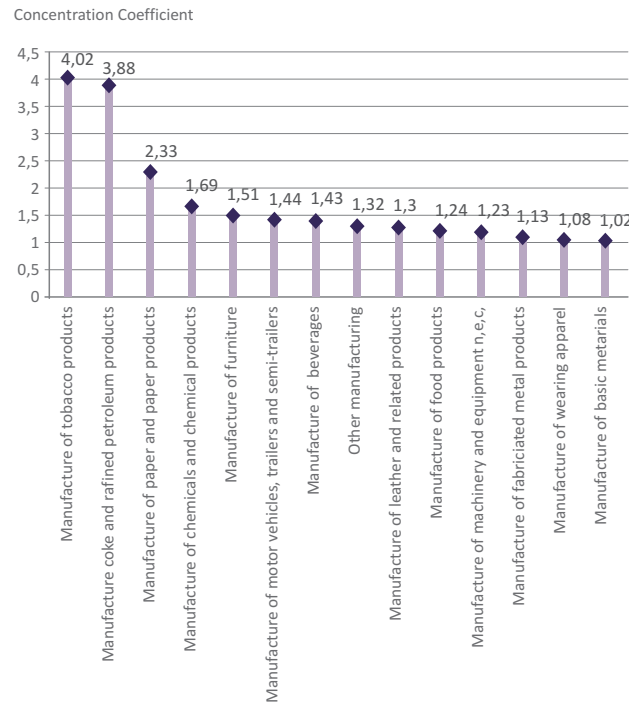
Table 86:
Distribution of Manufacture Industry Establishments in İzmir by Their Respective Sub-Sectors, 2009

NACE Rev. 2 Code	Sub-Sector	Number of Enterprises	Ratio (%)	Employment	Ratio (%)
10	Manufacture of food products	2.473	12,14	27.546	15,60
14	Manufacture of wearing apparel	3.088	15,16	27.162	15,39
25	Manufacture of fabricated metal products	3.889	19,09	17.031	9,65
31	Manufacture of furniture	3.121	15,32	13.305	7,54
29	Manufacture of motor vehicles, trailers and semi-trailers	549	2,69	11.952	6,77
28	Manufacture of machinery and equipment n,e,c,	854	4,19	10.867	6,16
22	Manufacture of rubber and plastic products	940	4,61	9.227	5,23
23	Manufacture of other non-metallic mineral products	506	2,48	8.362	4,74
24	Manufacture of basic metals	181	0,89	6.427	3,64
20	Manufacture of chemicals and chemical products	224	1,10	6.415	3,63
17	Manufacture of paper and paper products	243	1,19	6.189	3,51
13	Manufacture of textiles	660	3,24	5.019	2,84
27	Manufacture of electrical equipment	317	1,56	4.439	2,51
12	Manufacture of tobacco products	17	0,08	4.161	2,36
32	Other manufacturing	350	1,72	4.051	2,29
15	Manufacture of leather and related products	1.026	5,04	3.762	2,13
18	Printing and reproduction of recorded media	661	3,24	2.399	1,36
19	Manufacture of coke and refined petroleum products	38	0,19	1.658	0,94
16	Manufacture of wood and of products of wood and cork	583	2,86	1.524	0,86
11	Manufacture of beverages	30	0,15	1.119	0,63
33	Repair and installation of machinery and equipment	285	1,40	1.102	0,62
30	Manufacture of other transport equipment	234	1,15	1.069	0,61
26	Manufacture of computer, electronic and optical products	78	0,38	1.010	0,57
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	25	0,12	738	0,42
Total		20.372	100	176.534	100

Source: TurkSTAT, 2009b

⁸¹ Although part of industry sector, mining and quarrying values are not taken into account in this section.

Şekil 59:
Concentration Coefficients of Manufacturing Industry Sub-Sectors in İzmir



Source: Calculated by using TurkSTAT, 2009b data.

(15.32%), manufacture of wearing apparel (15.16%), manufacture of food products (12.14%), and manufacture of leather and related products (5.04%).

Five most prominent sectors in İzmir in terms of employment are manufacture of food products (15.60%), manufacture of wearing apparel (15.39%), manufacture of fabricated metal products (9.65%), manufacture of furniture (7.54%), and manufacture of motor vehicles, trailers and semi-trailers (6.77%).

Sectors' employment based Turkey referenced concentration coefficients⁸² have been calculated, and 14 sectors with coefficients above 1 (concentrated) have been listed as follows (Figure 59).

In conclusion of the analyses conducted by using year 2009 data within the context of İzmir Province Potential Investment Fields Study prepared through the cooperation of İZKA and Turkey Development Bank A.S., the outstanding sub-sectors of manufacturing industry sector of İzmir have been classified as follows⁸³ (Table 87).

Table 87:
Classification of Manufacturing Industry Sub-Sectors in İzmir

Name of Sub-Sector	Criteria of Relative Significance			Ratio of Relative Size /Superiority		
	Number of Businesses	Employment	Turn-over	Employment/Business	Turnover/Business	Turnover/Employment
Manufacture of food products		X	X	X	X	
Manufacture of beverages		X	X	X	X	X
Manufacture of tobacco products	X	X	X			
Manufacture of wearing apparel		X		X		
Manufacture of leather and related products	X	X				
Manufacture of paper and paper products	X	X	X	X	X	
Printing and reproduction of recorded media					X	X
Manufacture of chemicals and chemical products		X	X	X	X	X
Manufacture of rubber and plastic products			X	X	X	X
Manufacture of other non-metallic mineral products			X	X	X	X
Manufacture of basic metals	X		X		X	X
Manufacture of fabricated metal products	X	X	X		X	X
Manufacture of machinery and equipment n,e,c,	X	X	X	X	X	X
Manufacture of motor vehicles, trailers and semi-trailers	X	X				
Manufacture of furniture	X	X		X		
Other manufacturing		X		X		

Source: İZKA and Development Bank, 2012

⁸² Concentration coefficient (CQ): Used for measurement of a sector's concentration within a certain region with reference to the upper scale region $CQ_i = (ei/et) / (Ei/Et)$ ei = employment of i sector in the district; et = overall employment in the district; Ei = employment of i sector in İzmir; Et = overall employment in İzmir

⁸³ By comparison of İzmir with Turkey based on sub-sectors, and the sub-sectors that outstand regarding relative significance (number of businesses, turnover and employment) and relative size and superiority (employment/business, turnover/business, turnover/employment) have been determined. While conducting this study, the total share of each sector throughout Turkey have been assumed as 100, their shares in İzmir have been calculated as index, and sectors that have index values higher than 100 have been highlighted. Detailed information on the methodology of the study may be found within the İzmir Province Potential Investment Fields Study.

Manufacture of food products sector, outstands in the region regarding employment and turnover criteria. This sector also displays better performance in the province compared to Turkey average in terms of scale size and turnover per business aspects. It is partially below Turkey average regarding number of businesses and efficiency.

Manufacture of beverages sector, displays considerably better performance in the province compared to Turkey average and outstands in terms of all criteria except number of businesses.

Manufacture of tobacco products sector, is a sector concentrated in İzmir and certain other provinces, and outstands in terms of number of businesses, employment and turnover. However it does not display adequate performance regarding scale size and efficiency aspects.

Manufacture of paper and paper products sector, displays better performance in the province compared to Turkey average and outstand in terms of all criteria except efficiency, which is measured as turnover value divided by employees.

Manufacture of rubber and plastic products sector and Manufacture of other non-metallic mineral products sector, has a certain relative advantage within the province regarding turnover, scale size, turnover per business and efficiency ratio, although failing to reach a significant value in terms of number of businesses and employment.

Manufacture of basic metals sector, outstands regarding scale size, business and turnover based criteria besides employment criteria. It has a relative advantage compared to overall Turkey for base metal sector establishments built as large scale establishments with high turnovers.

Manufacture of fabricated metal products sector, outstands in terms of all criteria except scale size compared to Turkey average. Although not considerably higher than Turkey average values, the sector displays a relative superiority.

Manufacture of leather and related products, Manufacture of furniture and Manufacture of motor vehicles, trailers and semi-trailers sectors are of relative importance in the region in terms of number of businesses and employment, but none of them achieves values above Turkey average regarding scale size (excluding manufacture of furniture), number of businesses and efficiency criteria (İZKA and Development Bank, 2012).

3.c.1.b. Manufacturing Industry by Districts⁸⁴

Districts displaying highest concentration in terms of employment in manufacture industry according to year 2008 SGK data are listed as Gaziemir, Kemalpaşa, Torbalı, Aliağa, Karşıyaka, Bornova, Buca, Konak and Çiğli, followed by Menderes, Menemen, Ödemiş and Tire that also have certain concentration of this sector.

Concentration coefficients (CQ) of manufacturing industry sub-sector branches in districts were calculated by again using year 2008 SGK data.

A CQ calculated higher than the value of 1 for a sector means that in general, the sector produces more than locally consumed and exports the produced goods and services out of the region. An important point regarding CQ is that not every sector with a calculated CQ over 1 in the region should necessarily be competitive or growing sectors. This may actually mean that the sector is not very efficient but in need of a workforce above the upper region average (İZKA, 2008). However, the efficiency levels of employees (or average labour efficiency) were assumed to be equal in all districts when conducting these calculations.

By using the year 2008 SGK data on the employment within districts, sectors' CQ values in reference to Turkey were calculated. The sectors that display concentration (specialisation) in İzmir compared to overall Turkey are sorted based on their concentration coefficients as below:

- Manufacture of tobacco products
- Manufacture of coke, refined petroleum products and nuclear fuel
- Manufacture of medical, precision and optical instruments, watches and clocks
- Manufacture of pulp, paper and paper products
- Manufacture of fabricated metal products, except machinery and equipment
- Manufacture of machinery and equipment n.e.c.
- Tanning and dressing of leather
- Manufacture of motor vehicles, trailers and semi-trailers
- Manufacture of wearing apparel; dressing and dyeing of fur
- Manufacture of chemicals and chemical products
- Manufacture of food products and beverages
- Manufacture of furniture
- Manufacture of basic metals

⁸⁴ Data based on SGK records on sub-sectors in districts were used in this section. The reason of this is that employment data based on districts were not included within TurkSTAT annual business statistics.

When the sectors with concentration coefficients over 1 in İzmir in reference to Turkey are examined at districts scale, the following assessments can be made. District based assessments on the manufacture of food products and beverages, manufacture of wearing apparel, manufacture of chemicals and chemical products, manufacture of machinery and equipment n.e.c., and manufacture of motor vehicles sectors have been handled within the context of their clustering aspect.



District based assessment on the manufacture of tobacco products sector, which is the most outstanding sector in reference to Turkey regarding CQ, reveals Torbalı as a high-concentration district.

In the tanning and dressing of leather sector, the highest concentration is observed in Menemen district due to the presence of İZBAŞ, followed by Torbalı as another district with high concentration based on employment.

Regarding manufacture of paper and paper products, another sector with high concentration coefficient, Tire is observed to be a district of outstanding status. However, this sector may be mentioned to have concentration most commonly across many districts.

In terms of manufacture of refined petroleum products, Aliğa is the district with the highest concentration, followed by Kemalpaşa and Konak districts.

Manufacture of basic metals (base metals industry) is another manufacturing industry sector that have an employment-based concentration in İzmir in reference to Turkey.

District-based concentration values of this sector reveals Aliğa again as the most outstanding district in this sense, followed by Çiğli, Kemalpaşa, Karabağlar, Menderes, Menemen and Torbalı districts. In the manufacture of fabricated metal products sector, which is considered supplementary to basic metals sector, Aliğa, Bornova, Çiğli, Gaziemir, Kemalpaşa and Menderes districts have been observed to display employment-based concentration.

When the manufacture of medical, precision and optical instruments sector is assessed in terms of district level employment-based concentration coefficients, the highest concentration in this sector within İzmir is observed in Karabağlar district followed by Bornova, Çiğli, Karşıyaka, Konak, Menemen, Tire and Torbalı as districts with certain sectoral concentration (specialisation).

The last manufacturing industry sector with concentration in İzmir is manufacture of furniture. This sector possess sectoral concentration in Buca, Çiğli, Gaziemir, Karabağlar, Kemalpaşa, Menderes and Torbalı districts.

3.c.1.b.1. District-Based State of Manufacturing Industry Sub-Sectors with Clustering Potential⁸⁵

In addition to assessments on employment-based sectoral concentration coefficients, assessments on the results of three-star analyses may also be conducted at district level. Sub-sectors have also been studied in terms of number of companies in districts⁸⁶.

Manufacturing industry sectors analysed according to 4-digit NACE Rev.1.1 codes among sectors determined to possess clustering potential in İzmir Clustering Analysis are as follows:

- Manufacture of food products and beverages
- Manufacture of wearing apparel
- Manufacture of chemicals and chemical products
- Manufacture of machinery and equipment n.e.c.
- Manufacture of motor vehicles

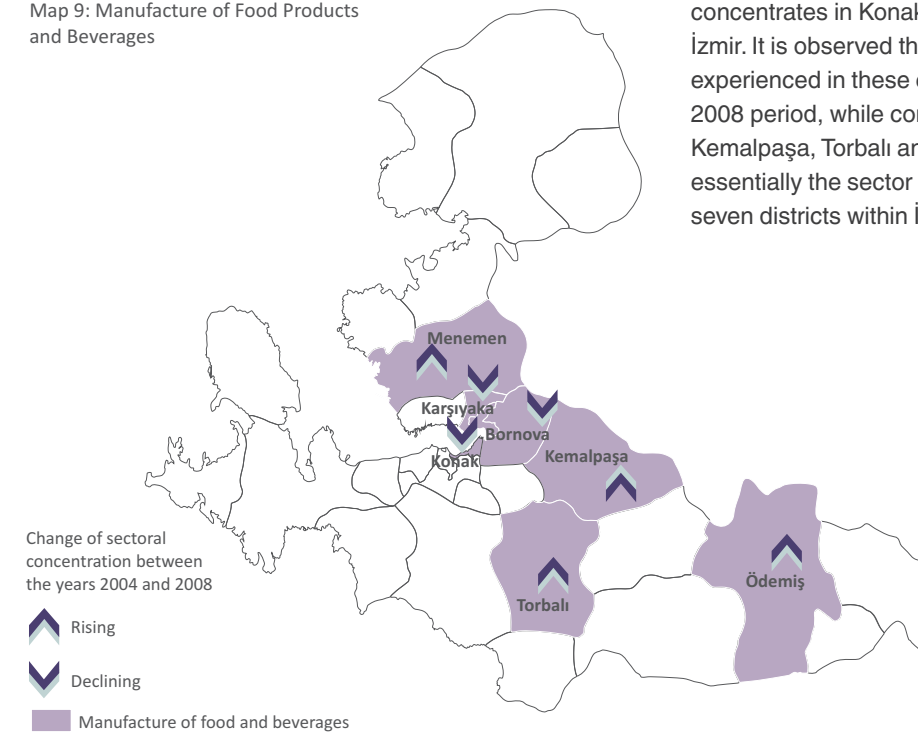
For the purpose of revealing the general regional status of these sectors included within cluster groups according to three-star analysis results, their 2004-2008 period concentrations have been studied within İzmir and districts. The conducted analyses showed that average sectoral concentrations in İzmir throughout years occur in central districts and districts at the periphery.



⁸⁵ This section was prepared by compiling the assessments found under İzmir Clustering Analysis issued by İzmir Development Agency in the year 2010: http://www.izmirplanliyorum.org/static/upload/file/izmir_kumelenme_analizi.pdf

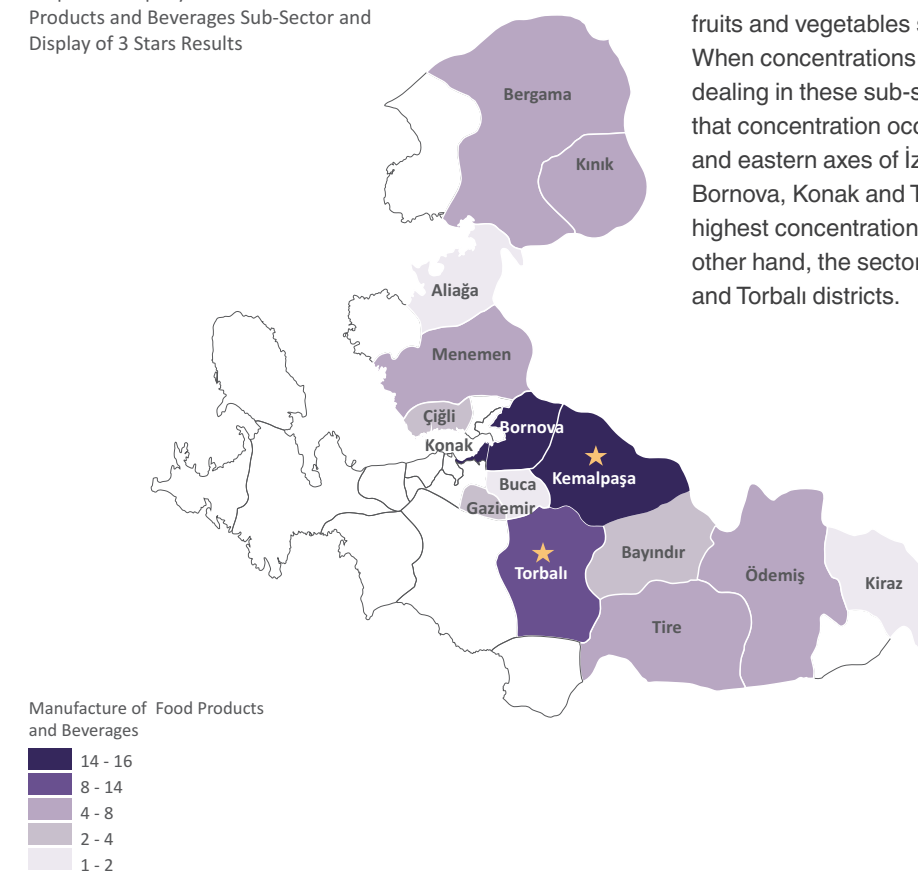
⁸⁶ Ministry of Finance data were used for the number of companies functioning within sub-sectors in districts. These data are based on the records of tax offices that the companies registered in.

Map 9: Manufacture of Food Products and Beverages



Manufacture of food products and beverages sector concentrates in Konak, Karşıyaka and Bornova districts of İzmir. It is observed that a certain decline was experienced in these central districts during the 2004-2008 period, while concentration increased in Menemen, Kemalpaşa, Torbalı and Ödemiş districts. However, essentially the sector displays concentration in these seven districts within İzmir borders (Map 9).

Map 10: Company Concentration in Manufacture of Food Products and Beverages Sub-Sector and Display of 3 Stars Results



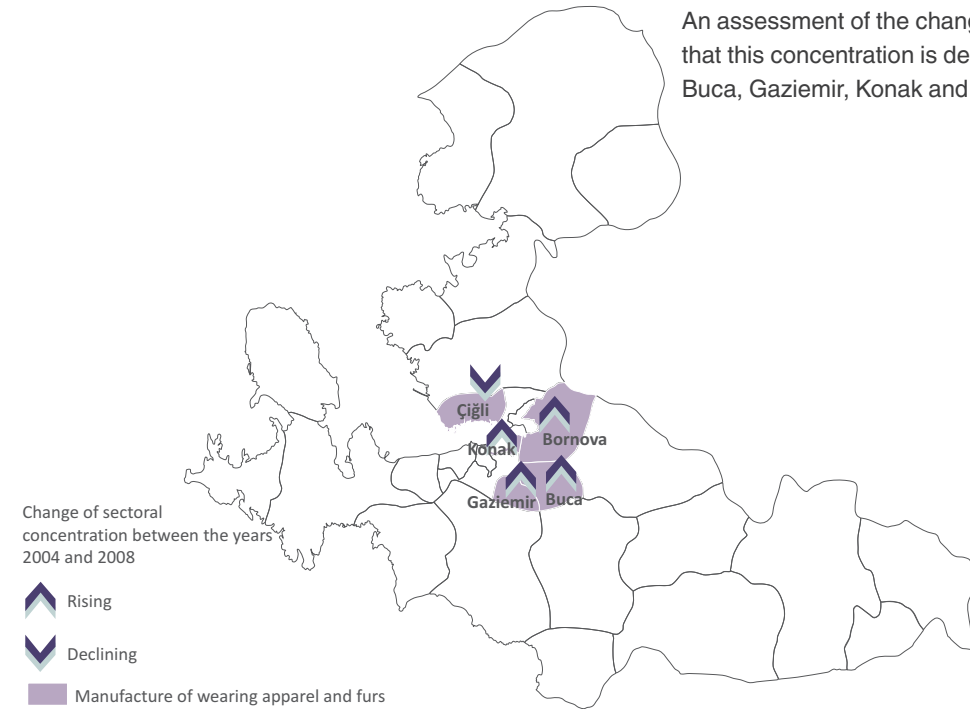
Analysis of sub-sectors that received three stars in food sector reveals that the processing and manufacture of fruits and vegetables sector outstands among others. When concentrations regarding number of businesses dealing in these sub-sectors are examined, it is observed that concentration occurs in the districts on the northern and eastern axes of İzmir (Map 10). Kemalpaşa, Bornova, Konak and Torbalı are the districts that show the highest concentration regarding sub-sectors. On the other hand, the sector received three stars in Kemalpaşa and Torbalı districts.



Sectors With Three Stars

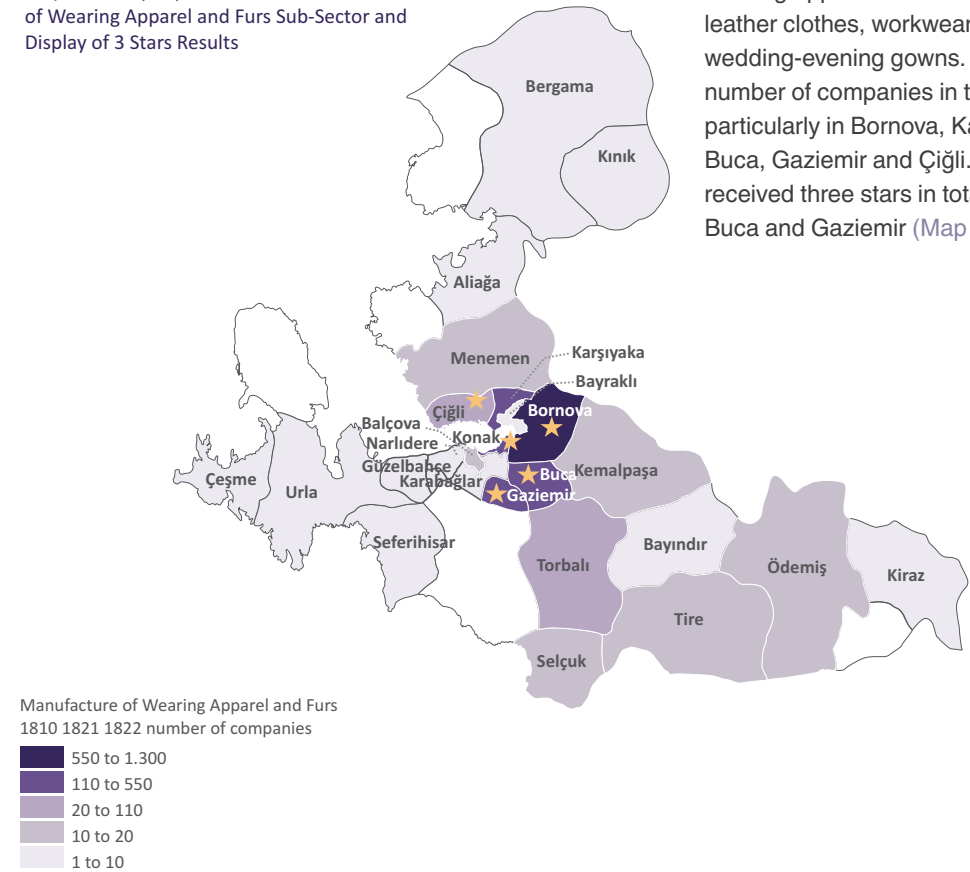
- 1531- Processing and preserving of potatoes
- 1532- Manufacture of fruit and vegetable juice
- 1533- Processing and preserving of fruits and vegetables n.e.c.
- 1587- Manufacture of condiments and seasonings

Map 11: Manufacture of Wearing Apparel and Furs



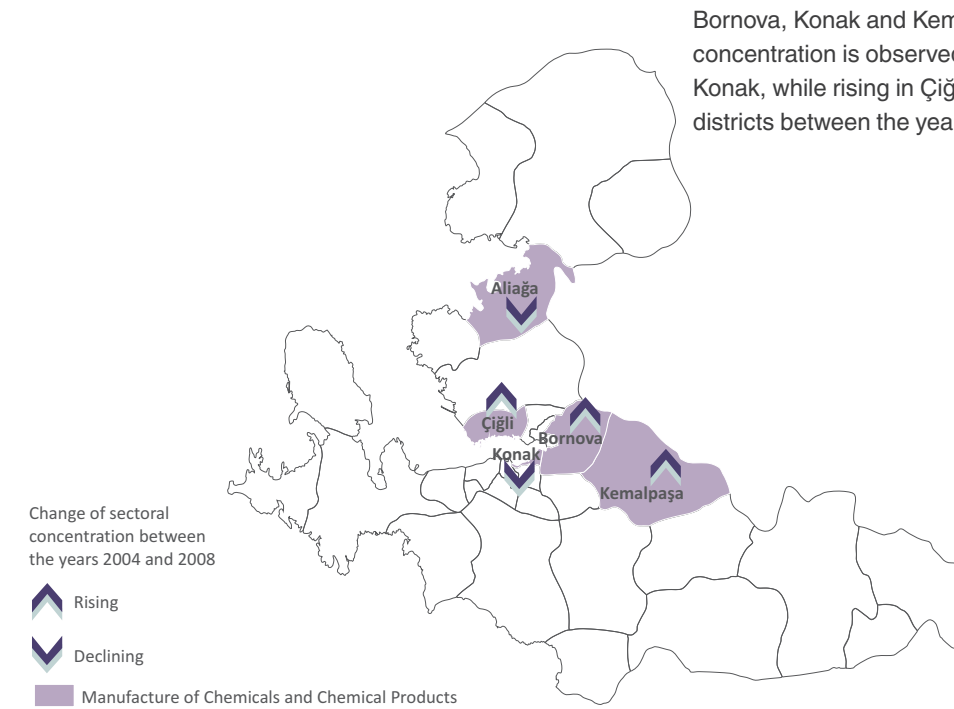
Manufacture of wearing apparel and furs sector displays concentration in the central districts of İzmir (Map 11). An assessment of the change through the years display that this concentration is declining in Çiğli, while rising in Buca, Gaziemir, Konak and Bornova districts.

Map 12: Company Concentration in Manufacture of Wearing Apparel and Furs Sub-Sector and Display of 3 Stars Results



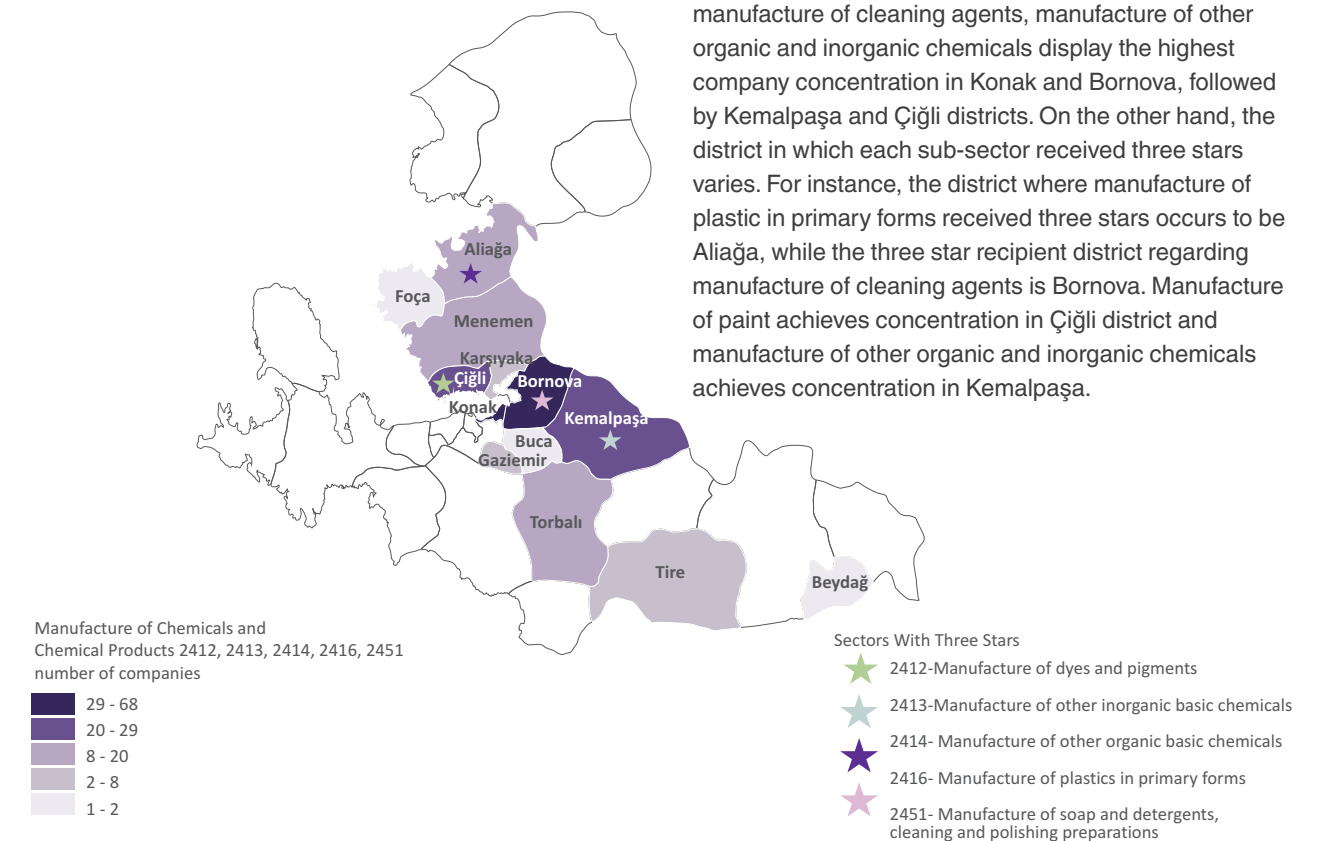
The most outstanding sub-sectors of the manufacture of wearing apparel and furs sector were found out to be leather clothes, workwear and other outerwear including wedding-evening gowns. Concentration based on number of companies in these sectors is observed particularly in Bornova, Karşıyaka and Konak, followed by Buca, Gaziemir and Çiğli. Districts where these sectors received three stars in total are Çiğli, Bornova, Konak, Buca and Gaziemir (Map 12).

Map 13: Manufacture of Chemicals and Chemical Products



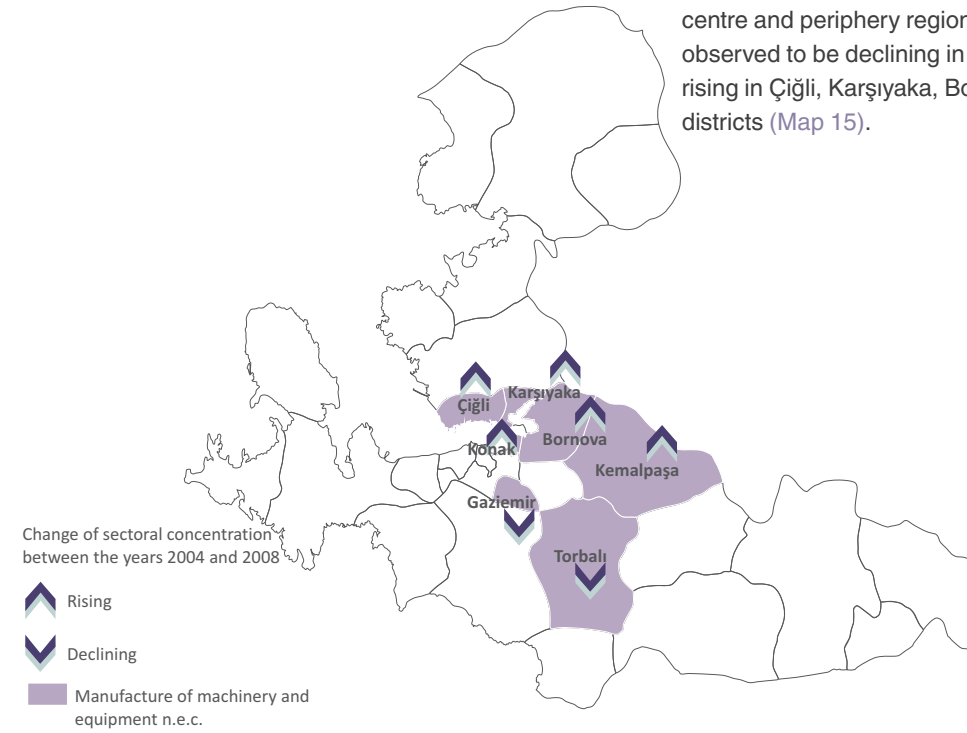
Manufacture of chemicals and chemical products sector display employment concentration in the Aliaga, Çiğli, Bornova, Konak and Kemalpaşa districts of İzmir. This concentration is observed to be declining in Aliaga and Konak, while rising in Çiğli, Bornova and Kemalpaşa districts between the years 2004 and 2008 (Map 13).

Map 14: Company Concentration in Manufacture of Chemicals and Chemical Products Sub-Sectors and Display of 3 Stars Results



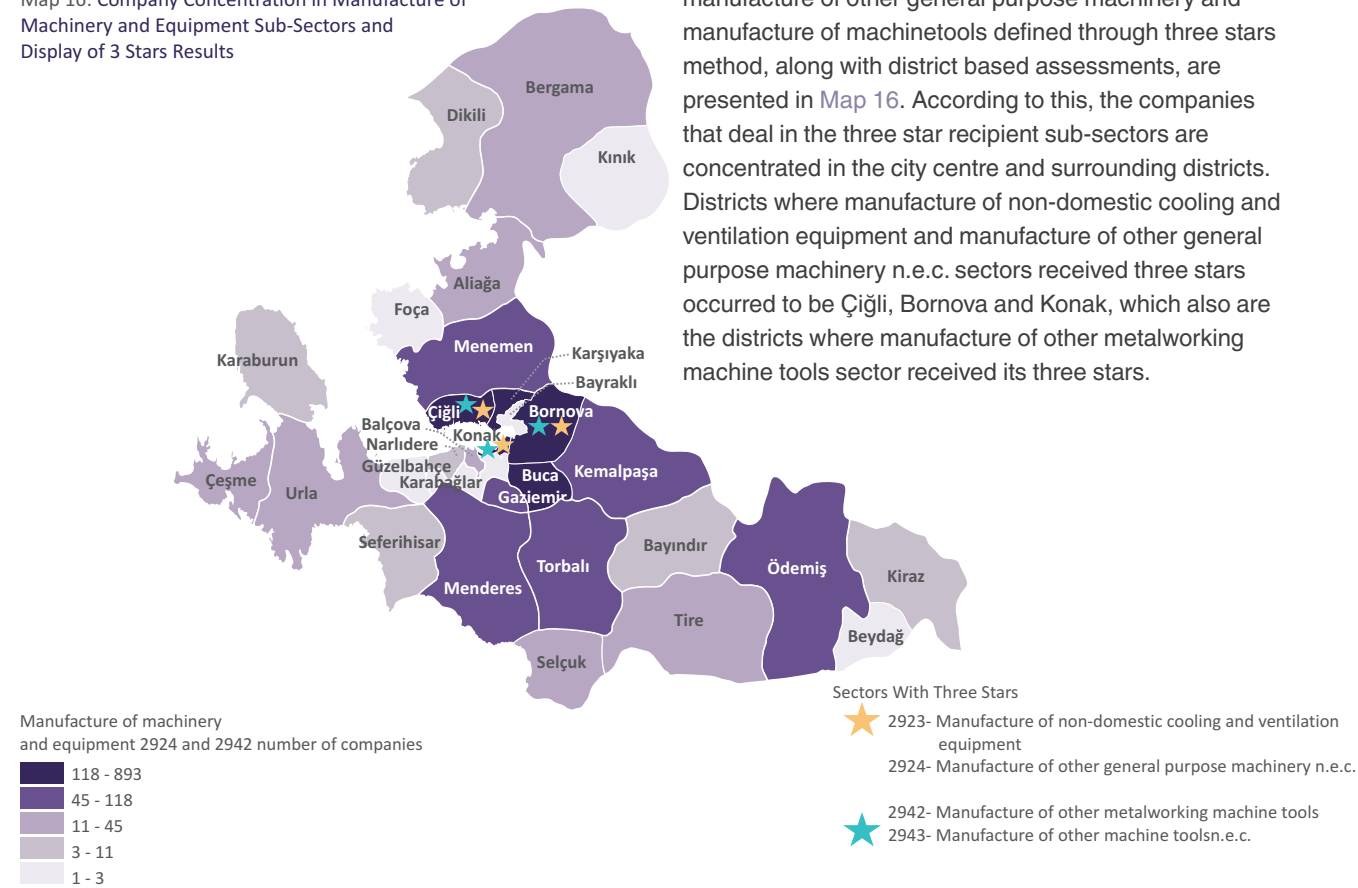
Concentration of number of companies in the sub-sectors of the sector defined through three stars method, along with district based assessments, are presented in Map 14. According to this, the companies that deal in the three star recipient sub-sectors of manufacture of dyes and pigments, manufacture of plastic in primary forms, manufacture of cleaning agents, manufacture of other organic and inorganic chemicals display the highest company concentration in Konak and Bornova, followed by Kemalpaşa and Çiğli districts. On the other hand, the district in which each sub-sector received three stars varies. For instance, the district where manufacture of plastic in primary forms received three stars occurs to be Aliaga, while the three star recipient district regarding manufacture of cleaning agents is Bornova. Manufacture of paint achieves concentration in Çiğli district and manufacture of other organic and inorganic chemicals achieves concentration in Kemalpaşa.

Map 15: Manufacture of Machinery and Equipment n.e.c.



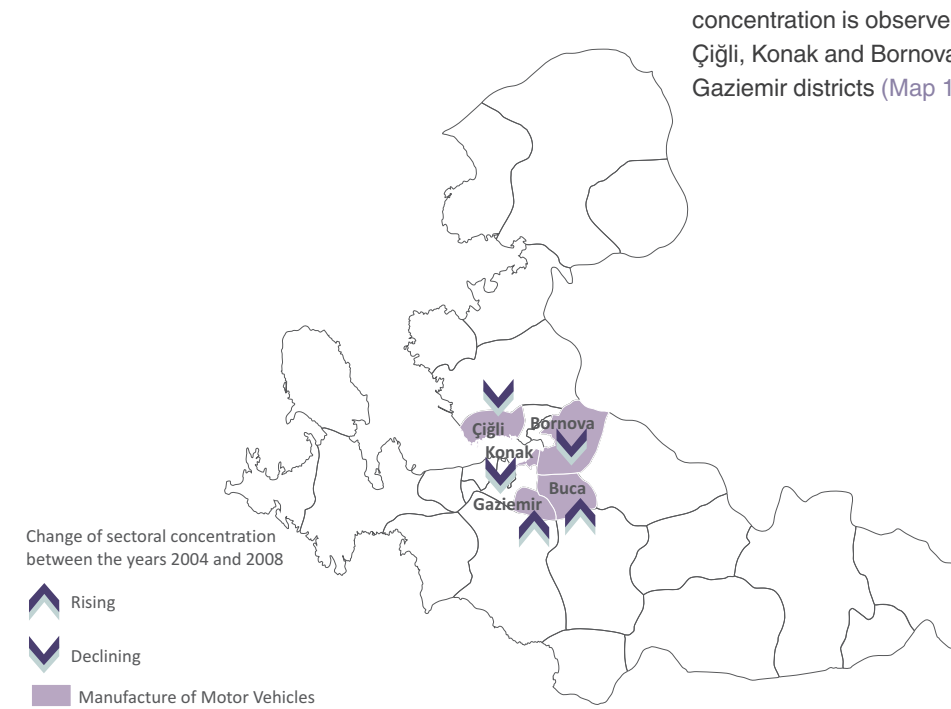
Manufacture of machinery and equipment n.e.c. sector displays concentration in a total of seven districts of İzmir centre and periphery regions. This concentration is observed to be declining in Gaziemir and Torbalı, while rising in Çiğli, Karşıyaka, Bornova, Konak and Kemalpaşa districts (Map 15).

Map 16: Company Concentration in Manufacture of Machinery and Equipment Sub-Sectors and Display of 3 Stars Results



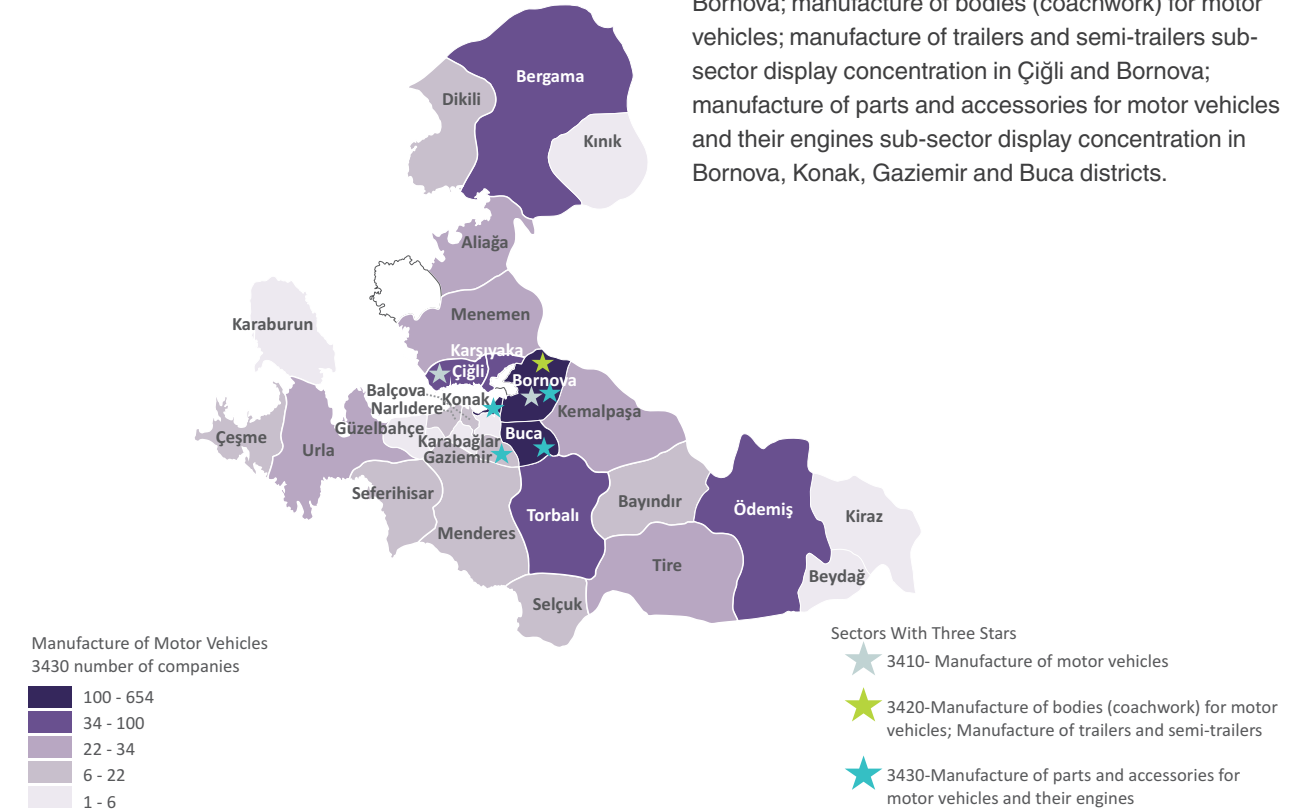
Concentration of number of companies in the sectors of manufacture of other general purpose machinery and manufacture of machinetools defined through three stars method, along with district based assessments, are presented in Map 16. According to this, the companies that deal in the three star recipient sub-sectors are concentrated in the city centre and surrounding districts. Districts where manufacture of non-domestic cooling and ventilation equipment and manufacture of other general purpose machinery n.e.c. sectors received three stars occurred to be Çiğli, Bornova and Konak, which also are the districts where manufacture of other metalworking machine tools sector received its three stars.

Map 17: Manufacture of Motor Vehicles



It is observed that manufacture of motor vehicles sector display concentration in five districts of İzmir. This concentration is observed to have a declining trend in Çiğli, Konak and Bornova, while rising in Buca ve Gaziemir districts (Map 17).

Map 18: Company Concentration in Manufacture of Motor Vehicles Sub-Sectors and Display of 3 Stars Results



When the districts recipient of three stars regarding sub-sectors are assessed, it is observed that manufacture of motor vehicles sub-sector display concentration in Bornova; manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers sub-sector display concentration in Çiğli and Bornova; manufacture of parts and accessories for motor vehicles and their engines sub-sector display concentration in Bornova, Konak, Gaziemir and Buca districts.

3.c.1.c. Organised Industrial Zones, Small Industrial Sites, Free Zones, Technology Development Zones

As of the end of year 2011, there are a total of 147 OIZs with completed infrastructure such as roads, drinking water, wastewater, rainwater and electricity throughout Turkey, covering 27,542 hectares area. With a total of 21 OIZs, the Aegean Region comprising of 8 provinces (Afyon, Aydın, Denizli, İzmir, Kütahya, Manisa, Muğla, Uşak) houses 14.5% of total OIZ area throughout Turkey. With this value, Aegean Region is ranked at the 4th place among regions, respectively following Marmara (11 provinces), Central Anatolia (13 provinces) and Southeast Anatolia (9 provinces) regions (Ministry of Science, Industry and Technology, 2012b).

OIZ process in İzmir started for the first time with the establishment of Atatürk OIZ in the year 1976, and there are 13 OIZs in the province with legal entities as of the year 2012. Nine of these OIZs have already been commissioned (Aliağa, Atatürk, Bergama, Buca Ege Giyim, İTOB, Kemalpaşa-İslah, Kınık, Tire and Pancar

Table 88:
Information on the Commissioned OIZs

İzmir	Number of Active Companies	Employment	Top Five Prioritised Sectors
Aliağa	15	691	Chemicals, Construction, Machinery, Metal, Plastic
Atatürk	563	35.000	Machinery, Rubber and Plastic, Fabricated Metal Goods, Food, Clothing
Buca (Ege Giyim)	40	2.502	Garment
Kemalpaşa	381	21.000	Machinery, Automotive Subsidiary Industry, Structural Materials-marble, Chemicals, Food
İTOB Tekeli*	71	2.193	Food, Construction, Iron-Steel, Structural Materials, Chemicals
Tire	38	1.250	Food, Textile, Structural Materials, Machinery, Plastic
Bergama	1	45	Mining, Machinery, Food, Furniture, Electricity
Kınık	1	-	
Pancar	1	-	

Source: İzmir Provincial Directorate of Science, Industry and Technology, 2012
* Up-to-date data communicated as revision ideas by İzmir Chamber of Commerce were used for İTOB Tekeli OIZ.

Table 89:
Small Industrial Sites Active in İzmir

Small Industrial Site	Year of Commissioning	Total Area (m²)	Total Number of Businesses	Number of Active Businesses	Number of Vacant Businesses	Vacancy Ratio (%)	Current Employment
İzmir-Aliağa	2001	132.000	254	254	0	100	500
İzmir-Aykkabicılar	1996	360.000	1.944	1.600	344	82	8.500
İzmir-Bornova	1987	360.000	500	485	15	97	5.100
İzmir-Kınık	2005	16.000	104	75	29	70	250
İzmir-Menemen	1994	75.000	94	94	0	100	375
İzmir-Centrum Woodworks	1988	300.000	391	343	48	88	1.263
İzmir-Centrum Metal casting	2002	60.231	106	93	13	88	600
İzmir-Centrum 1.San.Sit.	1966	160.000	1.200	830	370	69	8.700
İzmir- Centre2nd Auto	1980	175.000	1.007	955	52	95	3.350
İzmir- Centre3rd Auto	1990	109.000	509	497	12	98	2.900
İzmir- Centre Metalworks	1985	406.000	672	610	62	91	6.000
İzmir-Ödemiş	1985	72.000	1.200	1.000	200	83	3.100
İzmir-Tire	2002	264.436	200	86	114	43	243

Source:İzmir Provincial Directorate of Science, Industry and Technology, 2012

OIZs), and four of them are undergoing construction (Kemalpaşa-Bağyurdu, Menemen-Plastik, Ödemiş, and Torbalı OIZs) of infrastructure works (Table 88). 60% of the 3,078 plots within the OIZs dedicated to service were observed to be already allocated, while 40% of these parcels are vacant. Of the allocated 1,886 plots, 1,011 plots house functioning factories, and construction of 158 factories are underway as of the end of year 2011. With the commissioned OIZs, a total of 62,681 people were provided with employment. According to this value, approximately 3% of the overall industry sector employment throughout the country is met by the companies located inside OIZs in İzmir province. In terms of the area covered by of the 13 OIZs (4,763 hectares), our province takes the first place within Aegean Region (28.3% share) and throughout the country (7.8% share).

In addition to the OIZs in İzmir, Small Industrial Sites (SIS) are also considered as areas where manufacturing industry functions. Within the 8,181 businesses located inside the SISs in İzmir and its districts provide

employment to approximately 40,900 people. Table 89. presents information on the SISs in İzmir.

Free zones, which offer a modern and developed investment environment for companies that desire to steer towards foreign trade through their flexible and contemporary administrative structures in addition to the contributions to the country economy, also gain importance as logistics centre similar to OIZs. There are a total of 20 free zones throughout Turkey. The highest number of free zones are located in Marmara region, while two out of the three free zones in Aegean Region are housed within İzmir province (Table 90).

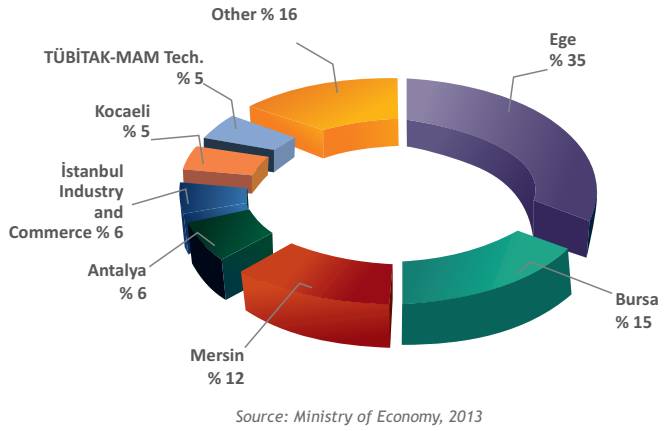
Table 90:
Distribution of Free Zones in Turkey by Geographical Region

Geographical Region	Free Zone
Mediterranean Region	Mersin Free Zone
	Antalya Free Zone
	Adana-Yumurtalık Free Zone
Aegean Region	Ege Free Zone (ESBAŞ)
	İzmir Free Zone (İZBAŞ)
	Denizli Free Zone
Marmara Region	İstanbul Airport Free Zone
	İstanbul Leather and Industry Free Zone
	İstanbul Thrace Free Zone
	Europe Free Zone
	Kocaeli Free Zone
	TÜBİTAK-MAM Technology Free Zone
	Bursa Free Zone
Black Sea Region	Trabzon Free Zone
	Samsun Free Zone
	Rize Free Zone
Southeast Anatolia Region	Mardin Free Zone
	Gaziantep Free Zone
East Anatolia Region	Erzurum East Anatolia Free Zone
Central Anatolia Region	Kayseri Free Zone

With an employment of 19,624 people, ESBAŞ comes up as the most important free zone. İZBAŞ also provides an employment of 1,427 people. When these employment values valid for the end of year 2012 are compared with the values of the year 2011, it is observed that employment displayed an increase of 3.5% in ESBAŞ while declining by 3.4% in İZBAŞ in one year. When the employment values are compared with the zones in other provinces, ESBAŞ comes up as the free zone with the highest value (Figure 60).

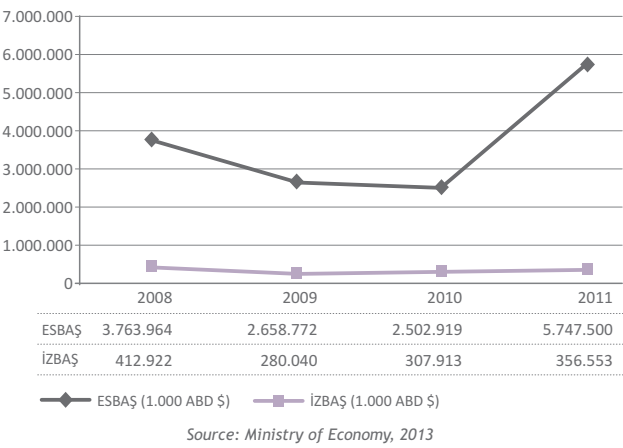
When all free zones throughout Turkey are taken into consideration, ESBAŞ, with a trade volume of

Figure 60:
Employment Distribution in Free Zones



5,747,500,000 Dollars, has a share of 25% in line with 2011 end-year values, while İZBAŞ possess 1.6% share among all free zones with a value of 365, 553,000Dollars. Change of trade volume data by years show that both free zones experienced a decline nearing 30% between the years 2008 and 2009. Trade volume in İZBAŞ increased by 10% and 16% respectively in the two years following 2009, while ESBAŞ experienced a trade volume decline of 6% in the year 2010 and 130% rise in the year 2011 (Figure 61).

Figure 61:
Change of Trade Volumes in ESBAŞ and İZBAŞ by Years



ESBAŞ houses 224 companies and İZBAŞ houses 37 companies within their structures. 77% of the companies within ESBAŞ are international companies and 23% are local companies. There are companies dealing in automotive, biomedical, electric-electronics, food and packaging, machinery, metal, textileand aviation sectors in ESBAŞ free zone. Actions aimed at expanding the area of the zone are underway. In İZBAŞ, food, iron-steel, chemicals, plastics, machinery and equipment, and electronics sectors outstand among others. Also the zone houses the only leather manufacturing wastewater treatment plant of Turkey.

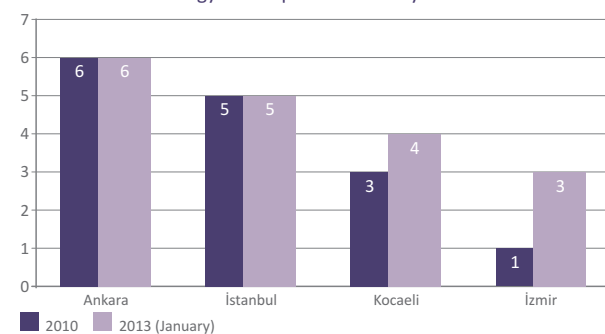
İzmir Technology Development Zone (İZTEKGEB)

There are 34 TDZs active and functioning in Turkey as of the end of year 2011. In addition to these, 15 TDZs officially founded but undergoing infrastructure works are expected to come alive. The highest number of TDZs are located in Ankara that houses six zones, followed by İstanbul with five zones and Kocaeli with four zones (Figure 62).

İzmir, despite being the third major city of Turkey and one of the regions realising highest export, housing nine universities, and accommodating 7,240 activeresearchers and 23,749 manufacturing industry companies, enjoys the services of only one TDZ (İzmir Technology Development Zone). Recently, works aimed at founding technology development zones have been sped up. İzmir Science and Technology Park TDZ (İzmir University of Economics) that is planned to focus on sustainable agriculture, sustainable energy and informatics themes was founded in year 2012 and Dokuz Eylül TDZ (Dokuz Eylül University) that is planned to partially specialise on healthcare field was founded in year 2013. Infrastructure works for these two technology development zones are underway.

When an assessment of the provinces where the technology development zones of Turkey are concentrated is considered, it is observed that 40% of the companies residing in all TDZs were located in TDZ of Ankara as of the end of year 2011. İzmir follows these three provinces with a share of 4% (Figure 62).

Figure 62: Number of Technology Development Zones by Province *

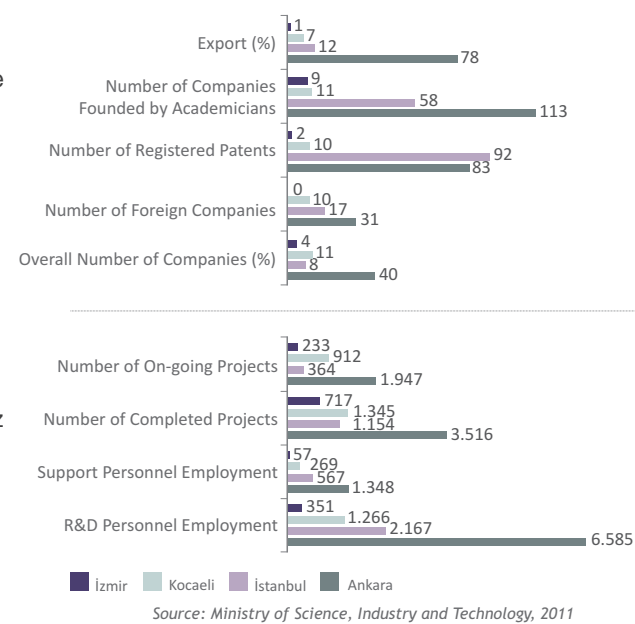


*Zones not yet activated are included.
Source: Ministry of Science, Technology and Industry, 2011

Five TDZs functioning in Ankara owns 78% of the entire export realised over TDZs. As of the year 2011, İZTEKGEB (74 companies) and İTÜ Arı Teknokent TDZ (76 companies) show similarity in terms of number of companies, while approximately 65 million Dollars of export volume possessed by Arı TDZ is significantly over the approximately 7 million Dollars export value of İZTEKGEB.

Ankara possesses the highest number of foreign companies functioning under TDZs with 31 foreign companies, followed respectively by İstanbul and Kocaeli. There are no foreign companies functioning in the TDZs of İzmir (Figure 63).

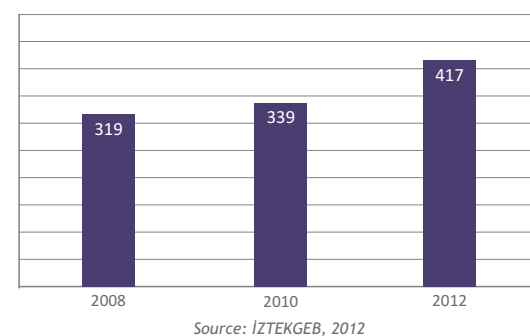
Figure 63: Characteristics of Technology Development Zones by Province



In terms of registered patents, the first place goes to İstanbul with 92 patents in contrary to other indicators. Arı Teknokent TDZ, which has a similar number of companies with İZTEKGEB, has been the one that led İstanbul to the first place. Ankara took the second place, while İzmir fell significantly behind with only 2 patents.3% (351) of all R&D personnel employed within the 32 active TDZs are employed in İZTEKGEB (Figure 63).The number of R&D personnel in İTÜ Arı Teknokent TDZ, which has a similar foundation date and number of companies, is 1,867.

As of the year 2008, İZTEKGEB housed a total of 64 companies and 319 employees within the structure of these companies.

Figure 64: Number of Employees in İZTEKGEB, 2008-2012

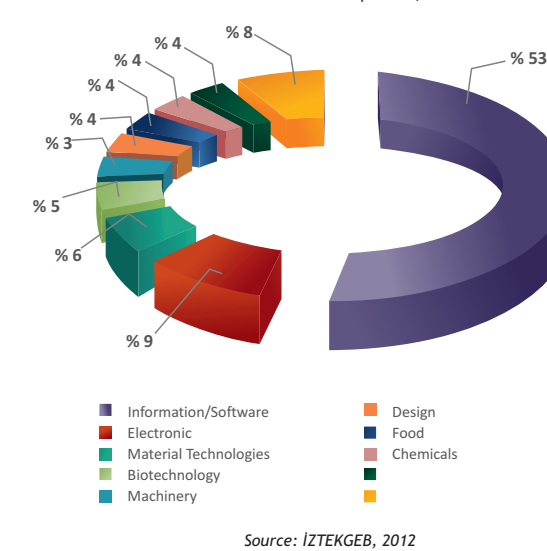


These values increased to 67 companies, 339 employees in the year 2010, and 84 companies, 417 employees in the year 2012 (Figure 64). According to this, an increase of 31% occurred in the number of companies and employees during the 2008-2012 period. As of the year 2012, 357 out of 417 employees (85.6%) were employed as R&D personnel (İZKA and İYTE, 2012).

On the other hand, it is observed that the average number of employees per company is around five throughout the period from 2008 to 2012. TDZs constitute an important aspect regarding their qualified employment creation capacity. They are one of the most effective mechanisms for employment of engineers and prevention of brain drain to other cities and countries.

Similar to other examples throughout Turkey, a major portion of the companies set up in İZTEKGEB belong in the informatics-software and electronics sector. 53% of the zone companies deal in informatics-software sector, while 9% deal in electronics, 6% deal in material technologies and 5% deal in bio technology sector (Figure 65).

Figure 65: Sectoral Distribution of İZTEKGEB Companies, 2012



In foreign trade, countries aim to realise export of technological, high value added products. Various support and incentive mechanisms are in place to that end. Goods produced in TDZs are featured as high value added advanced technology products and their export is aimed to be raised. One of the purposes of TechnologyDevelopment Zones is ensuring the projects generated in these zones are concluded with patents, converted into products and exported as new products (İZKA and EBİLTEM, 2012).

An approximate total of 7,000,000 Dollars export has been made over nearly 1,000 projects conducted by companies since August 2004 when İZTEKGEB was commissioned.

Total turnovers of the zone companies is over an annual average of 15,000,000 TL (İZKA and İYTE, 2012).

As of the year 2011, initiatives aimed towards opening various units to function under İZTEKGEB umbrella were started. A commission comprising of EÜ and İYTE academicians was established for forming up, for instance, an İZTEKGEB Branch planned to be founded for functioning in agro-industry field as per İZTEKGEB A.S.Administration Board decree. Preliminary works are stipulated to be carried out by this commission.

On the other hand, works related to İzmir TechnologyDevelopment Main Zone are underway. Design project of the Main Zone has been prepared. In addition to this, efforts towards finding investors and funding are being continued together with İzmir R&D and Informatics City Project.

Furthermore, the Innovation Centre Project carried out with İZKA Controlled Project Support is planned to become operational as of the end of year 2014. With the establishment of this centre, an innovative interface formation will have been realised that will provide the environment necessary for potential entrepreneurs in İzmir to create technology-oriented innovations, offer much needed qualification trainings, develop applicable business ideas in incubators, ensure production of value added goods and services, enable relay of generated technology to fields in need of such technologies, keep entrepreneurs and companies within a constantly up-to-date and social business network and enable them create synergy.

This interface is planned to serve within the "İZTEKGEB Innovation Centre" building that has 5,500 m2 indoor area within the TDZ annex zone that covers 6.4 hectares belonging to İZTEKGEB A.S. Specialised units and fields that form the interface generating the project's operation principle within the Innovation Centre building are;incubation centre, promotion, patenting and technology relay office, stakeholders office, qualified social facility areas, technical training halls, meeting halls, technical workshop and rental offices and rental commercial spaces (İZTEKGEB, 2012).



3.c.2. Energy Sector and Renewable Energy

More than 70% of Turkey's foreign trade deficit comprises of energy import and also carbon dioxide emissions due to fossil fuel use rapidly increase. Turkey was ranked at the 59th place regarding global competitiveness index in the 2011-2012 edition of Global Competitiveness Report published each year by WEF, and the country's energy importer standing gets deeper every day. This situation causes increase of the amount paid for energy each year, leading to foreign dependence and loss of competitiveness at global markets.

The most important condition of competing at national and international markets is the ability to producing higher-quality goods or services at lower costs. And for being able to offer cheaper goods or services to the market, it is mandatory to minimise input costs. Energy has become the most important input cost that influenced all sectors from manufacturing to services. 40% of the energy consumed throughout the world is consumed within buildings. As one of the most important components of competitiveness, energy is of vital importance for ensuring the sustainable development that would realise economic, social and environmental development simultaneously. Energy demand has to be satisfied in a high-quality, economic and safe manner. Taking into consideration that fossil fuels are rapidly diminishing, countries attach importance to energy investments and make actions towards generating energy by effective and efficient use of their natural resources (water, sun, wind etc.).

According to the World Energy Appearance Report of the year 2012 prepared by the International Energy Agency (IEA), global energy demand will increase by 1/3 as of the year 2035 and 60% of this increase will emerge from China, India and Middle East. Although renewable energy (RE) generation is on a rapid rising trend, fossil fuels maintain their worldwide status as the primary energy resource. While the demand for petroleum, natural gas and coal is estimated to increase until the year 2035, it is expected that the share of such resources within overall production will decline from 82% to 75% and natural gas will overtake coal until the year 2035. The share of nuclear power is estimated to remain at 12% due to experienced accidents and countries' change of policies.

World countries try to address the increasing energy demand by utilising their RE resources. The share of RE resources particularly of hydropower, wind and solar energy within the global energy mix is constantly on the rise. RE resources, which will constitute the second major energy generation source of the world in the year 2015, will become the primary source of electricity together with coal as of the year 2035.

Global development of RE resources is estimated to vary based on incentives, decrease of costs, increase of fossil fuel prices and pricing of carbon, and their share within electricity generation is expected to rise from around 20% to 31% in the year 2035. In spite of many developments occurring in regards to energy investments in Turkey, deficiencies of incentive mechanisms, lack of adequate legislation, lack of qualified human resource and deficiencies in technology generation/development have become the primary problems standing against RE investments.

In line with the growth of Turkish economy, energy demand also displays an annual average of 9% increase. In order to address this demand and keeping the energy supply-demand ratio in balance, Turkey has to invest in new and local sources, being poor in fossil fuel resources. Turkey possesses a strong potential regarding RE resources, and it is possible to install systems suitable for different energy types in different regions of the country. Regarding these investments, energy generation is not solely sufficient. Resources providing this energy should be of domestic origin and local producers should be encouraged by meeting the production within the country. There are companies related to this issue, dealing in turbine impellers and towers in İzmir. At the same time, RE and Environment Technologies Financial Assistance Programme to be initialised by İZKA in the year 2013 will increase the awareness of companies and institutions in İzmir in this regard, and support formation of new enterprises.

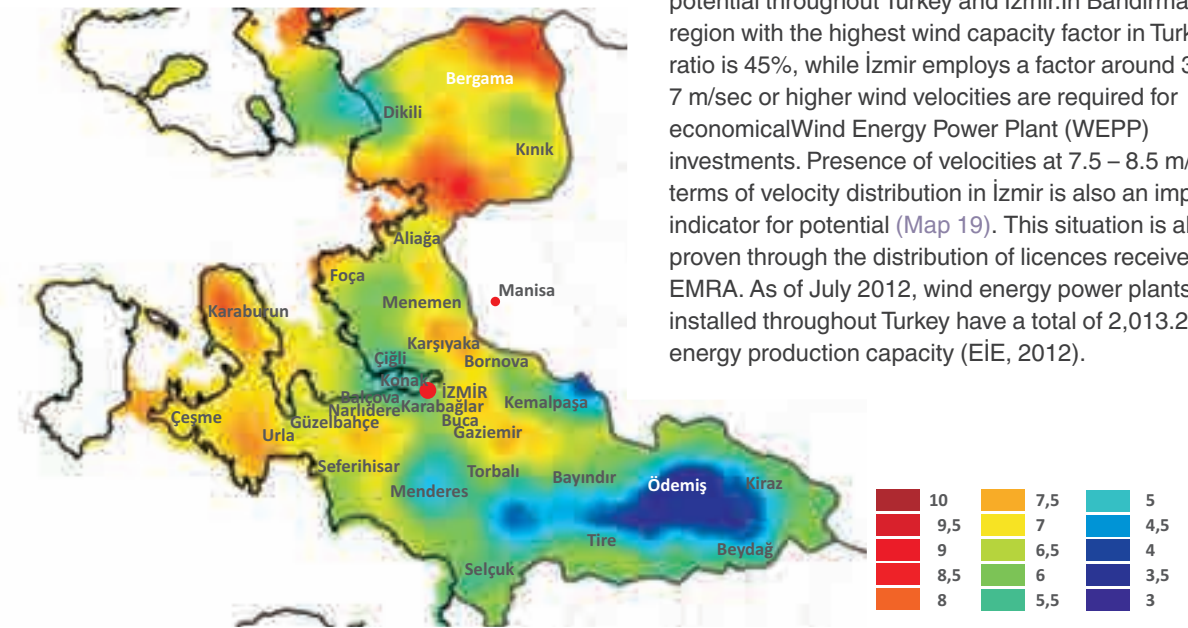
It is observed that the sector's interest in RE field is increasing due to the updated regulations of the Ministry of Energy and Natural Resources (ETKB) and Energy Market Regulation Agency (EMRA). Examples to such regulations may be listed as issuance of statement of measurement of solar energy, issuance of Regulation on Unlicensed Energy Generation within Electricity Market and raising unlicensed electricity generation threshold to 1 MW as of the year 2013. In the incentive system published in the year 2012, it was deemed that investments to be made in RE sector may be considered large scale investments and benefit from the 5th region opportunities that provide the most comprehensive supports. This regulation paves the way for sizable supports disregarding the region where the investment is actualised.

İzmir province is one of the most prominent provinces in terms of utilisation and development of RE resources due to its geographical position, ecological structure, and development of its agriculture and industry sectors. The RE potential of İzmir is studied below according to different types of energy sources.

Wind Energy

Turkey Wind Power Atlas, prepared by the Electrical Power Resources Survey and Development Administration (EİE) in the year 2002, points out a high potential throughout Turkey and İzmir. In Bandırma, the region with the highest wind capacity factor in Turkey⁸⁷ the ratio is 45%, while İzmir employs a factor around 30-35%. 7 m/sec or higher wind velocities are required for economical Wind Energy Power Plant (WEPP) investments. Presence of velocities at 7.5 – 8.5 m/sec in terms of velocity distribution in İzmir is also an important indicator for potential (Map 19). This situation is also proven through the distribution of licences received from EMRA. As of July 2012, wind energy power plants installed throughout Turkey have a total of 2,013.2 MW energy production capacity (EİE, 2012).

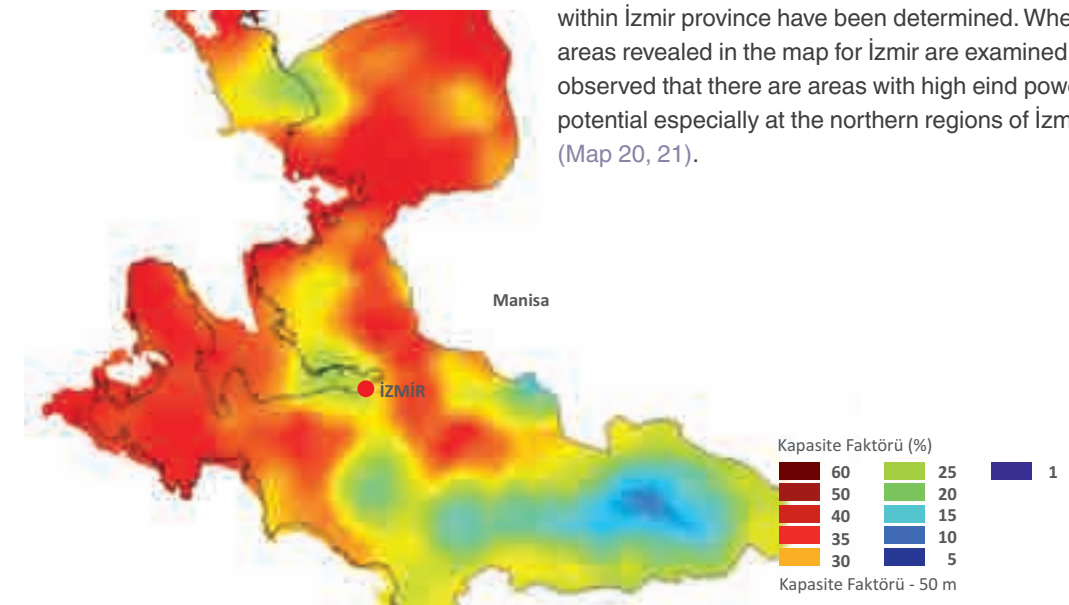
Map 19 : Wind Velocity Distribution*-50 m.



Source: EİE, 2012

*7 m/sec or higher wind velocities are required for economical Wind Energy Power Plant (WEPP) investments. The map shows wind measurements at 50 m elevation.

Map 20: Wind Capacity Factor *-50 m.

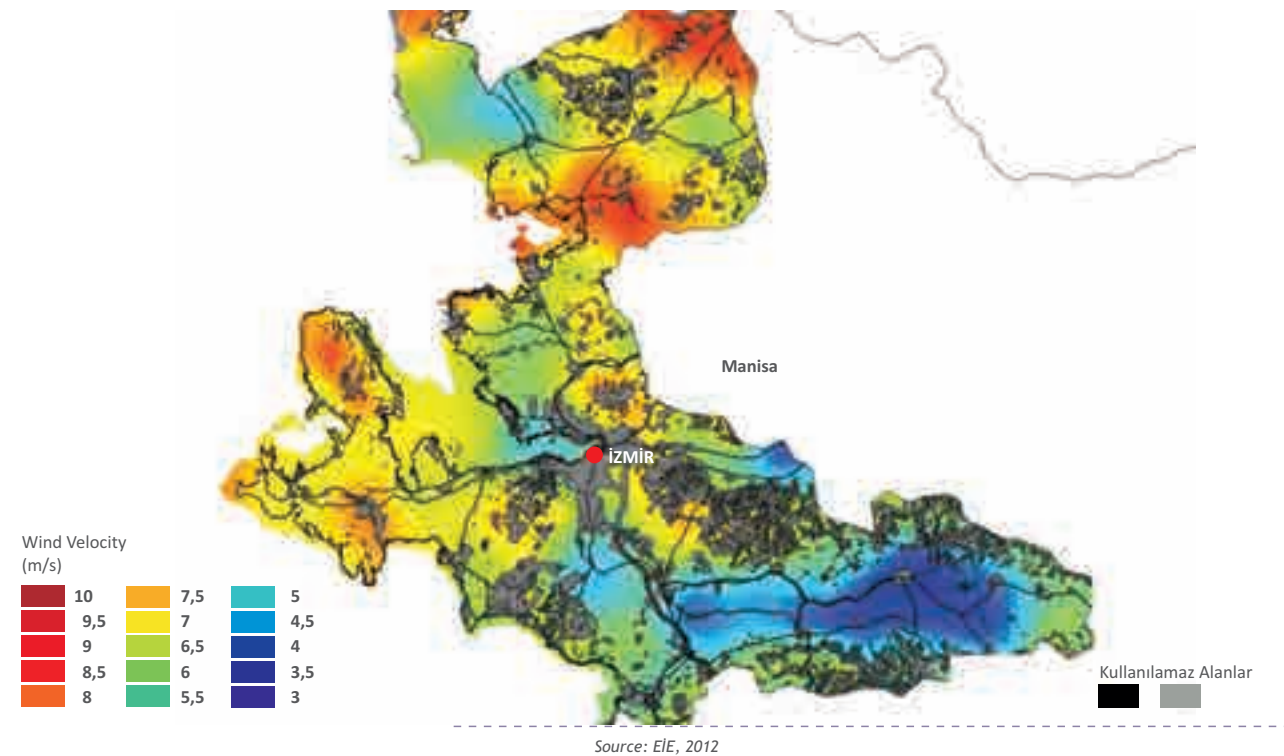


Source: EİE, 2012

*35% or above capacity factor is required for economical Wind Energy Power Plant (WEPP) investments.

⁸⁷ The ratio of annually generated net energy amount within the energy amount that may be generated in one year run at full capacity

Map 21: Areas Suitable for Wind Energy Power Plant Installation*



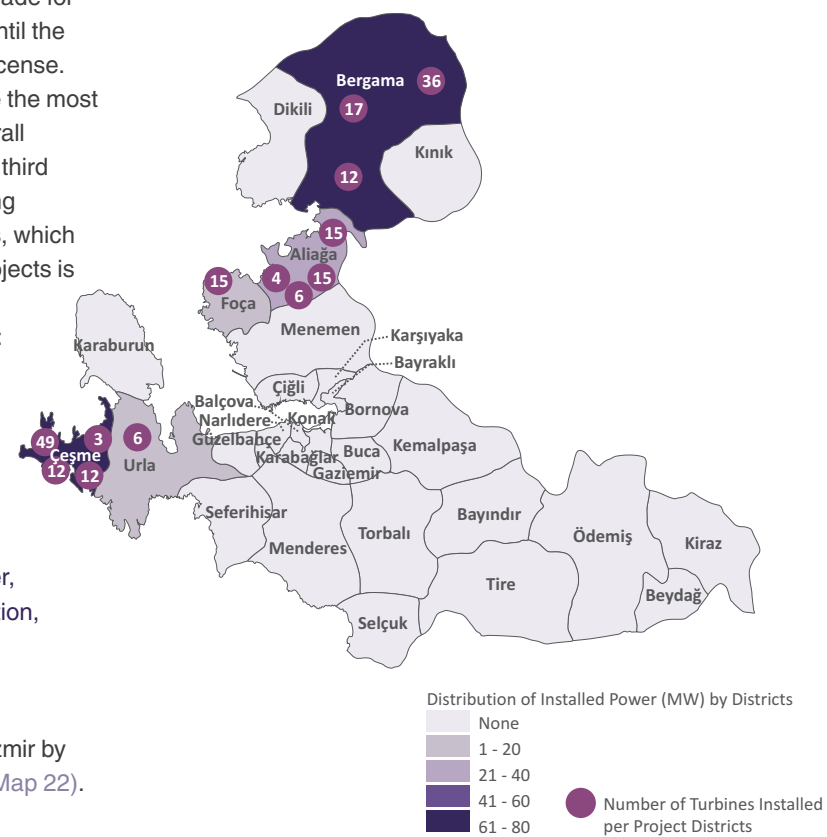
*Grey coded areas are assumed unsuitable for wind energy power plants.

15% of the installed wind energy throughout Turkey is housed in Izmir. 113 license applications were made for establishing wind power plants in the province until the end of year 2012, of which 30 received project license. Therefore, Izmir occurs to be the province where the most WEPP projects will be implemented with an overall installed power of 776.45 MW. Izmir ranks at the third place with an installed power of 17.33%, following Balıkesir (23.4%) and Manisa (19.1%) provinces, which means that the actualisation ratio of licensed projects is lower than that of other provinces. Some of the problems experienced in this field are as follows:

- Obligation to receive permits from almost 20 different institutions,
- Failure of relevant institutions to resolve connection problems (transmission lines, transformer centres etc.) in a rapid manner,
- Problems related to zoning and appropriation,
- Opposition from local populace,

Distribution of 13 actively functioning WEPP in Izmir by installed power is illustrated on the map below (Map 22).

Map 22: Distribution of WEPPs by Districts

Table 91:
Wind Energy Power Plants Functioning in Izmir

	Company	Project Name	Project Place	Installed Power (MW)	Number of Turbines
1	Alize Enerji Elektrik Üretim A.Ş.	Germiyan	Çeşme-İzmir	1,50	3
2	Bergama RES Enerji Üretim A.Ş.	Aliğa	Bergama-İzmir	90,00	36
3	Doğal Enerji Elektrik Üretim A.Ş.	Samurlu	Aliğa-İzmir	30,00	15
4	Doruk Enerji Elektrik Üretim A.Ş.	Seyitali	Aliğa-İzmir	30,00	15
5	Garet Enerji Üretim ve Ticaret A.Ş.	Karadağ	Aliğa-İzmir	10,00	4
6	İnnores Elektrik Üretim A.Ş.	Yuntdağ	Bergama-İzmir	57,50	17
7	Kardemir Haddecilik San. ve Tic. Ltd. Şti.	Bozyaka	Aliğa-İzmir	12,00	6
8	Kores Kocadağ Rüzgar Enerji Santrali Üretim A.Ş.	Kocadağ-2	Urla-İzmir	15,00	6
9	Mare Manastır Rüzgar Enerjisi Santrali San. ve Tic. A.Ş.	Mazı-1	Çeşme-İzmir	39,20	49
10	Ütopya Elektrik Üretim Tic. ve San. A.Ş.	Düzova	Bergama-İzmir	30,00	12
11	Yapısan Elektrik Üretim A.Ş.	Mazı 3	Çeşme-İzmir	30,00	12
12	Doğal Enerji Elektrik Üretim A.Ş.	Kozbeyli	Foça-İzmir	30,00	15
13	Ares Alaçatı Rüzgar Enerjisi Sant. San. ve Tic. A.Ş.	Ares RES	Çeşme-İzmir	7,20	12
Total Capacity				382,40	202

Source: EMRA, 2012

13 wind energy power plants in Izmir function with a total installed power of 382.4 MW (Table 91). Projects licensed by EMRA are planned to be completed until the end of year 2015. There are 2 projects undergoing construction in Izmir as of July 2012. When these projects are completed, the total installed power will reach 437.15 MW (Table 92).

production is currently realised in Izmir regarding turbine components. In a region with such high wind energy utilisation rate, all components required for installation of power plants (rotor, gear wheel, guide, transformer etc.) should be able to be produced locally. Thus, it is necessary to create a market and draw investments in Izmir.

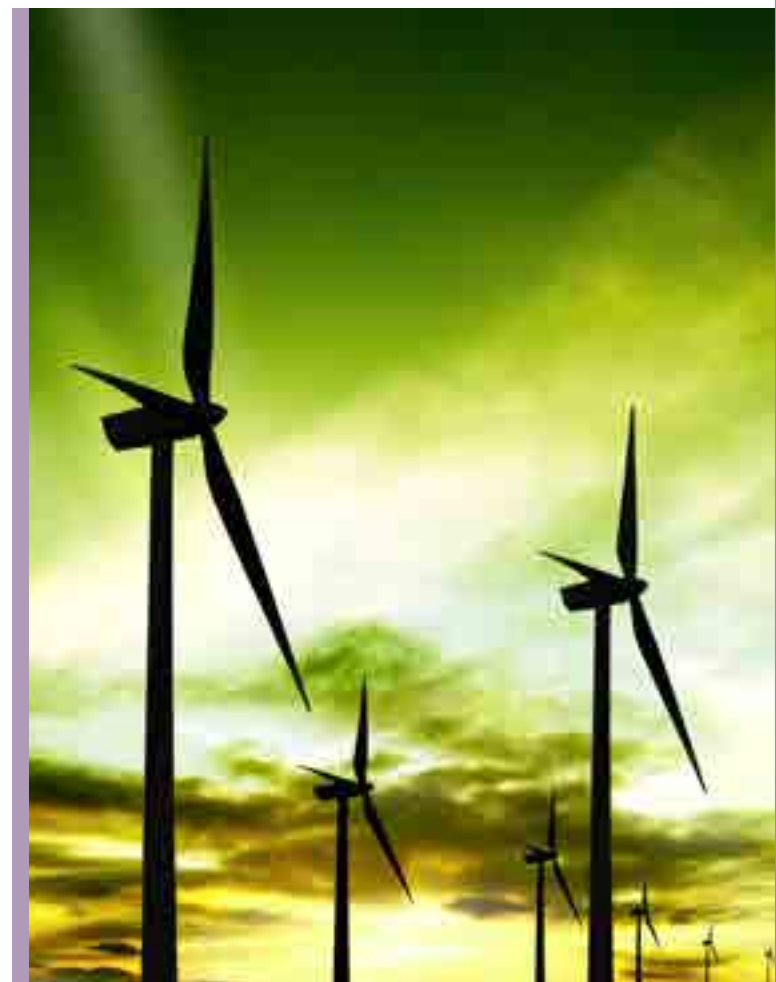
Table 92:
Wind Energy Power Plants Undergoing Construction in Izmir

Company	Project Name	Installed Power (MW)	Number of Turbines
Ayen En. A.S.	Mordoğan RES-Karaburun	30,75	16
Ayen En. A.S.	Korkmaz RES-Seferihisar	24	12
Total		54,75	28

Source: TÜREB, 2012

Izmir province is considerably rich in wind energy potential with a theoretical capacity of 11,854.2 MW, though currently capable of utilising only 3.2% of this potential. When the currently licensed projects are commissioned as of the end of year 2015, this ratio will be 6.5%. The total amount of energy to be generated with the utilisation of this potential is higher than the overall electricity consumption of Aegean Region. Investment areas for wind power infrastructure in Izmir may be listed as Bergama, Dikili, Aliğa, Çeşme, Karaburun and Urla districts, with the condition environmental impact is taken into consideration and relevant feasibility plans are implemented.

Although additional incentives for local production have been issued and are applicable, only impeller and tower

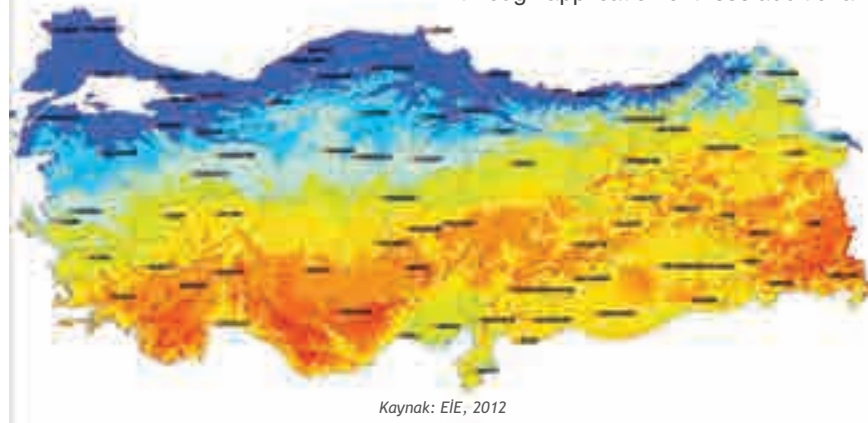


Solar Energy

Studies aimed at utilising solar energy throughout the world gained momentum especially after 1970s, and from then on, solar energy systems progressed technologically with declining costs, recognised as a clean and environment-friendly source of energy.

Solar energy potential assessments take into consideration daily total solar radiation hitting horizontal plane along with sunshine durations. In terms of solar energy potential, İzmir is one of the most advantageous cities following Mediterranean Region and Southeast Anatolia Region provinces. This ratio is measured as 20% in Antalya region that has the highest solar capacity, while İzmir enjoys a solar capacity ratio of 15-18% (Map 23).

Map 23: Turkey Solar Energy Potential Atlas



Kaynak: ELE, 2012

Furthermore, the districts with the highest potential in terms of energy hitting one square meter per year (kWh) are found out to be Ödemiş, Kiraz and Tire according to national solar energy map (Map 24).

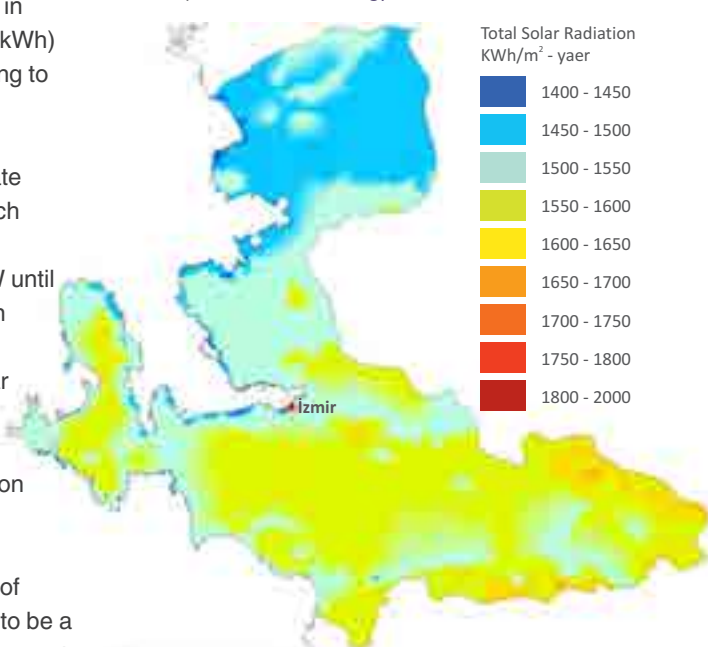
With the ETKB decree published on the OJ with date 08.01.2011, certain areas were designated for which licence may be granted for solar energy electricity production investments limited to a total of 600 MW until the end of year 2013. A total of 27 areas were given investment permits, while İzmir province was not included among these regions despite having solar values over Turkey average. Investment permit equal to 20 MW was granted for Muğla-Aydın area and 20 MW granted for Denizli within Aegean Region (İÖİ, 2012).

In addition to utilisation of solar energy, production of solar energy technologies in the region is revealed to be a strategic approach that will contribute to the development of the region regarding advanced technologies.

Although İzmir occurs to be the 3rd region regarding solar energy potential (following Mediterranean Region and Southeast Anatolia Region), the province has a good standing regarding technology generation in this field (İÖİ, 2012).

According to the RE Resources Law with date January 2012, 13.3 cent/kWh incentive is granted for electricity generated from solar energy. Additional incentives become applicable in case domestic products are used in investment. In the event a solar energy power plant is built completely of domestic production, guarantee of purchase occurs to rise to 22.6 cent/kWh. Furthermore, a 85% discount shall be applied to lease, right of way, occupancy certificate fees during the first 10 years for electricity production plants based on RE resources to be taken into commission until the year 2015, including those already commissioned. The sector's development is expected through application of these additional incentives.

Map 24: İzmir Solar Energy Potential Atlas



Source: ELE, 2012



Biomass Energy

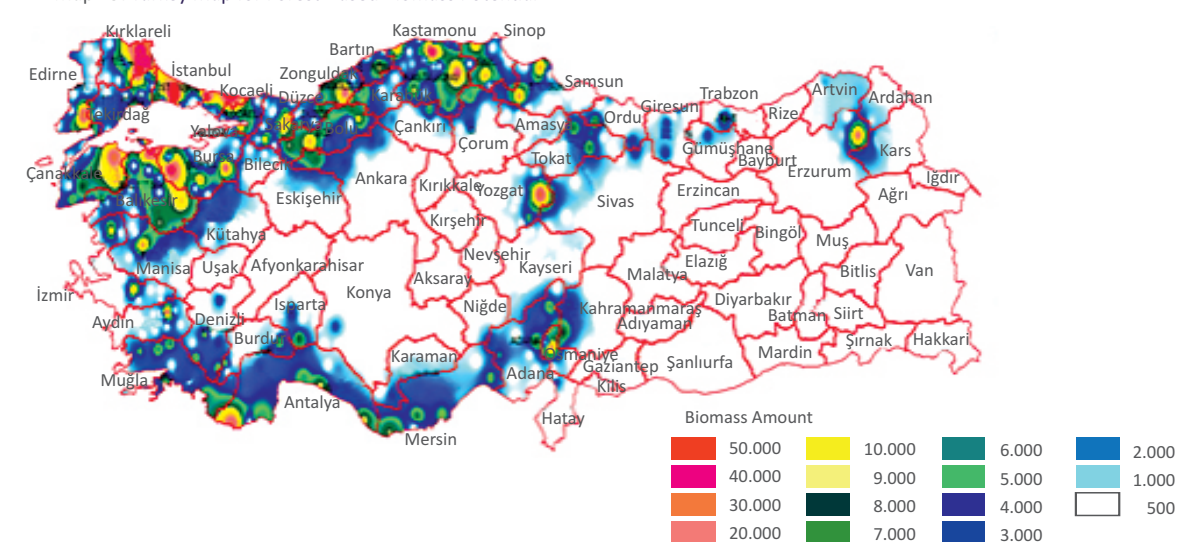
One of the resources that may be utilised for procuring energy in a sustainable manner without causing environmental pollution is biomass energy. Biomass energy is considered to be a suitable and important source of energy due to being an inexhaustible resource that can be obtained everywhere, suitable for energy efficiency at all scales, requiring low light intensity, being storable, not producing environmental pollution and aiding in socioeconomic development especially for rural areas.

Specifically cultivated plants such as corn and wheat, weeds, moss, algae, animal faeces, fertiliser and industrial wastes, and all organic domestic wastes (fruit and vegetable wastes) constitute source for biomass energy. Forests constitute an important potential for biomass energy (Map 25).

Due to growing scarcity of fossil fuels and their adverse environmental pollution impacts, biomass utilisation gains more and more importance regarding solving the energy problem.

Biomass energy possesses a two thirds share within RE production of Turkey (İÖİ, 2012). Total installed power of the institutions with biogas licence in Turkey is 147.73 MW. Due to presence of agricultural fields suitable for biomass use and the amount of animal and plant wastes, biogas electricity production potential in İzmir is around 537 MW. 50% of this potential belongs to Tire, Ödemiş and Torbalı districts. Turkey houses 12 biomass plant licences with a total installed power of 35.6 MW and 8 biogas plant licences with a total installed power of 30 MW. Furthermore, there are 5 landfill gas licences with a total installed power of 20.5 MW throughout the country. At the landfill site of Çiğli district of İzmir, a biogas system with an installed power of 4.1 MW and energy production of 34 GWh has been built. There are no institutions/organisations with biomass licence (EMRA, 2012).

Map 25: Turkey Map for Forest-Based Biomass Potential



Source: ELE, 2012

Geothermal Energy

Turkey possesses a considerable number of geothermal deposits and has a geothermal energy potential of 31,500 MW according to the data of ETKB General Directorate of Renewable Energy (Map 26). There are 17 geothermal plant licences in Turkey with a total installed power of 382.6 MW that correspond to 1.2% of overall electricity production potential. There are no power plants running on geothermal energy in İzmir (EMRA, 2012).

year 2012, 19,220 subscribers and approximately 96,000 people benefit from geothermal energy of a total size of 31,500 RE.⁸⁸ Regional Heating Project with a size of 4,300 RE was completed and commissioned during the 2012-2013 heating season by Jeotermal A.S.. Starting number of subscribers in this project occurred to be 1,486 people, with a size of 1,780 RE and utilisation rate of 41%. Although there is an existing potential for 9,000 houses in Çeşme, this resource could not yet be utilised.

Map 26: Nano-tectonic - Volcanic Activity and Geothermal Sites in Turkey



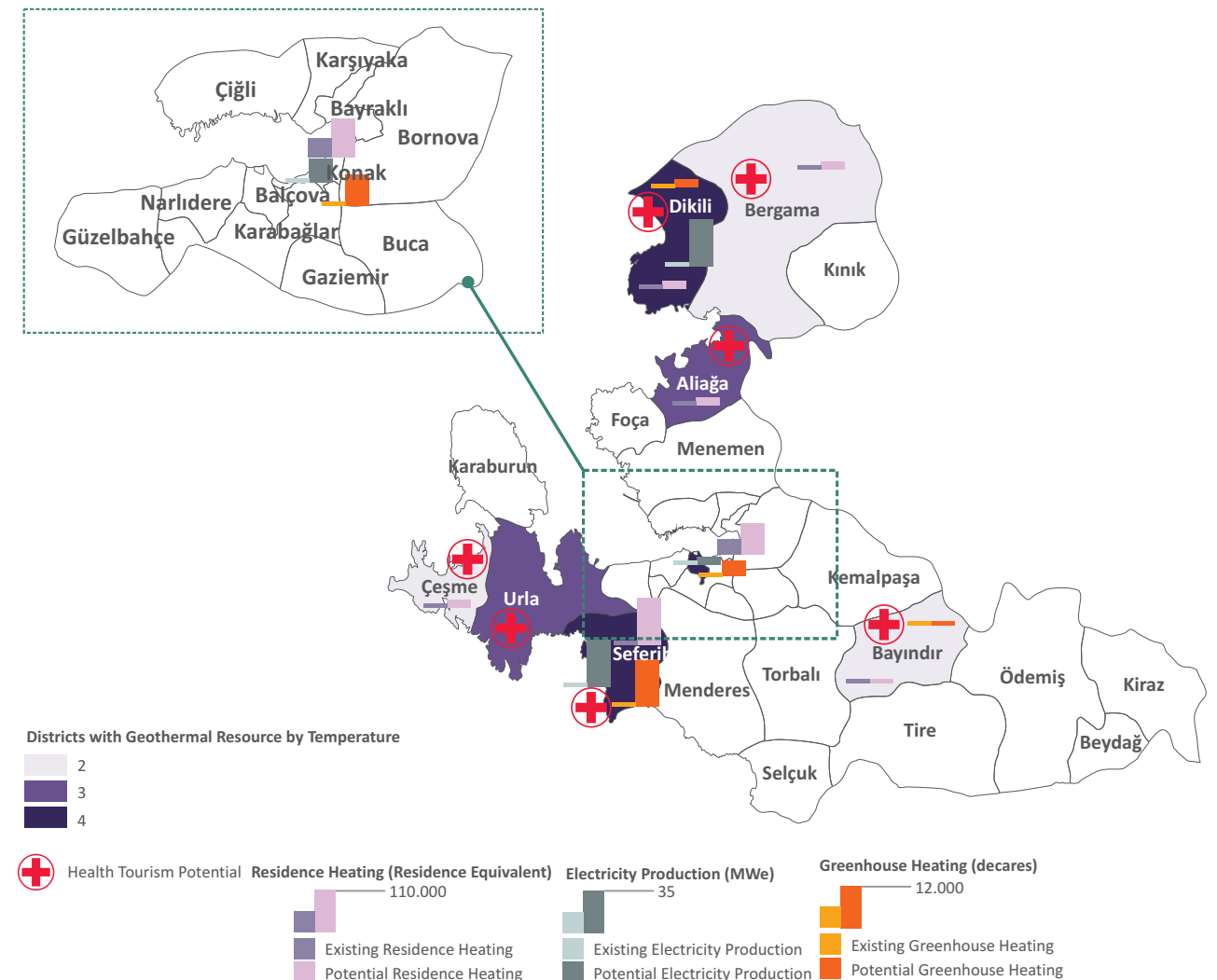
The first ever geothermal borehole was drilled in Balçova districts of İzmir in the year 1963. Geothermal resources in İzmir display variety regarding temperature and this diversity offers possibilities for utilisation in different fields. The districts of Balçova, Seferihisar (electricity production, greenhouse and thermal tourism), Çeşme (thermal tourism), Aliaga, Bayındır (thermal spring), Urla (thermal tourism), Bergama, Dikili (domestic heating, greenhouse and thermal tourism) are prominent in terms of geothermal energy in İzmir province (Map 27).

It has been determined that the resources in Balçova and Narlıdere have the potential sufficient to be used for the heating of 100,000 houses in the future. As of the end of

Three of the geothermal resources, (Seferihisar, Balçova and Dikili) are suitable for electricity generation. Geothermal resources in İzmir are used for regional heating, thermal spring and thermal tourism purposes. Most of the geothermal energy in İzmir is used for central systems built for domestic heating. 59% of geothermal energy is used for domestic heating, 36% is used for greenhouse heating, and the remaining 5% is used for thermal springs and thermal tourism. Considering the investments made in the province and the geothermal energy potential of the province, it is observed that approximately 60% of this potential is utilised, while the existing electrical production potential could not yet be benefitted from (İÖİ, 2012).

⁸⁸ House Equivalent (100 m² indoor area)

Map 27: Geothermal Resources, Current Utilisation States and Potentials in İzmir



3.c.3. Mining Sector

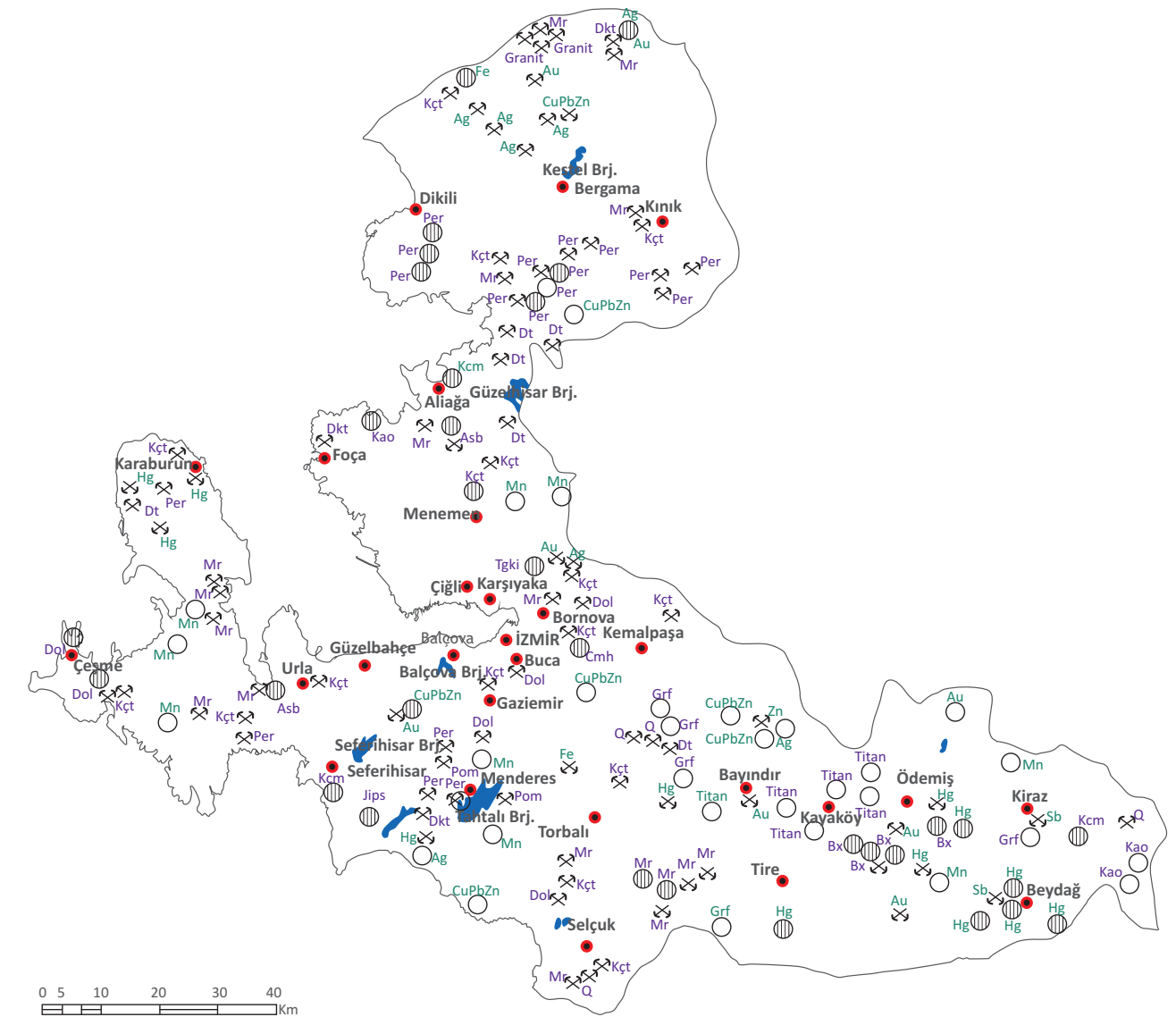
İzmir province possesses many industrial raw materials and metallic mineral deposits due to its geographical position. Main mineral assets may be listed as gold, antimony, copper, lead, mercury, zinc, alunite, limestone, dolomite, feldspar, graphite, perlite, marble and lignite (Map 28). (İZKA and Development Bank, 2012).

Distribution of economic activities in İzmir based on main sectors reveal that the share of mining and quarrying sector is below 1% in terms of number of businesses, employment and turnover aspects (TurkSTAT, 2009b).

17 out of 838 investment incentive certificates (2%) granted to İzmir province during the 2007-2011 period belonged to mining sector. Within the context of these certificates, a fixed investment amount of 215 million TL and employment of 699 people were envisaged (Ministry of Economy, 2012). Within the framework of new incentive system issued in the year 2012, mining investments are included among priority investment fields for İzmir.

Within the context of İzmir Province Potential Investment Fields Survey prepared by the cooperation of İZKA and Development Bank, suitable investment fields for mining sector were found out to be lignite mining, and sandi clay and stone quarrying.

Map 28: İzmir Province Minerals Map



Açıklamalar Explanations

- Zuhur / Exposure
- ⊗ Yatak / Ore Deposit
- ✂ İşletme / Mine
- ✂ Eski İşletme / Old Mine
- Yerleşim Merkezi
Urban Center
- Metallik Madenler
Metallic Minerals
- Endüstriyel Hammaddeler
Industrial Raw Materials

Ag	Gümüş Silver	Fe	Demir Iron	Q	Kuvars Quartz
Asb	Asbest	Grf	Grafit Graphite	Per	Perlit Perlite
Au	Altın Gold	Hg	Civa Mercury	Pom	Pomza Pumice
Bx	Boksit Bauxite	Jips	Jips Gypsum	Sb	Antimuan Antimony
Cmh	Çimento Hammaddeleri Cement Raw Materials	Kao	Kaolin Kaolinite	Tgki	Tuğla-Kiremit Brick-Tile Building Stone
CuPbZn	Bakır-Kurşun-Çinko Copper- Lead-Zinc	Kcm	Kum-Çakıl Sand-Gravel	Titan	Titan Titanium
Dol	Dolomit Dolomite	Kçt	Kireçtaşı Limestone	Zn	Çinko Zinc
Dt	Doğal Taş (Andezit, Bazalt vb.) Naturel Stone (Andesite, Basalt etc.)	Mn	Mangan Manganese		
Dkt	Dekoratif Taş Decorative Stone	Mr	Mermer Marble		

Source: MTA, 2012

3.c.4. Assessment

İzmir's contribution to industry sector that occurred to be 7.3% in the year 2004 declined to 6.3% during the 2004-2010 period, while İzmir industry sector's GVA contribution declined from 30.4% in the year 2004 to 25.8% as of the year 2010. This decline occurred in favour of services sector. Although the share of industry sector declined through the years, İzmir is still the second province represented by the highest number of companies in the Top 500 Large Scale Industrial Businesses of Turkey (İSO 500, following İstanbul). However, the number of companies within İSO 500 has been on the decline since 2000.

On the other hand, industry sector of İzmir province has a significant place within Turkey's industry sector regarding both number of local enterprises and number of employed people. Absence of primary industry branches in İzmir and the advantages conferred by the existing incentive system to nearby regions are considered to be the reasons beneath the relative recession experienced in the share of manufacturing industry.

Manufacturing industry sectors that have large scale businesses with high turnovers are manufacture of rubber and plastic products sector, manufacture of other non-metallic mineral products sector, and manufacture of basic metals sector. Among these three sectors, manufacture of basic metals sector is further distinguished in efficiency regarding employment, number of businesses and turnover-related criteria, differing from the other two. On the other hand, agriculture based industries (manufacture of wearing apparel and leather, food, beverages, tobacco), manufacture of fabricated metal goods, manufacture of chemicals and chemical products, manufacture of machinery and equipment, manufacture of motor vehicles, manufacture of furniture, manufacture of wood products, manufacture of paper products and manufacture of medical devices are sectors displaying concentration within the manufacturing industry.

In terms of clustering potential for manufacturing industry sectors; manufacture of food products and beverages, manufacture of wearing apparel, manufacture of chemicals and chemical products, manufacture of machinery and equipment n.e.c., and manufacture of motor vehicles and relevant subsectors come prominent. A geographical assessment of the current distribution of all manufacturing industry sectors within the region reveals that industry sector is concentrated in central and nearby districts of İzmir.

Almost all of the companies dealing in the manufacturing industry sector comprise of micro enterprises and SMEs. This situation is considered to be an opportunity for regional industry. Enterprises that can shape their flexible production structures in line with market conditions and adapt to the competitiveness tools applications will be able to become strong locomotives in the sector with the progress they will make during institutionalisation process. This feature that is considered to be positive also for local competition will make companies feel competition pressure in domestic market, triggering innovation by creating results towards both process improvement and new product development. Universalisation of clean production applications during process improvement stage will support innovative activities in the sector and contribute to the region for making a difference in terms of sustainable development. In addition, the input characteristics, establishment structure, demand conditions and relevant support sectors of the manufacturing industry sector show that the region may use the tool of clustering to good effect towards development.

When the physical infrastructure of manufacturing industry is examined, it is observed that OIZs are important for the sector and completion of the infrastructure works in the commissioned OIZs is necessary for emergence of new investments.

Technology development zones have great importance for development of the techniques and technologies used in the sector by using innovative approaches. In this sense, both the existing technology development zone and those to be commissioned in İzmir have to function in a manner contributing to the process and product improvements of manufacturing industry. In addition to the physical infrastructure in TDZs, employed R&D personnel are also of critical importance for regional export and economic value created by the region. In this sense, designing such zones in line with sectoral demands in terms of both human resource and technology investment will bring momentum to regional development. Along with OIZs and TDZs, expansion of free zones is also of vital importance. Activities aimed at increasing trade volume in free zones should be supported. Developing and making widespread use of clustering and innovation experiences especially in foreign capital enterprises in this field will positively impact the value added created by the sector. In addition to the existence of a well-established industry culture, the presence of 13 OIZs, 2 free zones, TDZ, newly opened technoparks and production areas such as TEKMER and activities such as 27 different specialisation fairs are articles of advantage that will increase the industry sector's contribution to the economy in the region.

Energy demand increase and use of fossil fuels as primary source of energy continues throughout the world. Increasing energy demand and its costs, failure to fully utilise RE resources, and constantly increasing environmental pollution constitute main problem topics in this field. İzmir possesses a significant potential of RE resources and technologies. With the utilisation of geothermal potential present in the geothermal fields in the province, it is considered that five times more houses can be heated. This has to be rapidly implemented and geothermal energy should be made widespread instead of natural gas consumption.

The actualisation ratio of WEPP project licences is observed to be low in İzmir. Reasons lying behind this situation may be listed as; obligation to receive permits from many different institutions, problems related to zoning, failure to resolve appropriation problems with haste and reaction of local populace.

These problems should be handled and steps should be taken towards their resolution, and institutional cooperation should be established for completion of investments in the shortest time period.

With its existing infrastructure opportunities, universities, non-governmental organisations and developed industry, İzmir possesses a significant potential for sustainable development. This potential has to be utilised and converted to products. There are certain actions that may be taken regarding energy utilisation and city planning towards becoming a sustainable city. In this sense; focusing on mass transit investments and making widespread use of them, reducing vehicle emissions, realising energy recovery in waste management, raising awareness on energy efficiency and creating exemplary models in implementation are some of the most prominent actions.

In order to alleviate foreign dependency of RE technologies throughout the country and raise utilisation ratios to EU member states' level, it is necessary to invest in RE technologies, increase RE incentives, establish the necessary technological infrastructure for connection of the generated energy into the interconnected grid, employ qualified personnel and realise university-industry cooperation.

8,6 billion \$
2012 İzmir export
value

7 %
The rate of İzmir
trade among
Turkey's Trading Volume

77 %
The share of İzmir Ports
among the container
traffic in the ports
operated by Turkish
State Railways in 2011

Table 93:
Information on the Top 20 Seaports Operated with the Highest Volume throughout the World

Seaport	Ranking (2010)	Ranking (2000)	Country	Handled Containers (2000, TEU) ⁸⁹	Handled Containers (2010, TEU)
Shanghai	1	6	China	5,613,000	29,069,000
Singapur	2	2	Singapore	17,040,000	28,431,000
Hong Kong	3	1	China	18,098,000	23,669,000
Shenzhen	4	11	China	3,994,000	22,509,000
Busan	5	3	South Korea	7,540,000	14,194,000
Ningbo	6	65	China	902,000	13,144,000
Guangzhou	7	38	China	1,430,000	12,486,000
Qingdao	8	24	China	2,120,000	12,012,000
Dubai	9	13	BAE	3,059,000	11,575,000
Rotterdam	10	5	Netherlands	6,280,000	11,145,000
Tianjin	11	32	China	1,708,000	10,080,000
Kaohsiung	12	4	Taiwan	7,426,000	9,121,000
Port Kelang	13	12	Malaysia	3,207,000	8,871,000
Antwerp	14	10	Belgium	4,082,000	8,468,000
Hamburg	15	9	Germany	4,248,000	7,895,000
Los Angeles	16	7	USA	4,879,000	7,831,000
Tanjung Pelepas	17	113	Malaysia	418,000	6,298,000
Long Beach	18	8	USA	4,601,000	6,263,000
Xiamen	19	-	China	-	5,824,000
New York/New Jersey	20	14	USA	2,712,000	5,292,000

Source: American Association of Port Authorities

Table 94:
Logistics Performances of Upper-Middle Income Level Countries,
2007-2010-2012

Country	Indicator	2007	2010	2012
South Africa	Logistic Performa's Index	3.53	3.46	3.67
	Ranking	24	28	23
China	Logistic Performa's Index	3.32	3.49	3.52
	Ranking	30	27	26
Turkey	Logistic Performa's Index	3.15	3.22	3.51
	Ranking	34	39	27
Malaysia	Logistic Performa's Index	3.48	3.44	3.49
	Ranking	27	29	29
Bulgaria	Logistic Performa's Index	2.87	2.83	3.21
	Ranking	55	63	36

Source:The World Bank, 2012

According to year 2012 Logistic Performa's Index⁹⁰,According to year 2012 Logistic Performa's Index, Turje took the 27th place among 155 countries with an index value of 3.51. Top five countries were listed as Singapore (4.13), Hong Kong (4.12), Finland (4.05), Germany (4.03) and Netherlands (4.02). Turkeyreached its 27th place in the year 2012 by going up 7 steps

beyond its 34th place in the year 2007. According to year 2012 data, Turkey resides among upper-middle income level countries, below South Africaand China, but above Malaysia and Bulgaria (Table 94).

Within the context of Turkey's Year 2023 Vision, it is envisaged that the annual growth rate of logistic sector may reach an average of 10-15% and sector expenditures may reach 10-12% of GNP as of the year 2023 (UBAK, 2011).

The import to Turkey and the export from Turkey are realised 55% via maritime lines, while 37% of export and 18% of the import is realised via land routes. The share of air lines is 6% for export and 9% for import, while the share of railroads is 1% for both export and import (TurkSTAT, 2011e). Although maritime lines are dominantly used for international shipping, land transport is more prominent for local (domestic) transportation. The ratio of passenger transportation by roads occurred to be 95% and the ratio of freight transportation by roads occurred to be 91.5% as of the year 2010 (TOBB, 2012).

3.d. Services Sector

3.d.1. Logistics

3.d.1.a. Logistics Sector in Turkey and throughout the World

Movements of goods that are rapidly increasing throughout the world through the impact of globalisation process caused logistics sector to gain more and more importance for ensuring competitive superiority. According to the data of World Trade Organisation (DTÖ), the share of transportation services within overall services sector occurred to be over 30% in the year 2010 (TOBB, 2012). Logistics sector worldwide corresponded to a market worth six trillion Dollars as of the year 2009. It is expected that this market will reach a volume of 10-12 trillion Dollars in the year 2015 (MÜSiAD, 2010).

The top 20 seaports throughout the world in regards to container traffic as of the year 2010 along with the rankings of these seaports during the years 2000 and 2010 are given below.

In the light of year 2010 container traffic data, it may be mentioned that the world logistics traffic moves more and more towards Asiaand East Asiadirection. It is observed that the same year İstanbul Ambarlı Seaport took the 47th place with 2.5 milyon TEU, MersinSeaport took the 94th place with 1 million TEU and İzmir Alsancak Seaport took the 114th place with 727 thousand TEU.

⁸⁹ TEU= Twenty Feet Equivalent Unit (container unit used in international maritime transport)

⁹⁰ Logistics Performance Index (LPI) that has been announced by the World Bank every year since the year 2007 assesses countries in the light of 6 indicators: effectiveness of customs and border administrations, quality of trade and transportation infrastructure, quality and competitiveness of logistics services, ability to realise transport over competitive prices, traceability of shipments, timely delivery of shipments.

3.d.1.b. Logistics Sector in İzmir

Logistics sector enables production and consumption networks to meet and thus ensures agriculture and livestock sector, manufacturing industry sector and other sectors to develop in a rapid and healthy manner. This is a sector also of importance for İzmir province. With an importance increasing more and more due to globalisation and the ensuing competition, logistics sector is observed to constitute one of the attractive fields of investment for İzmir, when the existing state and potential of the province is taken into consideration (İZKA and Development Bank, 2012).

17.7% of the production and 19.1% of the gross value added in İzmir are realised by the land, sea, air transport and transport via pipelines sector; and this sector comes up as the 4th sector with the highest forward connection effect with an index value of 4.860⁹¹ (İZKA and EÜ, 2012b). Logistics sector was also included among sectors with clustering potential within the context of İzmir Clustering Analysis.

As of the year 2011, there are a total of 2,427 companies dealing in logistics sector registered to İzmir Chamber of Commerce (İZTO) in İzmir, comprising of 283 international transport companies, 55 international warehouses and agencies, 858 freight transporting companies, 653 passenger transporting companies, 272 mail and courier companies and 306 transport support services companies. Number of companies displayed an increase of approximately 8% compared to year 2009. Activities realised in logistics field in İzmir dominantly comprise of transport, transport support activities and warehousing activities. (İZKA and Development Bank, 2012).

İzmir is a region strong in regards to logistics education. Logistics Management Department included under İEÜ İİBF (Faculty of Economics and Administrative Sciences) is the first graduate programme established under this name throughout Turkey. Logistics programmes included within the bodies of DEÜ Faculty of Maritime, newly founded İKÇÜ Faculty of

Shipbuilding and Maritime, YÜ and GÜ Vocational Colleges realise education services in line with the sector's demands.

3.d.1.b.1. Seaports

İzmir Port

With an annual ship acceptance capacity of 3.588⁹² İzmir Port is the largest shipyard of the Aegean Region. İzmir Port plays a very important role for the export goods of Turkey with its central location between West Europe and North Africa along with its strong agriculture and commerce hinterland. In addition to being the import portal of Central Anatolia Region and Aegean Region, it also is an important trading port between Europe, Middle East and Asian countries with its railway and land route connections. Taking also into consideration the ease of reaching the touristic assets of Aegean Region and its close proximity to Adnan Menderes Airport, the seaport is of importance also regarding its passenger services.

In year 2011, approximately 70% of all loadings and 77% of all container traffic made at ports operated by TCDD was realised through İzmir Port (Table 95). In İzmir Port, the most prominent seaport of Turkey regarding container handling, container loading-unloading activities increased by 83% during the 2001–2007 period⁹³, while a 23% decline was observed in the year 2011 compared to the year 2007. Global crisis is believed to be effective in this decline that became more distinct especially in the year 2010.

Table 95:
Freight and Container Traffic at Ports Operated by TCDD, 2007-2011

Ports	Traffic	2007	2008	2009	2010	2011
İzmir	Loading (thousand tonnes)	7,740	7,136	7,048	6,341	5,488
	Unloading (thousand tonnes)	4,328	4,168	3,230	3,586	4,016
	Container (TEU)	898,217	884,906	826,645	727,443	690,539
Haydarpaşa	Loading (thousand tonnes)	1,376	1,133	538	424	613
	Unloading (thousand tonnes)	2,552	2,040	1,060	1,068	1,285
	Container (TEU)	396,637	356,272	187,365	176,468	204,652
Derince	Loading (thousand tonnes)	845	1,066	788	1,580	1,334
	Unloading (thousand tonnes)	2,186	1,992	799	905	1,052
	Container (TEU)	488	402	251	800	1,825
İskenderun	Loading (thousand tonnes)	367	741	825	922	489
	Unloading (thousand tonnes)	1,480	1,795	1,588	1,478	1,044
	Container (TEU)	603	0	0	115	20
Total	Loading (thousand tonnes)	10,328	10,076	9,199	9,267	7,924
	Unloading (thousand tonnes)	10,546	9,995	6,677	7,037	7,397
	Container (TEU)	1,295,945	1,241,580	1,014,261	904,826	897,036

Source: TCDD, 2012a

⁹¹ "According to the calculations, in case of a 1 unit (for example 1 Million TL) final increase in demand, a 4,860 unit (4 Million 860 Thousand TL) increase in production will be observed in land, water, air and pipeline transportation and communication sector.

⁹² (<http://www.tcdd.gov.tr/Upload/Files/ContentFiles/2010/liman-bilgi/kapasite.htm>)

⁹³ İzmir Situational Analysis, 2009, p.86 <http://www.izmiriplanliyorum.org/izmir-mevcut-durum-analizi>



In year 2011, approximately 70% of all loadings and 77% of all container traffic made at ports operated by TCDD was realised through İzmir Port (Table 95). In İzmir Port, the most prominent seaport of Turkey regarding container handling, container loading-unloading activities increased by 83% during the 2001–2007 period, while a 23% decline was observed in the year 2011 compared to the year 2007. Global crisis is believed to be effective in this decline that became more distinct especially in the year 2010.

Due to the increase of import and export loads of Turkey and the demand that came into being for container transport especially in the recent years, the problems İzmir Port faced regarding meeting this increasing demand have risen more and more, and ships' anchored waiting periods have started to increase. Therefore, certain projects aiming to renew seaport infrastructure and embodied equipments, and ensuring more efficient use of harbour reaches were started by TCDD. When the renewal investments towards regaining İzmir Port its competitiveness and the canal dredging towards allowing berthing of larger container ships to the port are completed, it is expected for the seaport annual container capacity to reach 2.5 million TEU.

In addition to these, works towards the construction of an independent cruise port (BOT) that will separate the passenger section of İzmir Port from the container section along with relevant service buildings have been started.

Aliağa-Nemrut Docks

12 docks and wharfs belonging to private sector in Nemrut Bay of Aliağa district also serve third parties in addition to the loads they handle for their own organisations. The location of İzmir Port at the middle of city centre and long duration waits due to density caused the utilisation rate of the docks in Aliağa district (Table 96).

Table 96:
Freight and Container Traffic at Aliağa-Nemrut Docks, 2010-2012

Years	# of Ships	Loading-Unloading (Tonnes)	Container (TEU)
2010	4,558	37,033,271	239,166
2011	4,954	34,414,396	384,559
2012	5,221	39,167,072	412,559

Source: Aliağa Port Administration, 2013

Traffic related problems are experienced in the area due to inadequate access road to the wharfs. Within the context of Aliağa Beltway Road under construction, the road going towards the wharfs and the road going to the city centre should be separated and entrance of the traffic of transported loads to the district should be thus prevented (Aliağa Chamber of Commerce, 2012).

Menemen-Aliağa Double Line Railroad project is being constructed for the purposes of serving the transport of raw and processed materials from Aliağa Refinery and industrial plants near Nemrut Bay and ensuring that freight handled at the wharfs at Nemrut Bay to be transported via railroad grid in the most economical manner. 9 kilometres of infrastructure tracking has been completed for Nemrut Bay railroad access connection main route and become ready for commissioning (UBAK, 2012a).

Çeşme Port

Çeşme Port is used for passenger ships and Ro-Ro lines. Trucks are made to reach Europe through the Ro-Ro cruises made from Çeşme Port to Italy's Trieste city. The port is located at 80 km to İzmir and has access via highway. Çeşme Port has an annual ship acceptance capacity of 1,060 ships and pier length of 300 metres.

Dikili Limanı

Located at approximately 100 km at the north of İzmir, the pier of Dikili Port is capable of serving both bulk cargo ships and passenger ships. Annual bulk cargo capacity of the seaport is 1 million tonnes. Although Dikili Port also bears the right opportunity to provide Ro-Ro services, it is not currently able to render this service due to not benefitting from the tax exemption related to fuel use. The number of cruises from the port to Midilli Island has seen a significant rise in the year 2012 (Table 97).

Table 97:
Freight and Passenger Traffic at Dikili Port, 2010-2012

Years	# of Freight Ships	Loading-Unloading (Tonnes)	Midilli Line - # of Cruises	Midilli Line - # of Passengers
2010	116	447,090	41	2,973
2011	129	424,701	73	2,735
2012	156	551,744	114	9,438

Source: Dikili Port Administration, 2013

Northern Aegean (Çandarlı) Port

The construction of the seaport planned to be located at Çandarlı Bay in the Bergama district at the north of İzmir was initialised in May 2011. Infrastructure works of the port are aimed to be completed at the end of year 2013. The port is planned to become an alternative to İzmir Port within West Anatolia hinterland and create a new link with a transshipment centre character in the combined transport chain to emerge due to the potential traffic between Europe and Middle East and the East (UBAK, 2012b).

Northern Aegean (Çandarlı) Port is expected to be listed among the 10 biggest seaports of the world and take the title of the biggest seaport within the Mediterranean Sea with its capacity of 20 million tonnes/year and 2,500 hectares of stocking area and become a transfer centre where large transit ships may do loading/unloading.

The planned capacity of the port is around 12 millionTEU. With its strategic location on the Mediterranean Sea – Black Sea route and available expansion area, it has the potential to compete with Haifa, Damietta and Pire seaports and become one of the major transhipment ports of East Mediterranean Sea.

3.d.1.b.2. Kemalpaşa Logistics Village

Logistics centres, which are established especially in big cities and present significant income and employment source for country and region economies, also play important roles for the growth of foreign trade volume and increase of foreign capital. In Europe, more than a hundred logistics village throughout eight countries are in operation. In Germany alone, a total of 33 logistics villages were established in the last 20 years (TOBB, 2012).

Kemalpaşa Logistics Village that is to be built on an approximate area of two million square meters is planned to be the largest logistics base of Turkey, initially serving the load traffic of KOSBİ and then the traffic of İzmir and entire Aegean Region. The project framework includes the railroad line that will establish connection of KOSBİ to existing railroad line and thus to Northern Aegean (Çandarlı) Port. Thanks to the logistics village that will encourage combined transport activities by allowing land and rail road freights to be carried together, companies in the sector will be able to address consumer demands faster, and also reduce their operational costs. Kemalpaşa Logistics Village is expected to bring a significant dynamism to İzmir economy and provide new employment to 2,000 people (İZKA and Development Bank, 2012).

3.d.1.b.3. Warehousing Activities

Warehousing activities constitute the second highest share within all logistics activities following transport and distribution activities. According to the study titled “Warehouses in Turkey” prepared by İstanbul Chamber of Commerce, there are a total of 1,326 warehouses in Turkey, of which 372 are located in Aegean Region and 107 in İzmir province. İzmir takes the third place among all provinces following İstanbul and Kocaeli regarding the number of warehouses (İZKA and Development Bank, 2012).

Warehouses in İzmir are concentrated in Aliağa, Kemalpaşa and Torbalı districts. The types and numbers of warehouses display that the majority of the overall warehouse demand of İzmir and surrounding region are covered by the companies themselves and that third party logistics⁹⁴ (3PL) service providing has not yet been established in the area. This failing may be considered as an opportunity for companies or investors with the adequate qualification for rendering warehousing services.



The fact that the warehouses in İzmir generally have lower capacities and less developed systems and automation levels compared to those in İstanbul comes up as a medium term limiting factor regarding the development of logistics sector in İzmir.

3.d.2. Trade

Due to its location, İzmir has been at the start and finish of trade routes throughout the ages, and thus come out as a major trade centre. In our day, the province is in intense connections regarding commerce and industry with almost all other provinces, particularly İstanbul, Bursa, Manisa, Denizli, Aydın and Muğla. Thanks to presence of transportation facilities, Organised Industrial Zones, Free Zones, International Fair and a major seaport, in addition to the activities and efforts of professional organisations such as Chambers of Commerce, Exporter Unions, Chamber of Industry and Commodity Exchange, local and foreign trade is well developed in İzmir (Ministry of Science, Industry and Technology, 2011b).

Trade volume of İzmir constitutes 7% of the trade volume of Turkey. 93% of the Aegean Region export is realised over İzmir. Especially trade of food products, construction materials, textile products, wood products and furniture, chemical products and agricultural products bring momentum to İzmir commerce. With national and international bank network and stock exchanges, İzmir and surrounding region offer a strong capital market infrastructure. Turkey's biggest commodity exchange⁹⁵ is also located in İzmir (Ministry of Science, Industry and Technology, 2011b).

Regarding the commercial sales of companies in provinces as of the year 2010, İzmir comes up as the third province with the highest trade dynamism following İstanbul and Bursa (Tablo 98) (DTM, 2011). Also, İzmir is the province with the highest self-sufficiency for input supply offered to industry sector.

Table 98:
6 Provinces with Highest Trade Dynamism According to the Commercial Sales of Companies, 2010, (%)

Province	Share within Country (%)
İstanbul	52,30
Bursa	9,17
İzmir	5,99
Kocaeli	5,65
Ankara	4,74

Source: DTM, 2011

⁹⁵ Commodity means the goods comprising of metal, mineral and food products that may be subject to trade such as gold, silver, copper, raw petroleum, natural gas, coal, wheat, cotton, corn, sugar and coffee; while “Commodity Exchange” means the market where the trade of commodity goods is realised.

⁹⁶ In Hirschman's unbalanced growth model, sectors that have high reverse connection impact i.e. utilises significant amounts of intermediate inputs from other sectors, and sectors that have high forward connection impact i.e. realises production towards intermediate utilisation rather than final consumption play the role of key sectors regarding unbalanced development strategy. Such sectors are listed under Category I.

İzmir Regional Input Output Analysis also reveals the importance of the wholesale and retail trade sector for İzmir province. Wholesale and retail trade sector, which encompasses the sub-sectors of sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel; wholesale trade and commission trade, except of motor vehicles and motorcycles; and retail trade, except of motor vehicles and motorcycles; repair of personal and household goods, has the second place among all sectors with a share of 14.3% within the overall production of İzmir. In addition to its weight within production, it is the second most important sector in terms of gross value added (18.7% share), net operating surplus (20.8% share), net sales made in Turkey(6.4 million TL share) and payments made to employees (16.7% share).

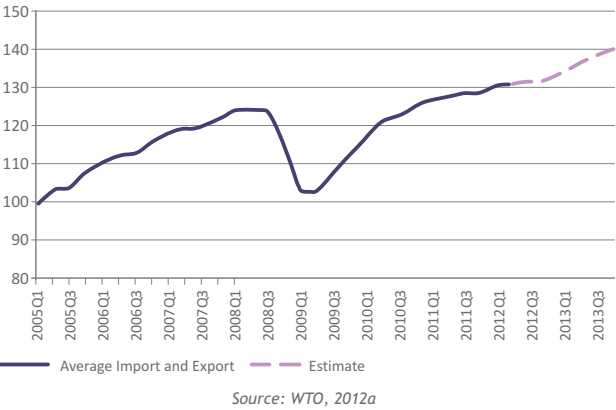
Forward connection effect is a quantitative indicator of how much important the overall output of the sector is for other sectors, while reverse connection effect is a quantitative indicator of how much the sector triggers the production of other sectors through intermediate input demands (İZKA and EÜ, 2012b). As expected, the sector that has the highest overall forward connection effect in İzmir (6.872 index value) is the wholesale and retail trade sector with a general characteristic of providing input to other sectors. Thus, a one-unit (for instance, 1 million TL) increase of final demand increase in all sectors would lead to 6,872,000 TL production increase in the wholesale and retail trade sector. Reverse connection effect of the sector is low, with a value of only 1.74. With this high forward connection and low reverse connection effect, the wholesale and retail trade sector is listed under Category III under the Hirschman classification. This category resides at the lower end regarding investment priorities.⁹⁶

3.d.2.a. Foreign Trade

Due to factors such as global economiccrisis, natural disasters and civil wars, world trade growth rate declined in recent years. WTO data reveal that a sharp decline occurred in the worldwide merchandise trade during the year 2008 and until the middle of the year 2009, after which a recovery trend started but this trend slowed down gradually especially after the year (WTO, 2012a). In the year 2011, worldwide trade increased by 5% and global production increased by 2.4%. These figures imply a considerable decline compared to the year 2010, when trade and production increased by 13.8% and 3.8% respectively (WTO, 2012b). Estimates on the year 2013 predict a slight acceleration of worldwide trade growth (Figure 66).

⁹⁴ Third Party Logistics: Realisation of the logistics services required by a company either partially or completely by another company.

Figure 66:
Worldwide Merhandise Trade Volume, 2005-2013



Varying growth rates are observed for different regions of the world. The 0.5% recession seen in the production of Japan occurred due to the devastating earthquake that occurred on May 2011, which also caused developed economies to stand at a 1.5% increase rate. Total production in USA occurred just over (1.7%) the average value of developed countries, while EU rate (1.5%) rested at the same level with this average (WTO, 2012b).

Most rapidly developing regions occurred to be Middle East (4.9%), Commonwealth of Independent States (4.6%) and South and Central America (4.5%). It may be mentioned that production increase rate that occurred to be 2.3% in Africa could happen at higher rates in the absence of insurrections throughout Libya, Tunis, Egypt and other regions (WTO, 2012b).

On the other hand, China outdistanced other regions with a production increase rate of 9.2%, while this rate happened to be below that of the period when global crisis peaked in the previous year (10.2%).

In spite of this performance, the average value of the newly industrialised economies of Hong Kong, China, South Korea, Singapore and Taiwan together (4.2%) points out that these economies grow with lower increase rates (Tablo 99) (WTO, 2012b).

As of the year 2011, world foreign trade volume is 36.3 trillionDollars. World foreign trade volume increased by 1.9 times during the 2001-2011 period. This increase occurred to be 1.3 times for developed economies, 1.4 times for EU 27 states, and 3.5 times for developing economies. As a member of this developing countries group, Turkey displayed a performance beyond that of this group and increased its foreign trade volume by 4.1 times (Table100). Generally, the shares of developing countries within worldwide foreign trade are on the rise, while the shares of developed economies and EU 27 member states are on the decline (Figure 67).

Table 99:
GDP and Merchandise
Trade Change throughout the
World by Region, 2009-2011, (%)

	GDP			Import			Export		
	2009	2010	2011	2009	2010	2011	2009	2010	2011
World	-2,6	3,8	2,4	-12,0	13,8	5,0	-12,9	13,7	4,9
North America	-3,6	3,2	1,9	-14,8	14,9	6,2	-16,6	15,7	4,7
USA	-3,5	3,0	1,7	-14,0	15,4	7,2	-16,4	14,8	3,7
South and Central America ^a	-0,3	6,1	4,5	-8,1	5,6	5,3	-16,5	22,9	10,4
Europe	-4,1	2,2	1,7	-14,1	10,9	5,0	-14,1	9,7	2,4
European Union (27)	-4,3	2,1	1,5	-14,5	11,5	5,2	-14,1	9,5	2,0
Commonwealth of Independent States (CIS)	-6,9	4,7	4,6	-4,8	6,0	1,8	-28,0	18,6	16,7
Africa	2,2	4,6	2,3	-3,7	3,0	-8,3	-5,1	7,3	5,0
Middle East	1,0	4,5	4,9	-4,6	6,5	5,4	-7,7	7,5	5,3
Asia	-0,1	6,4	3,5	-11,4	22,7	6,6	-7,7	18,2	6,4
China	9,2	10,4	9,2	-10,5	28,4	9,3	2,9	22,1	9,7
Japan	-6,3	4,0	-0,5	-24,9	27,5	-0,5	-12,2	10,1	1,9
Croatia	6,8	10,1	7,8	-6,0	22,0	16,1	3,6	22,7	6,6
Newly Industrialised Economies (4) ^b	-0,6	8,0	4,2	-5,7	20,9	6,0	-11,4	17,9	2,0
Developed Economies	-4,1	2,9	1,5	-15,1	13,0	4,7	-14,4	10,9	2,8
Developing and CIS	2,2	7,2	5,7	-7,4	14,9	5,4	-10,5	18,1	7,9

^a Including Caribbean Islands

^b Hong Kong, China; South Korea; Singapore; Taiwan

Source:WTO, 2012b

Figure 67:
Shares Received by Different Groups of Countries and Turkey within Worldwide
Overall Foreign Trade, 2001-2011, (%)

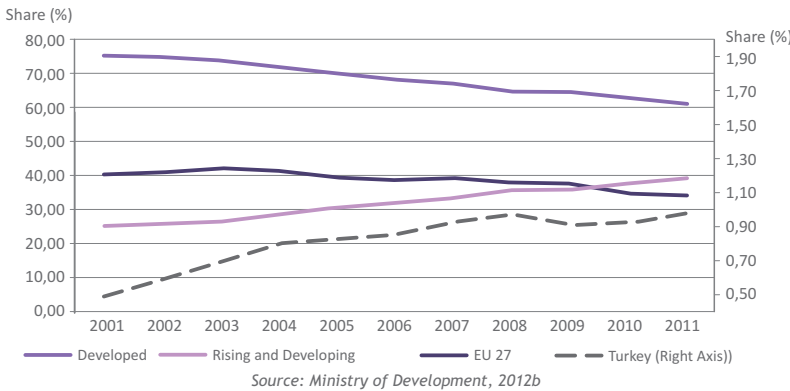


Table 100:
Foreign Trade Volumes of Certain Economies and Turkey and Their Shares within Worldwide
Foreign Trade 2001-2011, (%), (billion Dollars)

Year	Context	Developed Economies	Rising and Developing Economies	EU 27 States	World	Turkey
2001	Size	9.405	3.123	5.019	12.527	73
	Share (%)	75,07	24,93	40,06	100	0,58
2002	Size	9.710	3.310	5.310	13.020	88
	Share (%)	74,58	25,42	40,78	100	0,67
2003	Size	11.170	4.001	6.363	15.171	117
	Share (%)	73,63	26,37	41,94	100	0,77
2004	Size	13.304	5.230	7.617	18.535	161
	Share (%)	71,78	28,22	41,10	100	0,87
2005	Size	14.725	6.458	8.287	21.183	190
	Share (%)	69,51	30,49	39,12	100	0,90
2006	Size	16.660	7.823	9.422	24.483	225
	Share (%)	68,05	31,95	38,48	100	0,92
2007	Size	18.773	9.315	10.961	28.088	277
	Share (%)	66,84	33,16	39,02	100	0,99
2008	Size	20.901	11.545	12.225	32.446	334
	Share (%)	64,42	35,58	37,68	100	1,03
2009	Size	16.098	8.914	9.344	25.012	243
	Share (%)	64,36	35,64	37,36	100	0,97
2010	Size	19.023	11.424	10.524	30.447	299
	Share (%)	62,48	37,52	34,57	100	0,98
2011	Size	22.130	14.178	12.294	36.308	376
	Share (%)	60,95	39,05	33,86	100	1,03

Source:Ministry of Development, 2012b

The share of Turkey within the trade volume of developing countries rose from 2.3% in the year 2001 to 2.65% in the year 2011.

İzmir is an important export portal of Turkey. Transportation opportunities and the presence of İzmir Port enable both province and Turkey production to open up to international markets.

suitable for production and export of many products with competitive advantage. On the contrary, a province with low diversity value produces few different products subject to export. In this respect, İzmir takes the second place following İstanbul regarding diversity performance for products subject to export with 193 different products. Diversity average for competitively exported products of 76 provinces is 40 (DTM, 2011).

Table 101:
İzmir Foreign Trade Potential

Indicator	Year of Analysis	Unit	İzmir Specific Determination
Medium and advanced technology product export	2010	Million Dollars	5th place with a value of 1,597 million \$ following İstanbul, Bursa, Kocaeli and Ankara
'Diversity' of export goods	2009	Number of products	2nd place with 193 products following İstanbul.
"Commonness" of export goods	2009	Number of products	5th province with the lowest commonness following İstanbul, Rize, Sakarya and Ankara.
Qualified leaping capability	2009	Degree	Second province with the highest leaping capability following İstanbul. Leaping capability 14.5.
Technological distribution of export	2000, 2005, 2010	Percentage	As of the year 2010, Low Technology comes up at the first place with a value of 43%. Medium Technology has a share of 31.6%, Export Based on Natural Resource has a share of 24% and High Technology has a share of 1.4%.
Sophistication in export	-		29th place with a value of 9.8
Similar provinces in Turkey	-		Ankara and İstanbul

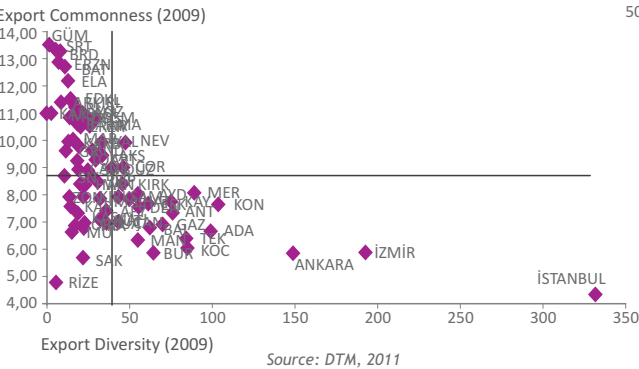
Source:Compiled from DTM 2011 data.

On the other hand, a high commonness value indicates that the products produced and exported in a competitive manner are common. The determinant for whether or not a product is ordinary is based on how many provinces possess the same product in their export baskets. Export products included in the export basket of many provinces are assumed as common products. Commonness value being low shows that there is a certain competition advantage regarding export of special/rare products. İzmir is the fifth province with the lowest commonness value following İstanbul, Rize, Sakarya and Ankara. Qualified

(DTM, 2011).

When the provinces' diversity and commonness values are examined together, it is observed that İzmir resides in the zone with high export diversity and low commonness, among provinces that export high diversity goods not found commonly (Figure 68). Within the context of policies to be issued towards increasing the export power of Turkey, diversity of export products should be increased, innovation capacity should be improved and thus transition to rare goods' production should be actualised (DTM, 2011).

Figure 68: Provinces by Export Commonness and Diversity, 2009



Qualified leaping displays a region's or country's capability to export more qualified products with its existing industrial structure. İzmir is the second province with the highest leaping capability following İstanbul. According to this, İzmir has extensive production capabilities for transition to different and highly qualified products. Provinces with high export sophistication export products that are included in the export packages of developed countries. A low sophistication value is the indicator that export products are devoid of complexity. After transitioning to different and highly qualified products, the export sophistication and technology level of İzmir are expected to increase (DTM, 2011).

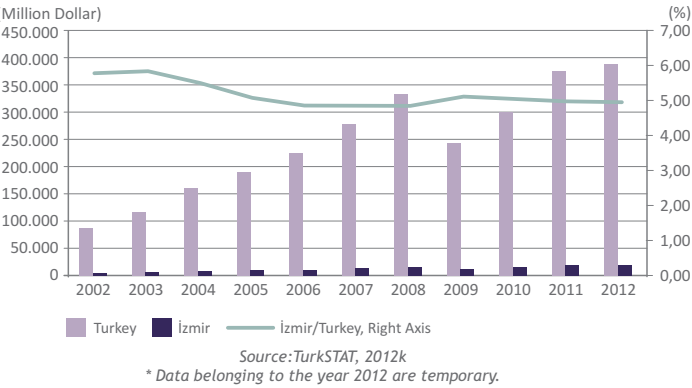
⁹⁷ There are a total of 12 exporter unions functioning under the umbrella organisation Aegean Exporters Union which has an important place within the export of Aegean Region (also covering İzmir) and Turkey. The primary fields of activity for these unions include; dried fruits and related products, livestock, aquaculture and related products, olive and olive oil, grains, legumes and oily seeds, wood products and forestry products, fresh fruits and vegetables, tobacco, textile and related raw materials, garment and ready-made clothing, leather and leather products, mining, iron and non-iron metals.

The number of exporter companies that was 3,694 as of the year 2010 in İzmir increased to 4,023 in the year 2011 and 4,60 in the year 2012⁹⁷ (İZKA and Development Bank, 2012). As of the year 2012, export per capita occurred to be 2,162 Dollars, and import per capita occurred to be 2,641Dollars in İzmir province, while export per capita occurred to be 2,017 Dollars, and import per capita occurred to be 3,128 Dollars throughout Turkey.

Foreign Trade Volume

During 2002-2012 period, foreign trade volume in İzmir increased by a factor of 2.8, while Aegean Region trade volume displayed an increase of 3.8 times and Turkey trade volume displayed an increase of 3.4 times in the same period. In result of these developments, the share

Figure 69: Development of Foreign Trade Volume and the Share of İzmir, 2002-2012, (%), million Dollars



of İzmir within overall Turkey foreign trade that was 5.8% in year 2002 declined to 4.9% as of year 2012. Similarly, the share of İzmir within Aegean Region foreign trade volume that occurred to be 71.3% in the year 2002 declined to 56% as of the year 2012 (Table 102) (Figure 69) (TurkSTAT, 2012k).

The foreign trade balance of İzmir that had displayed 489 million Dollars surplus in the year 2002 has begun to display deficit since the year 2004, which reached its peak value of 2.5 billion Dollars as of the year 2011. Foreign trade deficit of İzmir declined in the year 2012 to rest at 1.9 billion Dollars

When the export import coverage ratio is examined, it is observed that the coverage ratio that had been 121% in the year 2002 declined to 76% as of the year 2011 and rose back to 82% as of the year 2012. .

Table 102: Foreign Trade Volume and Foreign Trade Balance, 2002-2012, million Dollar

Years	Turkey		Aegean Region		İzmir	
	Foreign Trade Volume	Foreign Trade Balance	Foreign Trade Volume	Foreign Trade Balance	Foreign Trade Volume	Foreign Trade Balance
2002	87.613	-15.495	7.109	1.113	5.066	489
2003	116.593	-22.087	9.441	944	6.781	167
2004	160.707	-34.373	12.229	619	8.804	-583
2005	190.251	-43.298	13.791	870	9.632	-341
2006	225.111	-54.041	15.978	1.151	10.908	-10
2007	277.334	-62.791	19.887	842	13.465	-603
2008	333.991	-69.936	23.559	1.022	16.136	-490
2009	243.071	-38.786	18.134	1.153	12.387	-149
2010	299.428	-71.661	27.242	-298	15.102	-1.737
2011	375.749	-105.935	33.776	-956	18.693	-2.549
2012*	389.098	-83.976	34.323	-165	19.240	-1.914

Source: TurkSTAT, 2012k
*Data belonging to the year 2012 are temporary.

Coverage ratio throughout Turkey occurred to be 64% in the year 2012, while the same value was 99% in the Aegean Region in the same period (Figure 70) (TurkSTAT, 2012k). Decline of the export import coverage ratio increased the foreign trade deficit and limited the positive contribution of İzmir on the current deficit of Turkey.

Figure 70: Development of Export Import Coverage Ratio, 2002-2012



Source: TurkSTAT, 2012k
*Data belonging to the year 2012 are temporary.

It strikes attention that İzmir, which has been a net importer during the 2005-2011 period, occurred to be net exporter in the agriculture and forestry and mining sectors. In this period, mining sector consolidated its net exporter status, while agriculture and forestry sector experienced an export import coverage ratio decline from 234% to 120%. In manufacturing industry that is a foreign trade net importer on the other hand, export import coverage ratios recovered during the 2008-2009 period only to decline again after the crisis to below 80% levels (Table 103).

Table 103: Export Import Coverage Ratio of Prominent Sectors in İzmir, 2005-2011

Years	Agriculture and Forestry	Mining and Quarrying	Manufacturing	Wholesale and Retail Trade	Total
2005	234	173	90	9	93,2
2006	254	121	95	27	99,8
2007	199	133	93	12	91,5
2008	142	157	103	7	94,2
2009	186	194	98	12	97,6
2010	151	217	81	9	79,4
2011	120	213	79	9	76,1

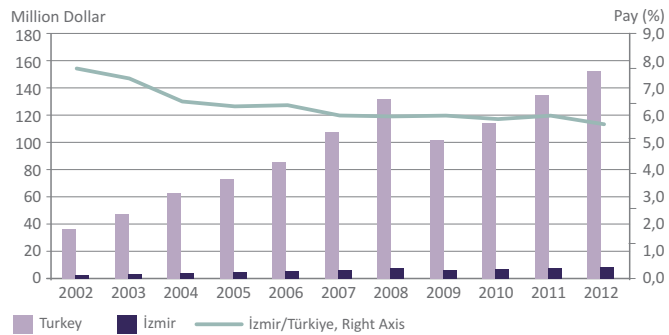
Source: TurkSTAT, 2012k



Export

In the year 2012, Turkey's overall export occurred to be 152.5billion Dollars, while the export values of Aegean Region and İzmir occurred to be 17 billion Dollars and 8.6 billion Dollars respectively in the same year (Table 104).

Figure 71:
Development of Export and İzmir's Contribution in Export,
2002-2012, (%), million Dollar



Source: TurkSTAT, 2012k
* Data belonging to the year 2012 are temporary.

During the 2002-2012 period, the overall export of Turkey increased by 3.2 times, while the export of Aegean Region increased by 3.1 times and the export of İzmir increased by 2.1 times. Receiving a 67.6% share from Aegean Region export and 7.7% share from Turkey overall export in the year 2002, İzmir province could not maintain these levels and had 50.7% and 5.7% shares respectively as of the year 2012 (Figure 71).

Table 106:
Distribution of İzmir Export by Countries, 2009-2012, thousand Dollars

Country	2009	2010	2011	2012*	2011 Pay (%)	2012 Pay (%)*
Germany	727.115	839.796	1.010.124	926.905	12,5	10,7
England	312.544	411.73	502.584	533.277	6,2	6,2
Spain	304.673	336.354	419.54	412.624	5,2	4,8
USA	432.924	381.102	399.728	477.807	5	5,5
Italy	389.861	382.541	378.212	397.299	4,7	4,6
France	286.439	323.927	373.296	335.009	4,6	3,9
Netherlands	228.973	270.738	301.003	392.595	3,7	4,5
Belgium	167.113	222.477	230.451	211.982	2,9	2,4
UAE	152.176	84.707	208.04	102.252	2,6	1,2
China	100.705	137.848	159.363	205.793	2	2,4
Other Countries	2.835.755	3.113.609	3.856.934	4.414.760	47,8	51,0
Ege Free Zone	130.918	142.02	191.019	206.858	2,4	2,4
İzmir Free Zone	19.289	10.257	10.296	16.576	0,1	0,2
Other Free Zones	30.244	22.513	30.314	29.797	0,4	0,3
Total	6.118.729	6.679.619	8.070.904	8.663.535	100	100

Source: TurkSTAT, 2012k
* Data belonging to the year 2012 are temporary.

Tablo 104:
Development of Export and İzmir's Share in Overall Export
2002-2012, million Dollar

Years	Turkey	Aegean Region	İzmir	İzmir/Aegean Region (%)	İzmir/Turkey (%)
2002	36.059	4.111	2.778	67,6	7,7
2003	47.253	5.193	3.474	66,9	7,4
2004	63.167	6.424	4.110	64,0	6,5
2005	73.476	7.330	4.645	63,4	6,3
2006	85.535	8.565	5.449	63,6	6,4
2007	107.272	10.365	6.431	62,0	6,0
2008	132.027	12.290	7.823	63,7	5,9
2009	102.143	9.644	6.119	63,4	6,0
2010	113.883	13.472	6.682	49,6	5,9
2011	134.907	16.410	8.072	49,2	6,0
2012*	152.561	17.079	8.663	50,7	5,7

Source: TurkSTAT, 2012k
* Data belonging to the year 2012 are temporary.

Table 105:
Sectoral Distribution of İzmir Export, 2005-2011, %, thousand Dollars

Years	Agriculture and Forestry		Mining and Quarrying		Manufacturing		Wholesale and Retail Trade		Total Export
	Export	%	Export	%	Export	%	Export	%	
2005	579.324	12,5	64.625	1,4	3.967.809	85,4	22.925	0,5	4.645.361
2006	670.441	12,3	60.406	1,1	4.634.932	85,1	66.872	1,2	5.448.556
2007	668.710	10,4	87.297	1,4	5.583.105	86,8	71.386	1,1	6.430.999
2008	648.093	8,3	113.356	1,4	6.961.438	89,0	75.122	1,0	7.823.311
2009	703.301	11,5	98.235	1,6	5.226.753	85,4	62.263	1,0	6.118.710
2010	731.935	11,0	146.392	2,2	5.719.449	85,6	67.273	1,0	6.682.429
2011	679.626	8,4	162.516	2,0	7.124.924	88,3	85.506	1,1	8.071.538

Source: TurkSTAT, 2012k

When the export of İzmir province is examined based on the prominent sectors of the province, it is observed that the highest export share belongs to manufacturing industry sector. The share received by manufacturing industry from overall export during the 2005-2011 period varied between 85% and 88%, while the shares of runner up agriculture and forestry sector varied between 8% and 12% (Table 105).

İzmir province has foreign trade relations with approximately 200 countries in recent years. Distribution of İzmir provincial export by countries reveals that the highest share of export was made to Germany (10.7%), followed by England (6.2%), USA (5.5%) and Spain (4.8%). Other major markets of İzmir export are Italy, France, Netherlands, Belgium, United Arab Emirates and China. Export made to Ege Free Zone and İzmir Free Zone correspond to 2.6% of overall İzmir export (Table 106).

Import

As of the year 2012, Turkey's overall import was 236.5 billion Dollars, while the import of Aegean Region occurred to be 17.2 billion Dollars and the import of İzmir occurred to be 10.5 billion Dollars in the same period (Table 107).

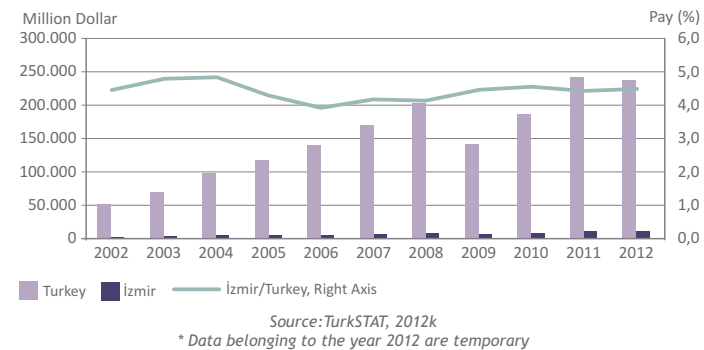
Table 107:
Development of Import for Turkey, Aegean Region and İzmir,
2002-2012, million Dollars

Year	Turkey	Aegean Region	İzmir	İzmir/Aegean Region (%)	İzmir/Turkey (%)
2002	51.554	2.998	2.288	76,3	4,4
2003	69.340	4.249	3.307	77,8	4,8
2004	97.540	5.805	4.694	80,9	4,8
2005	116.774	6.461	4.986	77,2	4,3
2006	139.576	7.413	5.459	73,6	3,9
2007	170.063	9.522	7.034	73,9	4,1
2008	201.964	11.268	8.313	73,8	4,1
2009	140.928	8.490	6.268	73,8	4,4
2010	185.544	13.770	8.419	61,1	4,5
2011	240.842	17.366	10.621	61,2	4,4
2012*	236.537	17.244	10.577	61,3	4,5

Source: TurkSTAT, 2012k
* Data belonging to the year 2012 are temporary.

During the 2002-2012 period, the overall import of Turkey increased by 3.5 times, while the import of Aegean Region increased by 4.6 times and the import of İzmir increased by 3.6 times. İzmir province generated 76.3% of Aegean Region import and 4.4% of Turkey overall import in the year 2002, while these values changed to 61.3% and 4.5% respectively as of the year 2012 (Figure 72).

Figure 72:
Development of Import and İzmir's Contribution in Import,
2002-2012, (%), million Dollar



Similar to export, the highest sectoral contribution (primary sectors) within İzmir import belongs to manufacturing industry sector. The share received by manufacturing industry from overall import varied between 81% and 90% between the years 2005 and 2011, while the share of runner up wholesale and retail trade sector occurred to be between 4.5% and 12.2% (Table 108).

Table 108:
Sectoral Distribution of İzmir Import, 2005-2011, thousand Dollars

Years	Agriculture and Forestry		Mining and Quarrying		Manufacturing		Wholesale and Retail Trade		Total Import
	Import	%	Import	%	Import	%	Import	%	
2005	247.132	5,0	37.424	0,8	4.431.400	88,9	268.487	5,4	4.985.969
2006	263.829	4,8	49.816	0,9	4.898.771	89,7	243.691	4,5	5.458.262
2007	336.375	4,8	65.560	0,9	6.034.294	85,9	586.085	8,3	7.025.034
2008	455.180	5,5	72.128	0,9	6.755.981	81,4	1.015.466	12,2	8.300.862
2009	378.788	6,0	50.686	0,8	5.321.362	84,9	515.060	8,2	6.266.636
2010	485.626	5,8	67.427	0,8	7.078.907	84,1	776.169	9,2	8.412.842
2011	567.045	5,3	76.444	0,7	9.026.887	85,1	929.249	8,8	10.608.911

Source: TurkSTAT, 2012k



When the distribution of İzmir import by countries is examined, it is observed that the highest import share belonged to Russia with a 11.3% share, followed by Germany with 10.5% share, China with 8.5% share and USA with 5.7% share. Italy, Spain, FranceandUkraine are other major countries from which import goods are purchased.Import made from Ege Free Zoneand İzmir Free Zone constitutes only a small portion of overall İzmir import with a value of 1.3% (Table 109).

Table 109:
Distribution of İzmir Import by Countries, 2009-2012, thousand Dollars

Country	2009	2010	2011	2012*	2011 Pay (%)	2012 Pay (%)*
Germany	802.205	904.381	1.192.249	1.111.692	11,2	10,5
China	355.375	565.909	860.792	895.670	8,1	8,5
Russia Federation	859.544	611.39	760.796	1.197.541	7,2	11,3
USA	541.241	612.306	631.251	604.210	5,9	5,7
Italy	412.066	532.556	581.108	557.761	5,5	5,3
Spain	215.406	489.618	397.559	397.545	3,7	3,8
France	245.398	270.185	328.039	311.191	3,1	2,9
Ukraine	141.726	177.431	314.574	202.540	3	1,9
Bulgaria	70.848	148.211	294.47	299.391	2,8	2,8
Poland	101.918	194.129	263.309	215.861	2,5	2,0
Greece	31.693	109.531	240.405	175.753	2,3	1,7
Netherlands	170.869	195.798	230.305	277.179	2,2	2,6
England	214.32	200.513	209.01	221.871	2	2,1
Other Countries	2.003.407	3.277.939	4.166.979	3.936.917	39,2	37,2
Ege Free Zone	45.259	50.263	72.053	91.057	0,7	0,9
İzmir Free Zone	48.469	55.292	50.006	43.997	0,5	0,4
Other Free Zones	8.305	21.953	26.045	36.528	0,2	0,3
Total	6.268.049	8.417.405	10.618.950	10.576.704	100	100

Source:TurkSTAT, 2012k
* Data belonging to the year 2012 are temporary.

Technology Level in Foreign Trade

When the foreign trade of İzmir manufacturing industry is analysed based on the technology level classification of OECD⁹⁸ (İZKA and Development Bank, 2012); it is observed that a transition from low level technology to

Table 110:
Development of İzmir Manufacturing Industry Export by Technology Level

Technology Level	2002	2007	2008	2009	2010	2011
High Technology	0,9	0,8	0,8	1,2	1,3	1,2
Medium-High Technology	20,2	28,0	28,3	27,9	32,4	33,2
Medium-Low Technology	18,0	26,4	32,5	26,0	25,1	27,8
Low Technology	61,0	44,8	38,4	44,9	41,2	37,8

Source: İZKA and Development Bank, 2012

medium level technology has been occurring in the export of İzmir during the 2002-2011 period. The share of “Low Technology” products within export, which was 61% in the year 2002,declined through years to rest at 37.8% as of the year 2011. In the same period, the share of “Medium-High Technology” products increased from 20.2% to 33.3%, and the share of “Medium-Low Technology” products increased from 18% to 27.8%. The share of High Technology products within provincial export remained around 1% average value (Table 110).

The share of high technology products within İzmir manufacturing industry import remains limited (similar to export) to around 3% (Table111). The highest share in import goes to “Medium-High Technology” products with 49.4%, followed by “Medium-Low Technology” products with 29.3%.

Table 111:
Development of İzmir Manufacturing Industry Import by Technology Level

Technology Level	2002	2007	2008	2009	2010	2011
High Technology	4,1	3,5	4,3	3,2	3	3
Medium-High Technology	46,4	47,5	44,3	42,1	48,4	49,4
Medium-Low Technology	23	28,9	30,6	33,3	28,7	29,3
Low Technology	26,6	20	20,9	21,3	19,9	18,4

Source: İZKA and Development Bank, 2012

During the 2002-2011 period, the share of Medium-High Technology and Medium-Low Technology products within import displayed increase, while the share of Low Technology products within import declined. As was the case with export, certain advancement may be discerned in import regarding technological level. However, the share of high and medium-high technology products in export is 34%, while the same ratio occurs to be 52% in import, which points out that the province imports more high technology products than it exports.

3.d.3. Tourism Sector

3.d.3.a. Global Tourism Sector

Although varies from time to time, tourism sector usually resides within the top three major sectors throughout the world. The sector experienced a rapid development particularly in the last 50 years. International tourist movements amounted to 25 million people in the year 1950, while it reached 983 million people as of the year 2011 (Table 112).

Table 112:
Development of International Tourism Movements throughout the Years, 1950-2011

Years	# of Tourists (million people)	Tourism Income (billion Dollars)
1950	25	2
1960	69	7
1970	166	18
1980	278	104
1990	438	270
1995	539	411
1998	617	451
2000	687	482
2002	706	488
2003	693	535
2004	764	635
2005	807	683
2006	846	735
2007	903	856
2008	924	941
2009	883	853
2010	940	927
2011	983	1.030

Source: UNWTO, 2012a

International tourism revenues occurred to be an average of 927 billion Dollars as of the year

2010, which rose by 3.8% until the year 2011 to rest at 1.03 trillion Dollars (740 billion Euro). In terms of global tourism trends; 503 million of the international tourists went to European countries in the year 2011, while the tourists' preference between developed and developing countries occurred to be 523 million and 457 million respectively after the gap between the two countries group narrowed. Number of tourists increased in 125countries, and declined in 25 countries out of 150.

Estimates point towards continuation of the dynamism in tourism sector. Table 113 illustrates the number of tourists throughout the world between the years 1950 and 2010,

Tablo 113:
Number of Tourists throughout the World, million people

Regions	2000		2008		2009		2010		2020 (estimate)	
	People	%	People	%	People	%	People	%	People	%
Europe	386	57	481	53	457	52	472	50	717	46
Asia and Pacific	110	16	184	20	181	21	204	22	397	26
America	128	19	148	16	141	16	151	16	282	18
Africa	27	4	44	5	46	5	49	5	77	5
Middle East	25	4	56	6	53	6	60	6	69	4
World	675	100	913	100	877	100	935	100	1.542	100

Source: UNWTO, 2012b

together with year 2020 estimates. According to the World Tourism Organisation (UNWTO), it is expected that the number of tourists visiting abroad countries will increase by 43 million each year and rest at approximately 1.8 billion tourists as of the year 2030 (İZKA and YÜ, 2012).

It is expected that Turkey will receive 63 million tourists and 86 billion Dollars international tourism income and approximately 1,350 Dollars expenditure per tourists as of the year 2023 with the condition that actions to be carried out within the framework of strategic approaches indicated under 2023 Turkey Tourism Strategy are completed and the infrastructure and accommodation demands within the regions subject to development are satisfied (Ministry of Culture and Tourism, 2007).

Table 114:
Countries with the Highest Tourism Income in the Year 2011

Rank	Country	2011 Income (billion Dollars)	2010-2011 Change(%)	Rank	Country	2011 Income (billion Dollars)	2010-2011 Change(%)
1	USA	116.3	12.3	9	Macao (China) ⁹⁹		
2	Spain	59.9	8.6	10	Hong Kong (China)	27.2	22.7
3	France	53.8	10.1	11	Thailand	26.3	26.0
4	China	48.5	5.8	12	Turkey	23.0	10.6
5	Italy	43.0	5.5	13	Austria	19.9	1.7
6	Germany	38.8	6.7	14	Malaysia	18.3	-5.1
7	England	35.9	6.9	15	Singapore	18.0	17.4
8	Australia	31.4	-6.2				

Source: UNWTO, 2012c

⁹⁸ OECD Directorate For Science, Technology and Industry, STAN Indicators (2005 edition) 1980-2003, p. 25

⁹⁹ Although no information was provided for Macao (China) within UNWTO data, it was indicated to be ranked at the 9th place.

Although tourism sector is one of the primary sectors in almost all countries throughout the world, it is the locomotive sector for some countries. USA came foremost among countries with the highest tourism income with a revenue of 116.3 billion Dollars in the year 2011, followed by Spain with a revenue of 59.9 billion Dollars. Turkey took the 12th place with a revenue of 23 billion Dollars (Table 114).

When the countries with the highest tourism income and the cities attracting the highest number of tourists in the year 2011 are considered together, it is observed that Paris occurred to be the city attracting the highest number of visitors (15.6 million tourists), while France was ranked at the 3rd place in regards to tourism income. Similarly, Antalya was the 3rd city with 10 million visitors and İstanbul was the 9th city with 8 million visitors, Turkey occurred to be at the 12th place among the countries that generate the highest tourism income (Table 114, Table 115).

Table 115:
Cities Attracting the Highest Number of Visitors, 2011, millionpeople

Rank	City	Country	# of Visitors
1	Paris	France	15.63
2	London	England	15.24
3	Antalya	Turkey	10.55
4	New York City	USA	10.36
5	Singapore	Singapore	9.27
6	Kuala Lumpur	Malaysia	9.08
7	Hong Kong	Hong Kong (China)	8.79
8	Dubai	United Arab Emirates	8.110
9	İstanbul	Turkey	8.111
10	Bangkok	Thailand	7.212

Source: London Culture and Promotion Consultancy Department, 2012

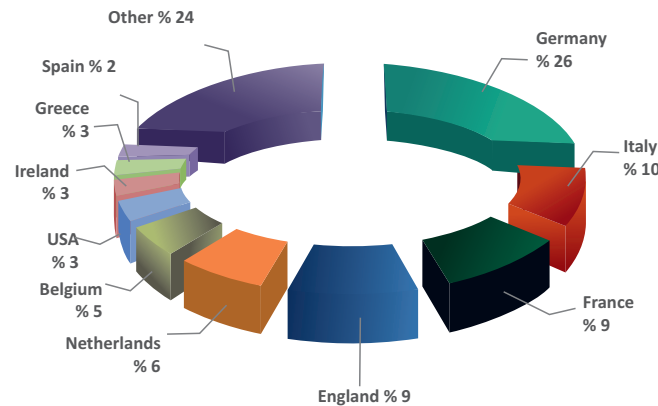
3.d.3.b. Touristic Demand Profile in İzmir Province

İzmir has been displaying a rapid development in tourism sector during the recent years. Especially with the development in cruise tourism, significant increases were recorded in the number of foreign tourists. The number of foreign tourists increased by 18.5% in the year 2011 compared to the previous year. İzmir comes up as the fourth province that is most preferred by foreign tourists visiting Turkey, following Antalya, İstanbul and Muğla. Although four out of the top five cities experienced declines in the year 2012

compared to the previous year, İstanbul managed to significantly increase the number of visitors (Table 116).

Regarding the distribution of foreign tourists visiting İzmir by their country of origin, the first four places are observed to be taken up by Germany, Italy, France and England (Figure 73).

Figure 73: Distribution of Foreign Tourists Visiting İzmir by Their Country of Origin, 2012



When the distribution of foreign tourists by their country of origin is examined for the 2010-2012 period, it is observed that the number of tourists from the top three

Figure 74:
Change of the Number of Tourists Visiting İzmir throughout the Years, 2010-2012

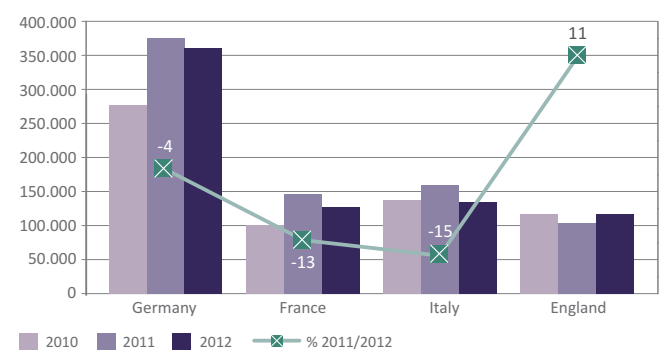


Table 116:
Distribution of Foreign Tourists within Major Touristic Destinations of Turkey, 2011-2012

Province	2011	Ratio (%)	2012*	Ratio (%)*	2011/2012 Change
Antalya	10,464,425	33.27	10,298,769	32.4	-1.58
İstanbul	8,056,390	25.61	9,383,054	29.52	16.47
Muğla	3,076,508	9.78	2,986,629	9.4	-2.92
İzmir	1,370,018	4.36	1,368,251	4.31	-0.13
Aydın	689,131	2.19	592,637	1.86	-14
Other	7,799,604	24.8	7,153,492	22.51	-8.28
Total	31,456,076	100	31,782,832	100	1.04

Source: TYD, 2012

* Data belonging to the year 2012 are temporary.

countries, namely Germany, France and Italy rose while the number of tourists from England declined the year 2011. On the other hand, year 2012 displayed opposite changes; decrease of tourists from the three countries but increase from England (Figure 74).

The top three places did not change during this period; the first place was taken up by Germany, second place by Italy, while the third place was shared by France and England. The share of tourists coming to visit İzmir from Germany within the overall number of tourists occurred to be 26% in the year 2012, almost 2.5 times of the share of the second country in this list, Italy (10%). Thus, it is observed that foreign tourists visiting İzmir dominantly comes from Germany. In the year 2012, the number of local (national) tourists visiting İzmir occurred to be 496,175 (26.6%), almost equalling the tourist ratio emerging from Germany.

Average stay period of foreign tourists visiting İzmir occurred to be 3.8 nights as of the year 2010. 23.3% of the

Tablo 117:
Distribution of Foreign Tourists Visiting İzmir by Their Countries, 2010-2012

Country	2010	2011	2012	2010/2012 Change (%)
Germany	276.155	374.237	359.687	30,25
Italy	138.903	161.320	137.266	-1,18
France	100.248	147.179	128.199	27,88
England	117.666	106.359	117.736	0,06
Netherlands	77.439	82.735	85.696	10,66
Belgium	58.842	60.553	63.736	8,32
USA	35.746	36.350	47.003	31,49
Ireland	32.964	40.129	37.477	13,69
Greece	34.553	41.066	36.069	4,39
Spain	35.153	45.758	32.056	-8,81
Poland	18.335	26.469	31.554	72,10
Austria	21.491	29.504	29.196	35,85
Switzerland	19.039	24.175	24.334	27,81
Iran	31.716	26.369	23.504	-25,89
Sweden	14.245	16.554	23.106	62,20
Russia Fed.	13.825	14.093	21.087	52,53
Belarus	19.613	18.164	17.589	-10,32
T.R.N.C.	14.610	15.140	15.351	5,07
Norway	13.964	13.554	13.089	-6,27
Canada	9.144	10.045	12.601	37,81
Denmark	11.094	11.690	12.320	11,05
Australia	3.857	6.386	9.186	138,16
S. Korea	9.144	6.256	5.289	-42,16
Finland	4.551	4.871	4.996	9,78
Czech Rep.	1.682	4.746	4.887	190,55
Brazil	1.916	4.234	4.042	110,96

occupancy rate of the accommodation facilities in İzmir belongs to foreign tourists (İZKA and YÜ, 2012). The months when İzmir receives the highest number of tourists are June, July, August and September. The distribution of foreign tourists coming to İzmir from abroad by all countries is illustrated at the table below (Table 117).

3.d.3.b.1. Demographic Characteristics of Tourists

Bringing better living quality for İzmir may be possible by increasing the region's share received from tourism and investments, and design and management of individual perceptions without leaving it to coincidences. For the purposes of systematise promotion activities by determining target groups and strategic priorities,

Portugal	3.792	3.562	4.004	5,59
Japan	3.168	3.607	3.701	16,82
Azerbaijan	313	5.598	3.528	1027,16
S. Cyprus Greek Adm.	961	2.161	3.412	255,05
Bulgaria	1.799	3.142	3.289	82,82
Argentina	1.409	2.701	2.761	95,95
Slovakia	877	1.188	2.745	213,00
Ukraine	2.714	3.305	2.340	-13,78
Mexico	1.609	2.103	2.326	44,56
Romania	1.113	2.175	2.151	93,26
Croatia	1.618	2.053	2.001	23,67
Slovenia	1.684	1.968	1.881	11,70
Hungary	1.154	1.641	1.843	59,71
Philippines	1.112	1.268	1.732	55,76
South Africa	731	975	1.624	122,16
Morocco	858	821	1.482	72,73
Lebanon	390	477	1.406	260,51
China	784	1.200	1.375	75,38
Macedonia	270	871	1.280	374,07
New Zealand	805	1.018	1.276	58,51
Luxemburg	530	919	1.205	127,36
Chile	484	738	1.117	130,79
Lithuania	713	826	969	35,90
Tunis	614	485	961	56,51
Colombia	321	497	959	198,75
India	536	626	954	77,99
Israel	289	421	869	200,69
Bosnia Herzegovina	474	491	845	78,27
Albany	408	788	757	85,54
Syria	1.064	835	754	-29,14
Venezuela	461	676	733	59,00
Malaysia	224	238	641	186,16
Malta	320	483	639	99,69
Libya	42	489	607	1345,24

Source: İzmir Provincial Directorate of Culture and Tourism, 2012

ensuring coordination, creating synergy among all relevant parties and form a brand city strategic plan for İzmir, the Urban Marketing Strategy was issued in the year 2010.¹⁰⁰

In this regard, also the demographic structures and country breakdowns of tourists visiting İzmir were also analysed. It was determined that the main target group comprise of domestic and foreign tourists between 25-55 years of age, belonging to medium/high income group and caring for travelling. Foreign tourists are comprised mostly of European couples or families, while domestic tourists are comprised mostly of individuals and families coming from Istanbul and Ankara with high levels of income.

According to the year 2009 data of the Ministry of Culture and Tourism, the breakdown of the tourists that visited Turkey and İzmir based on their country of origin reveals that the number of tourists visiting İzmir is only 5% of the number of overall tourists visiting Turkey. It is observed that rather European tourists visit İzmir, and the share of the top 5 countries (Germany, Italy, France, England and Netherlands) in this regard constitute approximately 80% of all tourists visiting İzmir.

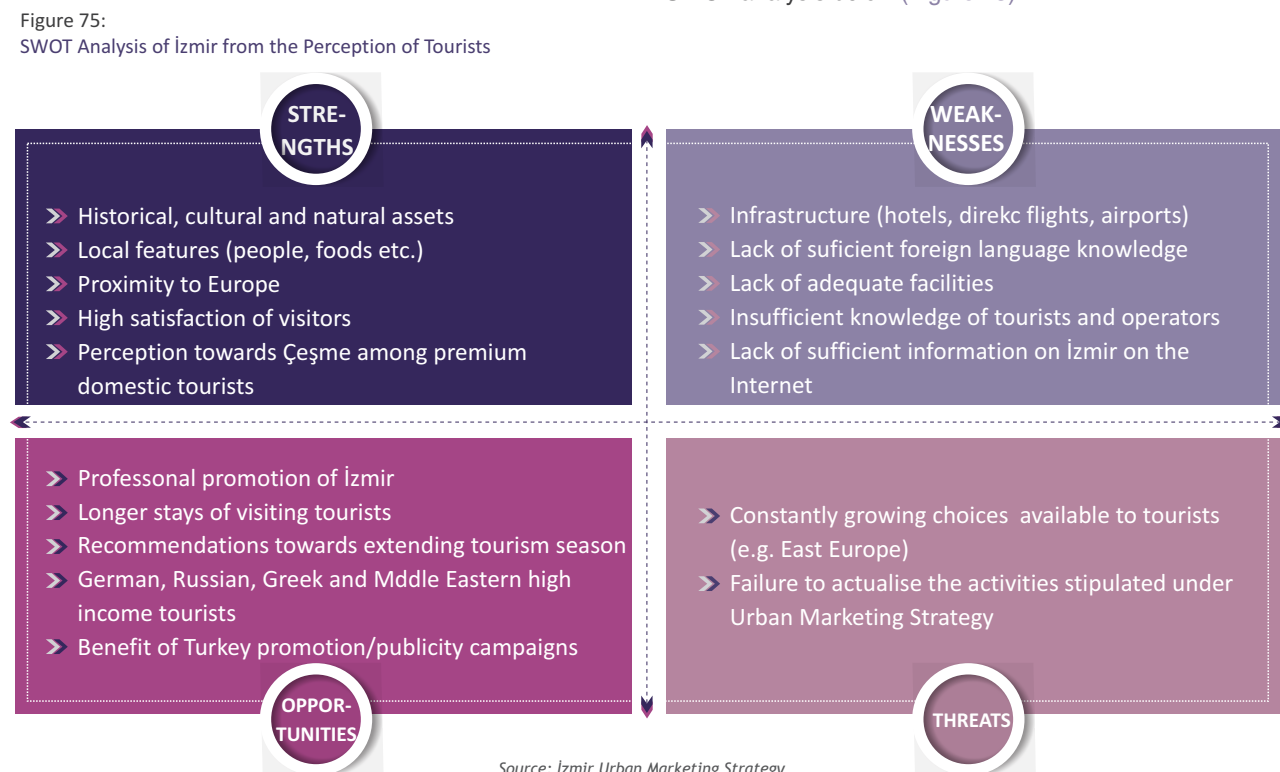
The province attracts tourists from Italy, Belgium, France and Netherlands considerably higher than Turkey average (5%). However, İzmir fails to attract enough tourists from Germany,

Russia and Middle East countries that send considerable number of tourists to Turkey. It is possible to add Greece to this list, considering the historical and cultural proximity.

Within the context of urban marketing strategy, a survey on perception and recognition of İzmir has been conducted in İzmir and 17 other provinces of Turkey along with 10 cities in Europe, USA and Middle East. According to the summary information obtained in result of this study; although İzmir employs features from tourism to history and from its industry to its citizens that are important regarding all target groups, none of its features comes prominent as to be distinguished enough from its rivals. Although the recognition of İzmir especially in abroad cities is significantly low, it is a positive aspect that once a tourist visits he/she leaves with satisfaction and desires to come back again. Additionally, it is considered that İzmir does not have a visual icon recognised by all target groups. "Ephesus" comes prominent in the perception of foreign tourists, while the prominent icon for domestic tourists occurs to be "Clock Tower and Kordon". "Blue", as a relaxing colour, is considered to be a colour characterised with İzmir by all target groups. Citizens of İzmir are generally content to be living in the city, while concerned about the development of their city.

SWOT Analysis of İzmir Regarding Foreign Tourists

Aspects considered as strengths, weaknesses, opportunities and threats for İzmir regarding tourists are illustrated in the SWOT analysis below (Figure 75).



¹⁰⁰ Within the plan preparation process, a survey on perception and recognition of İzmir has been conducted in İzmir and 17 other provinces of Turkey along with 10 cities in Europe, USA and Middle East. In addition, an online prize competition survey has been organised, a facebook page has been created and face-to-face interviews have been realised in many districts of İzmir. Within the context of İzmir Recognition and Perception Study, opinions and ideas of a total of 3,687 people on İzmir have been received. <http://www.izka.org.tr>

3.d.3.b.2. Mode of Arrival for Tourists Visiting İzmir

The months when the number visitors by air and sea to İzmir were highest occurred to be July and August in the year 2012 (Table 118). Compared to the previous year, the number of tourists arriving by air increased by 14% in the year 2011, and declined by 0.5% in the year 2012. Arrivals by sea increased by 31% in the year 2012 compared to the previous year, while this value declined by 3% in the year 2012. The sum of arrivals by both air

While 3,271 passengers visited İzmir with 5 cruises in year 2003, these values increased respectively to 510,042 passengers and 286 cruises as of year 2012 (Table 119). According to this information, the number of cruise voyages increased by 56 times and the number of passengers arriving via cruise ships increased by 155 times throughout the 2003-2012 period. In addition to the numbers of voyages and passengers, significant increases occurred also in the number of passengers per cruise ship.

Table 118: Distribution of Foreign Tourists Visiting İzmir by Mode of Arrival and Months, 2010-2012

Month	Number of Visiting Tourists (2012)			Change Ratio (%)					
	Air	Sea	Total	Air		Sea		Total	
	2011/10	2012/11	2011/10	2012/11	2011/10	2012/11	2011/10	2012/11	
January	13,909	4,913	18,822	-3.0	-2.3	209.4	-75.8	62.6	-45.5
February	23,427	4,429	27,856	22.2	-10.9	41.8	-56.2	27.0	-23.5
March	34,280	8,030	42,310	51.7	2.9	195.4	-73.5	97.5	-33.5
April	55,465	34,352	89,817	92.4	-12.9	50.0	-12.8	73.6	-12.9
May	87,223	51,504	138,727	0.4	1.3	26.0	-8.5	9.1	-2.6
June	116,761	63,188	179,949	17.3	0.2	-13.9	23.5	5.6	7.3
July	155,171	84,510	239,681	5.1	6.5	22.3	29.6	9.9	13.6
August	140,997	77,282	218,279	12.9	6.2	20.5	-3.7	15.7	2.5
September	116,103	77,129	193,232	8.6	5.2	34.3	8.3	17.4	6.4
October	72,158	73,543	145,701	7.0	-10.1	32.0	28.5	16.2	5.9
November	17,305	29,437	46,742	19.4	-30.4	70.8	-34.8	48.1	-33.2
December	17,597	10,211	27,808	12.2	-13.5	-33.1	43.7	-4.5	1.3
Total	850,396	518,528	1,368,924	14.2	-0.5	30.9	-2.8	20.1	-1.4

Source: İzmir Provincial Directorate of Culture and Tourism, 2012

and sea displayed an increase of 20% in the year 2011 and 1% decrease in the year 2012.

The number of tourists arriving by sea is also correlated to cruise tourism statistics. İzmir attracts attention with a rising performance in Turkey cruise tourism for the last seven years.

Table 119: Number of Cruise Ships Visiting İzmir, 2003-2012

Year	Overall Number of Cruise Voyages Arriving at İzmir Alsancak Port	Total Number of Passengers Arriving at İzmir via Cruise Ships
2003	5	3,271
2004	32	77,000
2005	26	58,042
2006	94	183,198
2007	122	288,017
2008	128	321,279
2009	127	309,603
2010	141	355,899
2011	272	504,921
2012	286	510,042

Source: İzmir Provincial Directorate of Culture and Tourism, 2012



654 passengers per cruise ship in year 2003 changed to 2,524 as of year 2010 and 1,783 as of year 2012. İzmir Seaport is considered the second most prominent cruise port in Turkey based on its share of cruise tourism, following Kuşadası Seaport (İZKA and Development Bank, 2012).

3.d.3.c. Tourism Supply and Tourism Types in İzmir

3.d.3.c.1. The State of Infrastructure and Superstructure (Accommodation) Facilities

The number of all hotels and facilities in İzmir summed together occurred to be 145 as of November 2012. The number of beds that was 24,639 back in year 2006 increased merely by 4,407 to rest at 29,046 in the six years until November 2012. During the same period, number of facilities displayed an increase by 15 facilities (Table 120).

Table 120:
Number of Accommodation Facilities with Establishment and Investment Certificates and Their Capacities by Years, 2012

Year	Number of Facilities (Establishment Certificate)	Number of Facilities (Investment Certificate)	Number of Rooms (Establishment Certificate)	Number of Rooms (Investment Certificate)	Number of Beds (Establishment Certificate)	Number of Beds (Investment Certificate)
2006	130	42	11,622	4,770	24,639	10,483
2007	134	44	11,871	5,417	25,182	12,621
2008	133	46	12,268	5,592	26,115	13,037
2009	130	49	12,442	5,656	26,479	13,166
2010	135	51	12,503	6,830	26,627	16,481
2011	141	37	13,279	4,491	28,137	10,379
2012	145	44	13,890	4,434	29,046	10,104

Source: İzmir Provincial Directorate of Culture and Tourism, 2012
*Data for 2012 are valid for the period until November.

37% (53) out of the 145 hotels with tourism establishment certificate are located at the provincial centre (Konak), followed by Çeşme with 21% (29 hotels), Selçuk with 8.4% (12 hotels) and Menderes with 7% (11 hotels). A major portion of the five-star and four-star hotels are located likewise in Çeşme, Selçuk, Menderes and Konak districts. Total number of rooms of the hotels with tourism establishment certificate in İzmir is 13,890, while total bed capacity is 29,046. The number of accommodation facilities with tourism establishment certificate is determined to be 44, with 4,434 room capacity and 10,104 bed capacity as of November 2012.

Facilities with tourism establishment certificate in İzmir province contributes to the overall number of facilities with tourism establishment certificate within the Aegean Region by 21.3% as of the year 2011, while this share occurs to be 18.2% and 17.6% for room and bed capacity respectively for the same period. The share of İzmir within the overall number of facilities with tourism establishment certificate throughout Turkey is found out to be 5%, while this share is 4.1% in terms of room and bed capacity.

3.d.3.c.2. Tourism Types in İzmir

Particularly sea (coast) tourism, followed by culture tourism, belief tourism, convention tourism, winter tourism, thermal tourism, cruise tourism, nature tourism, camp and trailer tourism, sports tourism, gastronomy tourism and ecotourism may be listed among existing tourism types and types foreseen to have development possibility in İzmir province (İZKA and YÜ, 2012).

Sea (Coast) Tourism

Sea or coast tourism, also known as sea-sand-sun trio, is one of the tourism types receiving the highest demand in İzmir. Because İzmir possesses the sea tourism prerequisites of long coasts, clean sea, suitable beaches, natural and historical assets in addition to suitable climate conditions, this type of tourism flourished in the province. 101 km of its entire 629 km Aegean Sea coast is comprised of natural beaches. Due to the geographical structure comprising of peninsulas and coves, coasts of İzmir also enable use of beaches.

Natural beaches of İzmir along the Aegean Sea coasts may be listed as Selçuk, Pamucak, Gümüldür and Özdere beaches at the south, Urla-Çeşmealtı, Özbek, Gülbahçe, Çeşme-İllica, Altinkum and Alaçatı at the west, and Dikili, Çandarlı and Foça at the north. Coves along the coasts, their geographical features, existing ancient cities and other assets support also yacht tourism. Ports of significance for yacht tourism may be mentioned as Çeşme Marina, Çeşme Setur Marina, Port Alaçatı Marina, Seferihisar Teos Marina and Levent Marina.

Fair Tourism

Founded for the first time in the year 1927, İzmir International Fair is held every year on September as the most well-established fair of Turkey Fair (exposition) organisations in İzmir are realised dominantly in İzmir Kültürpark Fair Area. There is also Ödemiş National Fair held by Ödemiş Municipality since 27 years ago and EgeArt Art Days held by Ege University since the year 2005.

Fairs outstanding in terms of number of visitors in İzmir occur to be wedding gown and marble fairs. IF Wedding Fashion İzmir wedding gown fair was held first in the year 2007. The number of participants that was 4,864 back in 2007 displayed a considerable increase to reach 14,210 people in the year 2011.

International Natural Stone & Technologies Fair MARBLE has been held since the year 1995. Approved by Global Association of the Exhibition Industry (UFI), MARBLE is recognised as one of the top three fairs of its field.

In addition, Travel Turkey İzmir Tourism Fair and Conference to be held for the seventh time on 5-8 December 2013 has become one of the leading international tourism fairs of Turkey. Sixth of this fair series was visited by 778 companies and 25,915 people from 47 countries.

Culture Tourism

With its natural and historical assets, climate conditions suited for tourism, and adequate accommodation and transportation infrastructure, İzmir is one of the provinces with high tourism potential. Although İzmir entered tourism in modern sense at a recent past, it is seen to be intertwined with tourism at all times when the province's historical features are analysed. In addition to the sea-sand-sun trio, İzmir is the most prominent province throughout Turkey that offers cultural tourism opportunities with İzmir-Centrum, Bergama, Çeşme, Ödemiş, Tire, Selçuk Museums, and Ephesus and Bergama ruins.

Touristic attraction centres include Smyrna (Tepekule) that has been present since the ancient era at the city centre, Kadifekale and Smyrna Agora –known to be the biggest agora of the world- along with Kemeraltı Bazaar with a genuine structure, and mosques, churches, synagogues, inns and water fountains.

Belief Tourism

İzmir is a city of tolerance where the believers of three monotheistic religions lived together with the feeling of being citizens of İzmir and carried on with hundreds of years of friendships.

The province possesses three out of the seven first churches from where Christianity spread, i.e. first seven Christian congregations, within its borders. Three of the Seven Churches in the Aegean Region are located in İzmir (Smyrna/İzmir, Ephesus/Selçuk and Pergamon/Bergama), three are located in Manisa (Sardes/Salihli, Philedelphia/Alaşehir, Thyateira/Akhisar), and one is located in Denizli (Laodikeia/Denizli).

Virgin Mary Church built in the name of Virgin Mary where the First Ephesus Consul was gathered (Paired Churches) is located in Ephesus Ancient City. St. Jean Basilica where the grave of the Bible compiler St. Jean to whom Jesus Christ entrusted her mother and the Companions of Cave (Seven Sleepers) are also allocated in Selçuk. House of Virgin Mary in Bülbüldağı, where Virgin Mary is believed to have lived her last years and

died is one of the most significant places of pilgrimage for Christianity. Every year on the 15th of August, ascension ceremonies are held at this site where Christians come for pilgrimage. In 1967, Pope Paul the 4th, in 1979 Pope Jean Paul the 2nd and in 2006 Pope Benedict the 16th came to visit the pilgrimage of Ephesus and House of the Virgin Mary. House of the Virgin Mary, also considered sacred by Muslims, attracts thousands of tourists every year.

Prominent synagogues used by Jewish congregation of İzmir are also visited by tourists belonging to Jewish religion [Such as Sinyora (Giveret), Algazi, Berk Holim, Şaar Aşamayın, Bet İsrail]. Nesim Levi, famous businessmen of his time, gifted the Historical Elevator that connects two neighbourhoods to the citizens of İzmir in the year 1907. In addition to being an excursion spot attracting attention with its restaurant and café in our day, the site is also known for the street where the house of the famous singer Dario Moreno is located and named after him who was a lover of İzmir city.

Prominent mosques such as Hisar, Şadırvan, Kemeraltı, Salepçioğlu, Kestane Pazarı and Konak (Yalı) mosques located at city centre, particularly within the historical Kemeraltı, attract attention also with their architecture. In districts such as Bergama, Çeşme, Foça, Ödemiş-Birgi, Selçuk and Tire, beautiful examples of İslam architecture such as water fountains, baths, mosques, madrasahs, inns, covered bazaars and mansions may be spotted that attract attention with workmanship and architecture belonging to Beyliks and Ottoman Eras.



Convention Tourism

İzmir is deserving of being a city of business, conventions and fairs due to having hosted the first ever International Industry Fair of Turkey. The province has convention tourism potential throughout the entire year due to suitable climate conditions. Also, presence of nine universities supports this tourism type. Development of convention tourism in İzmir initially will create the potential to expand the seasonal concentration to an entire year. Organisation of conventions usually in April, May, June, September, October and November months show that İzmir may leave behind its classic tourism approach with the widespread utilisation of convention tourism.

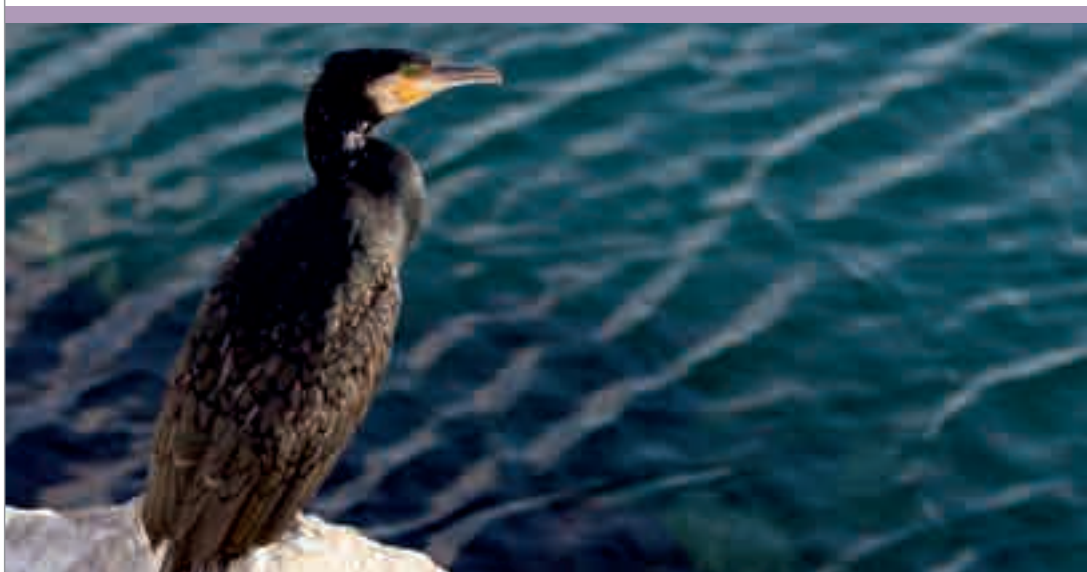
Winter Tourism

Existence of natural tracks at the northern slopes of Bozdağ ridge protruding between Gediz and Küçük Menderes located within the Aegean Region enables skiing sports. There are three open tracks and ten natural tracks in the skiing centre, with an approximate skier capacity of 4,000 people.

Thermal Tourism

There are many thermal springs in İzmir that had also been used in the past centuries for healing purposes. Balçova Thermal Baths, Bayındır Thermals, Bergama Thermal Baths, Menemen Thermals, Ilıcagöl Thermals, Tavşan Adası Thermal, Çeşme Thermals, Şifne (Reisdere) Thermal Bath and Mud, Seferihisar Thermal Baths, Urla Thermals (Malkoç Mineral Springs) and Gülbahçe Thermals currently offer thermal tourism to visitors.

In the thermal baths, there are hot water, mud bath and drinking waters, also including different healing methods with the aid of modern medicine. Many people from local or foreign origin are interested in thermal baths. Furthermore, planning works for the potential thermal sites in Dikili, Bayındır and Seferihisar districts are underway.



Highlands Tourism

Bozdağ Gölcük Highland and Subatan Highland in Ödemiş district, Karagöl on amanlar Mountain at the north of Karşıyaka district and Kozak Highland on Mount Madra at the north of the mountain range surrounding Bergama district are areas suitable for one-day excursions and highland tourism.

Camp and Trailer Tourism

Tent camping and trailer (caravan) camping services are provided in Çeşme, Foça, Gaziemir, Gümlüdü, Seferihisar and Selçuk.

Ornithology (Bird Watching Tourism)

8,000 hectares of land covering İzmir Çamaltı Marshland in Çiğli district was registered as Waterfowl Preservation and Breeding Ground in the year 1982. In addition to this, this site was declared as a natural and archaeological SIT area, Wildlife Preservation Site and International Protection Status of RAMSAR site due to the natural and cultural assets of the area.

Gediz Delta Wetland Protection Area stretches over an area of approximately 20,000 hectares from Mavişehir next to İzmir to Foça Hills. The area houses many different habitats ranging from lagoons, coastal swamps, salt meadows, sand dunes, marshlands, freshwater swamps and hills, which host numerous living species. The area is referred to as İzmir Bird Sanctuary due to being very rich in sheltering birds, where a total of 289 different bird species were recorded until this day. An average of 50,000 birds visit the area every year, therefore İzmir Bird Sanctuary is one of the richest natural sites of Turkey. This area constitutes one of the two breeding grounds of flamingos (*Phoenicopterus roseus*), one of the five breeding grounds of Dalmatian Pelican (*Pelecanus crispus*), and the only breeding ground of Sandwich Tern (*Sterna sandvicensis*). It is possible to witness more than 20,000 flamingos in winter months. Other bird species include White Stork (*Ciconia ciconia*),

Common Kestrel (*Falco tinnunculus*), Eurasian Oystercatcher (*Haemetopus ostralegus*), Common Tern (*Sterna hirundo*), Common Stilt (*Himantopus himantopus*), Ruddy Shelduck (*Tadorna ferruginae*), Mallard (*Anas platyrhynchos*), Eurasian Hobby (*Falco subbuteo*), Common Kingfisher (*Alcedo atthis*) are among the most striking bird species.

Sports Tourism

With various wind conditions and ideal surfing area, Alaçatı site of Çeşme district is one of the most prominent surf centres of Europe. Çatalkaya and Yamanlar Mountain are places where amateur mountain sports can be performed. Furthermore, Mount Madra at the north among the mountain ranges that descend down to İzmir Bay is very suitable for mountaineering with its peak exceeding 2,000 metres. İzmir is also very suitable for sailing tourism, and the wind in Çeşme area at internationally recognised values makes the province one of the leading sites throughout Turkey in this regard. Tourism-oriented sportive activities carried out in İzmir are mentioned below.

Mountain and Nature Trekking

There are many mountains, highlands and lakesides with striking beauty in İzmir. Particularly on the weekends, many activities are held in such sites by mountaineering, nature trekking, photography clubs and associations. Especially Bergama Kozak Highland, Kemalpaşa Nif Mountain, Buca Kaynaklar, Ödemiş Bozdağ, Ödemiş Gölcük Highland, Ödemiş Subatan Highland, Özdere Kalemlik Forest, Selçuk Meryem Ana, Belevi Keçi Kalesi, Yamanlar Mountain-Karagöl, Bornova Çiçekli Village, Bornova Homeros Valley, Balçovaand Urla Demircili are routes preferred by nature and adventure lovers.

Paragliding

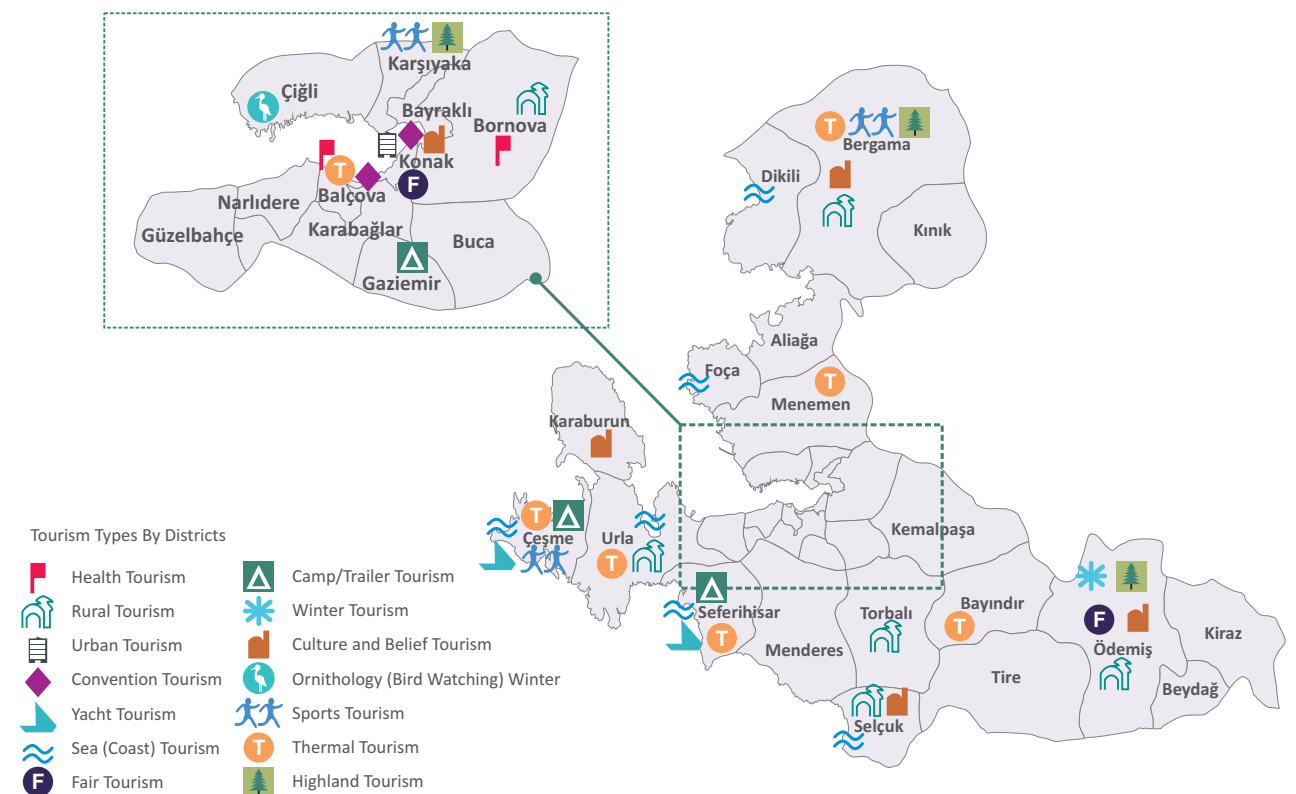
Tire and Ödemiş districts of İzmir are significant sites preferred by paragliding lovers. There are easy to reach climbing points at 800, 1000 and 1200 metres on Tire Güme Mountains, at 1400 metres on Ödemiş Bozdağ, and at 100-150 metres on Ödemiş Eseli Hill.

Windsurfing and Kitesurfing

Alaçatı Yumru Cove is one of the most preferred sites throughout the world for windsurfing and kitesurfing sports due to its geographical location, eleven months of wind and shallow structure. This site hosts World, Europe and Turkey windsurf championships and many more international organisations. There are accommodation and refreshments facilities with high quality standards and many qualified centres offering surf training in the area.

Pırlanta (Diamond) Beach located in Çiftlikköy at 10-kilometre distance to Çeşme takes its name from its sand that glitters like diamonds, and it is famous with its wind and waves. It has an ideal geography for kitesurfing, which is one of the favourite extreme sports throughout the world in recent years. There is a facility providing kitesurfing services in the area.

Map 29: Tourism Types By Districts



Source: Aykaç Yanardağ, A.; Yanardağ, M.Ö. 2009; İZKA and YÜ, 2012

The breakthrough made by Alaçatı regarding windsurfing and kitesurfing in recent years has become an example for many sportsmen /sportswomen who set their heats on these sports in İzmir, starting search for further suitable sites, which led to beginning of windsurfing and kitesurfing activities in Urla İçmeler and windsurfing activities in Çandarlı and Foça.

Sailing

There are many sites suitable for sailing sport in İzmir. Sailing sport is performed especially within the bodies of Çeşme Altinyunus Hotel, Foça Neilson Fokai Hotel, Seferihisar Neilson Club Teosand Seferihisar Kır Atlantis Hotel. Also, there are many clubs functioning in the field of sailing sports. Sites available for sailing attract much attention also from abroad. İzmir trained many national sportsmen/sportswomen (athletes) regarding sailing sport. These athletes perform intensive activities towards making sailing sports widespread and serve tourism within the structure of both sportive activities businesses and clubs. Furthermore, surface sports activities/services are offered at accommodation facilities' beaches and other beaches in Çeşme, Menderes, Seferihisar, Karaburun, Foça, Dikili and Selçuk districts with jet ski, banana, water ski, pedalo, canoeetc. equipments.

Underwater Diving

There are points suitable for diving and undersea

sightseeing preferred by diving lovers in Karaburun, Menderes, Selçuk, Foça, Çeşme, Urla, Seferihisar and Dikili areas. There are many diving centres offering diving trainings in İzmir. These diving centres serve professional divers, along with diving training services.

Equestrian Safari and Equestrianism

It is possible to enjoy equestrian safari coupled with natural beauties and an amazing landscape in Kemalpaşa and Selçuk districts. Also, equestrianism services are offered at the studfarms in the horse farms within Urla, Seferihisar and Kemalpaşa districts.

Jeep Safari

Jeep safari services are provided in Selçuk and Menderes districts (Özdere Neighbourhood). This activity enables tourists to have an unforgettable experience at the tracks in pine-scented forests, coupled by natural beauties where various flower scents mix together.

ATV (QUAD) Safari

ATV (QUAD) Safari is an adrenaline sport performed with 4-wheeled motorcycles within natural environment. It is possible to enjoy this sport in Selçuk district.



Health Tourism

Among the tourism types in İzmir, health tourism outstands with its significant potential. Health tourism is a rapidly rising trend throughout Turkey and the world. Visiting a country other than the origin country of for treatment purposes for any reason whatsoever is called health tourism, and the visiting person is called a health tourist (Ministry of Health, 2012b).

Health tourism should not be considered with a narrow definition of only getting treatment in hospitals. While all types of tourism that provide a healthy life are considered as health tourism, health tourism is classified under 3 categories; medicine, thermal and elderly-handicapped tourism.

Health tourism in Turkey is still undergoing development, while attracting tourists especially from Germany, Russia, Netherlands, France, Turkic Republics and Middle East countries. Approximately 92% of the tourists are treated in private hospitals and 8% are treated in public hospitals. It is known that health tourists dominantly visit the country for treatment in the fields of ophthalmology, orthodonty, orthopaedy, oncology, plastic surgery and neurosurgery.

İstanbul, Kayseri, Adana and Gaziantep were respectively the four most commonly visited provinces of Turkey for health tourism between the years 2008 and 2010 (Table 121).

Table 121:
Top 10 Provinces That Attract the Highest Number of Foreign Health Tourists by Years, 2008-2010

2008 Total (Public and Private)		Share within Turkey	2009 Total (Public and Private)	2008/2009 Change(%)	Share within Turkey	2010 Total (Public and Private)	2009/2010 Change (%)	Share within Turkey
Turkey	74.708	100	93.464	25,1	100	75.031	-19,7	100
İstanbul	36.598	49,0	46.802	27,9	50,1	31.714	-32,2	42,3
Kayseri	11.525	15,4	13.397	16,2	14,3	10.976	-18,1	14,6
Adana	4.780	6,4	6.459	35,1	6,9	6.912	7,0	9,2
Gaziantep	3.363	4,5	4.418	31,4	4,7	5.727	29,6	7,6
Ankara	2.863	3,8	3.689	28,9	3,9	2.812	-23,8	3,7
Antalya	2.438	3,3	3.063	25,6	3,3	2.719	-11,2	3,6
İzmir	2.276	3,0	2.891	27,0	3,1	2.370	-18,0	3,2
Isparta	2.267	3,0	2.566	13,2	2,7	1.790	-30,2	2,4
Trabzon	2.202	2,9	1.917	-12,9	2,1	1.680	-12,4	2,2
Kocaeli	615	0,8	1.512	145,9	1,6	1.913	26,5	2,5

Source:Ministry of Health, 2012c

It is striking that Kayseri province that normally receives not much foreign tourists succeeds to attract many foreign patients. İzmir province maintained its seventh place and the 3% share within Turkey overall health tourism during the 2008-2010 period. The number of foreign patients increased by 25% throughout Turkey and by 27% in İzmir during the year 2009.

A decline of 19.7%throughout Turkey, and a decline of 18% in İzmir in line with the national recession were observed as of the year 2010. It is considered that İzmir is capable of raising its skill of attracting health tourists in line with its potential.

Blue Flagged Beaches

Blue Flag Programme for beaches and marinas is carried out by the international non-profit non-governmental organisation called International Foundation for Environmental Education (FEE). Blue Flag Programme supports sustainable development in freshwater and marine environments. Through this programme, local administrations and beach establishments are encouraged towards achieving high standards in the fields of swimming water quality, environmental management and life safety. In result of the implementations in this field, blue flag has become a respected and prestigious eco-label that brings together tourism and environment sectors at local, regional and national scale (TÜRÇEV, 2012).

Blue Flag Programme has been implemented in Turkey since 1993.

Table 122:
Number of Beaches with Blue Flag
by Provinces, 2012

Province	Number of Beaches
Antalya	190
Muğla	76
İzmir	32
Aydın	22
Balıkesir	17
Mersin	8
Çanakkale	5
İstanbul	2
Düzce	1
Kocaeli	1
Tekirdağ	1
Total	355

Source:TÜRÇEV, 2012

The beaches awarded thus are increasing steadily every year. The number of beaches awarded with blue flags was 314 in the year 2010, while this number rose to 324 and 355 respectively during the years 2011 and 2012.As of the year 2012, as holder of the most beaches with blue flags, Antalya province houses more than half (53.5%) of the beaches throughout Turkeywith a total of 190 beaches, followed by Muğla with 76 beaches (21.4%) and İzmir with 32 beaches (9%) (Tablo 122).

Table 123:
Distribution of Blue Flagged Beaches by Districts, 2012

District	Number of Beaches
Çeşme – district centre	8
Menderes-Gümüldür	6
Foça – district centre	6
Seferihisar – district centre	4
Dikili – district centre	3
Selçuk-Pamucak	3
Karaburun	2
Total	32

Source: İzmir Provincial Directorate of Culture and Tourism, 2012

Çeşme is distinguished as the district with the most blue flagged beaches. 25% of all blue flagged beaches in İzmir are located inside Çeşme, while Foça and Menderes-Gümüldür follow this district with 19% (Table 123). In addition to blue flagged beaches, İzmir also houses two blue flagged marinas. In order to increase the number of blue flagged beaches that is a significant indicator for environment-friendly and sustainable tourism, awareness raising activities and encouraging activities are of importance.



Table 124:
Distribution of Deposit in İzmir by Type, 2004-2012, million TL

Year	Savings Deposit	Official Organisations Deposit	Commercial Organisations Deposit	Banks Deposit	Foreign Currency Deposit Account	Other Organisations Deposit	Precious Metals Reserve Accounts	Total
2012	25.482	1.126	4.348	1	9.092	662	897	41.608
2011	23.330	1.150	3.719	1	8.428	606	629	37.863
2010	21.126	772	3.586	4	7.063	473	95	33.121
2009	17.974	643	3.227	3	6.763	255	49	28.914
2008	16.674	693	2.042	11	6.403	260	5	26.088
2007	12.579	376	1.731	1	5.151	307	4	20.149
2006	9.991	525	1.974	1	5.157	283	2	17.932
2005	7.795	452	158	2	3.904	249	0	13.980
2004	5.386	313	1.096	1	4.112	212	1	11.120

Source: BAT, 2013

3.d.4. Finance Sector

Banking

Financial markets that intermediate in the conversion of savings into investment are of importance for ensuring the vitality and continuity of economy. Finance sector, which enables money to move between individuals, sectors and times, also holds an important place in terms of the value of produced service and the created employment as a separate economic sector beyond this functionality.¹⁰¹

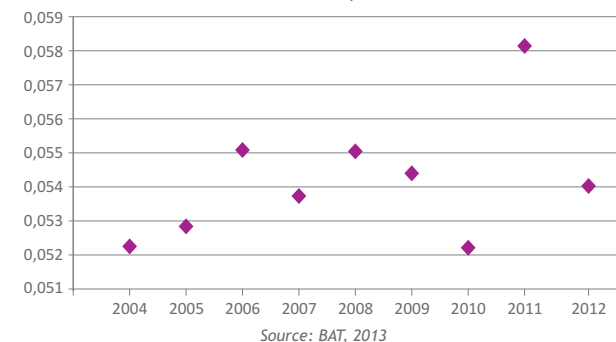
It should be mentioned that the finance sector, which has been both the source and target of the global economic crisis' effects, maintained its position with relative success compared to EU and USA. In the year 2009 when the impact of the global crisis was felt most intensively, the deposit levels declined in many developed countries such as USA, Japan, England and France (compared to the year 2008), while a 11.7% increase was observed in the deposited money levels of Turkey (BRSA, 2012). Regarding İzmir specifically, it is considered that this positive situation has been inherent also in the province.

According to the data obtained from The Banks Association of Turkey (BAT), the deposit existing in İzmir increased by 3.7 times during the 2004-2012 period. Total deposit occurred to be 41,608 million TL, comprising by 61.2% of savings deposit-25,482 million TL (Table 124). An issue to point out would be the increase recorded in the precious metals reserve accounts due to the rise of demand towards precious metals during the global economic crisis period and the mechanisms that the banking system developed in order to integrate this demand (thus, including savings stored in this manner) into the system.

The increase ratios observed in total deposit compared to the previous year point out that İzmir banking sector was affected to a degree from the reflections of the global economic crisis on Turkey. The increase rate that occurred at over 25% during the 2005-2006 years, declined to 12% in the year 2007, though achieved 29.5% in the year 2008; while the same value had actualisations of 10.8%, 14.5%, 14.3% and 9.9% respectively by years beginning from 2009 when the impact of the global crisis was at its peak. Deposit increase is of importance regarding the financing required for economic development.

The share of İzmir within the overall domestic deposits account occurred to be around 5%-6% during the 2004-2012 period. The decline observed during the 2008-2010 period is seen to have turned to a significant leap in the year 2011 but returned to average values as of the year 2012 (Figure 76).

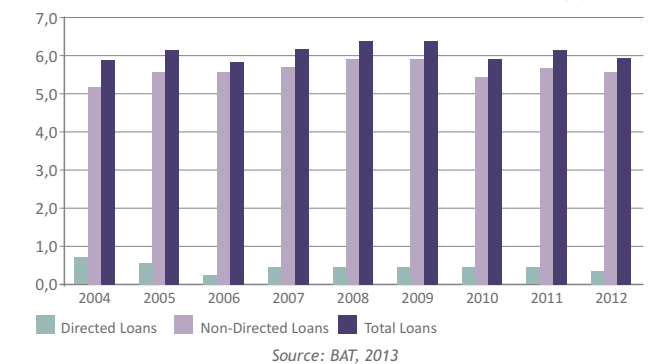
Figure 76:
İzmir's Contribution within Overall Deposit, 2004-2012



Access to financing (funding) is one of the most fundamental parameters in respect to empowerment of private sector and economy. The subject is also of specific importance regarding investment environment assessments of foreign direct investors. Monitoring the rising and declining trends observed regarding the loans in İzmir will enable determining problems in cases of inclining trends and intervening to the blockage channels. In this framework, the distribution of loans by directed loans, non-directed loans, and total loans throughout provinces is studied for the 2004-2012 period by utilising BAT data.

Total loans peaked (6.4%) during the 2008-2009 years when the impact of the economic crisis was the most severe, and declined in the recent years back to their 2004 level (5.9%). The share of İzmir within directed loans did not show much change after 2007. The share of non-directed loans peaked in the year 2008 with 5.9%, declined to 5.5% in the following years and rested at 5.6% as of the year 2012 (Figure 77).

Figure 77:
The Share of Loans in İzmir within the Total Loans, 2004-2012, (%)



Data on the distribution of loans at İzmir scale display that the share of directed loans within total loans declined during the 2004-2012 period. This share that had an actualisation of 12.1% in the year 2004 declined to 7.2% as of the year 2012. This decline is in line with the trend that was present throughout the country. At national scale,¹⁰² it is observed that the share of directed loans within total loans changed from 9.3% to 6.2% between the year 2004 and 2008, and rested at 6.1% as of the year 2012.

On the other hand, a significant increase was observed in the amount of agriculture loans used in İzmir during the recent years (Table 125).

Table 125:
Distribution of Loans by Years, thousand TL, İzmir

Year	Directed Loans						Non Directed Loans	Total
	Agriculture	Real Estate	Professional	Maritime	Tourism	Other		
2004	379	42	89	0	1	106	4.475	5.093
2005	484	35	121	0	6	87	7.085	7.816
2006	64	27	187	0	0	187	10.167	10.631
2007	642	22	164	0	0	232	13.135	14.194
2008	844	16	206	0	0	279	17.039	18.384
2009	1.023	0	199	2	27	317	17.419	18.987
2010	1.534	0	219	0	21	306	24.568	26.646
2011	1.964	0	370	0	20	385	34.503	37.242
2012	1.857	0	422	0	18	329	39.961	42.586

Source: BAT, 2013

¹⁰¹ Due to the problems experienced for accessing regional-scale data, the section on finance sector remained limited to subjects of banking and derivatives exchange.

¹⁰² The data mentioned encompasses also the loan actualisations for İller Bankası A.Ş., Cyprus and foreign countries. However, assessments specifically for İzmir were calculated at domestic actualisations scale excluding the mentioned data.

This situation is in line with the developments regarding the agriculture sector within İzmir economy especially in the years that followed the economic crisis (for instance, significant increase of agricultural employment). Other directed loans do not present any interesting data on İzmir.

An important indicator of the intermediary function of banking sector is the loan/deposit ratio. Loan/deposit ratio increased at both İzmir and Turkey scaleduring the 2003-2012 period (except the year 2009) (Table 126). The loan/deposit ratio, which occurred to correspond to the significantly low value of 41.8% in İzmir as of the year 2003, reached 102.4% in the year 2012. Until the year 2010, the loan/deposit ratio in İzmir remained below that of Turkey average. In other words, the loans used within the province until the year 2010 remained considerably below the provincial deposit level (İZKA and Development Bank, 2012).

Table 126:
Loan/Deposit Ratio, 2003-2012, (%)

Year	Turkey	Aegean Region	İzmir
2003	42,9	37,1	41,8
2004	51,9	45,0	45,8
2005	60,1	57,5	55,9
2006	69,8	64,3	59,3
2007	78,2	75,1	70,4
2008	80,3	77,0	70,5
2009	74,8	70,3	65,7
2010	82,5	84,8	80,5
2011	94,6	100,6	98,4
2012	99,2	106,7	102,4

Source: BAT, 2013

Development of the capacities of accessing banking services is important due to allowing for raising awareness on such services as much as deepening the institutional relations banks establish especially with SME's. Although internet and telephone banking services continue to develop significantly during recent years, especially inabilities regarding internet literacy in the public and certain cultural factors cause face to face contact to maintain its significance.

At this point; indicators such as number of bank branches and population per bank employee at regional and local units scales maintain their significance. When the number of bank branches in İzmir is analysed by years, a certain decline is observed in the bank branches increase rate in recent years (Tablo 127). One of the major reasons behind this is economic crisis conditions, while the other is considered to be relatively widespread use of electronic banking services as mentioned above.

Table 127:
Data on Bank Branches in İzmir, 2005-2012

Indicator	2005	2006	2007	2008	2009	2010	2011	2012
Number of branches	478	525	591	659	676	696	720	736
Branch percentage distribution (%)	7,7	7,7	7,8	7,5	7,5	7,4	7,3	7,2
Increase rate from previous year		47	66	68	17	20	24	16

Source: BAT, 2012

When the number of bank branches in İzmir is analysed over types of banks, it is observed that most of the present bank branches (total of 736 branches) comprise of deposit banks. Private capital banks have a higher share than public capital banks within the total number of deposit banks (Table 128).

Table 128:
Distribution of Bank Branches by Type, İzmir

Banks	Number of Branches
Sector	736
Deposit Banks	733
Public Capital Banks	208
Private Capital Banks	376
Foreign Banks	149
Foreign Banks Established in Turkey	147
Foreign Banks Branched in Turkey	2
Development and Investment Banks	3
Public Capital Banks	2
Private Capital Banks	1
Number of Banks in the Province	27

Source: BAT, 2013

District-based distribution of bank branches enables a limited level of assessment on access to services. The districts housing the highest number of bank branches occurred to be Konak, Bornova and Karşıyaka as of the year 2012 (Table 129).

Cash dispensers (ATM), which had seen significantly widespread utilisation in the recent years, and POS devices (devices allowing payments from the bank/credit account) come foremost among the service providing tools of banking system not limited to bank branches. According to BAT data, the number of ATM's is 2,452 and the number of POS subscriber businesses is 144,326 in İzmir as of the year 2012.

Banking sector is an employment field with increasing significance for qualified workforce. According to BAT data for the year 2012, Turkey banking sector employed a total of 186,098 people.

Table 129:
Bank Branches by Districts, 2008-2012

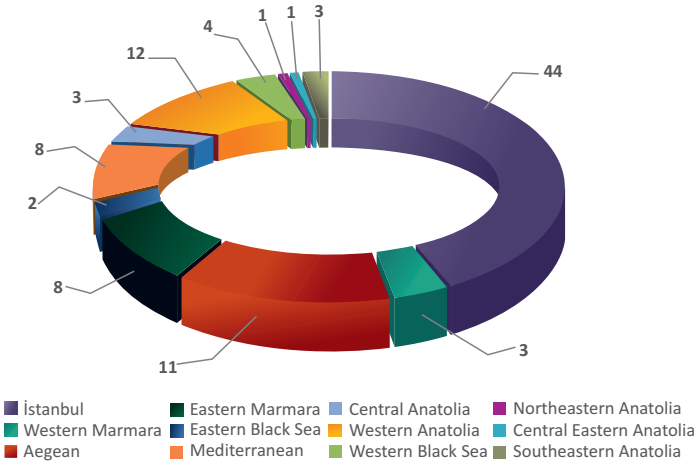
District	2008	2009	2010	2011	2012
Aliağa	22	22	21	20	19
Bağcı	19	19	20	20	18
Bayındır	3	3	3	3	4
Bayraklı		11	12	15	21
Bergama	9	9	9	9	10
Beydağ	1	1	1	1	1
Bornova	90	92	98	99	96
Buca	23	25	31	33	37
Çeşme	15	16	17	19	20
Çiğli	27	26	26	29	30
Dikili	7	7	8	8	8
Foça	8	8	6	6	7
Gazimir	23	22	23	24	24
Güzelbahçe	4	4	3	3	3
Karabağlar		26	29	31	38
Karaburun	1	1	1	1	1
Karşıyaka	69	64	69	73	75
Kemalpaşa	14	13	15	15	15
Kınık	2	2	2	2	2
Kiraz	4	3	3	3	3
Konak	230	208	204	207	203
Menderes	9	10	10	10	10
Menemen	11	12	12	13	13
Merkez İlçe	4	3	0	0	0
Narlıdere	9	10	12	12	13
Ödemiş	12	13	13	13	13
Seferihisar	5	5	6	6	6
Selçuk	6	6	7	7	7
Tire	10	10	10	11	12
Torbalı	13	15	15	17	17
Urla	9	10	10	10	10
Total	659	676	696	720	736

Source: BAT, 2013

675 of these employees worked in Cyprus and other foreign countries, while 185,423 worked inside the country. Distribution banking sector employees working in Turkey by the NUTS Level 1 regions reveal that 81,378 (44%) of all employees in the sector were employed in İstanbul, which has a claim of becoming a global scale finance centre. İstanbul was followed by the Western Marmara Region, where public institutions as important actors for finance markets are present along with the public capital bank headquarters.

Western Marmara Region accommodates 22,159 (12%) of all sector employees, followed by Aegean Sector at the third place (Figure 78).

Figure 78: Distribution of Banking Sector Employees by Regions (%)



Source: BAT, 2013

Aegean Region hosts 19,823 (11%) of the sector employees, of which 10.632 are employed in İzmir. According to overall country data, sector employees comprise 75% of higher education, and 6% of postgraduate and doctorate programme graduates, while 18% comprise of secondary education graduates, only 1% of these are primary education graduates. These data show the importance of the sector for the employment of qualified young people.



Derivatives Exchange

Globalisation process has caused companies to become more sensitive against external shocks, which has brought to subject of risk management to into the prioritised

agendas of companies. Dervatives Exchanges offer important opportunities regarding risk management via various goods and services they provide. The first Derivatives Exchange (DE) of Turkey, where derivatives contracts based on economic and financial indicators, capital market tools, goods, precious metals and foreign exchange, and capital market tools comprising of various derivative tools are dealt, was founded in İzmir as of the year 2005. Establishment of DE has been a significant gain for deepening of finance sector in both Turkey and İzmir.

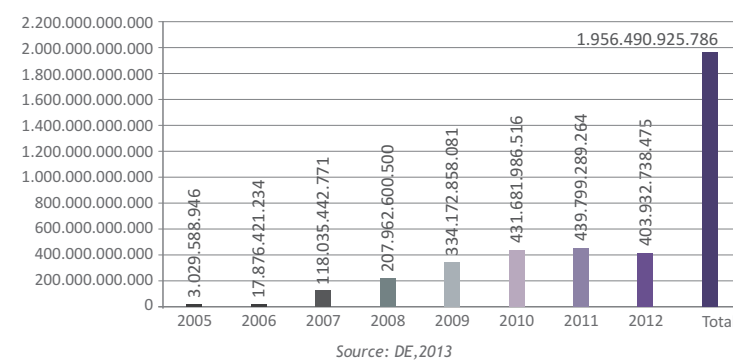


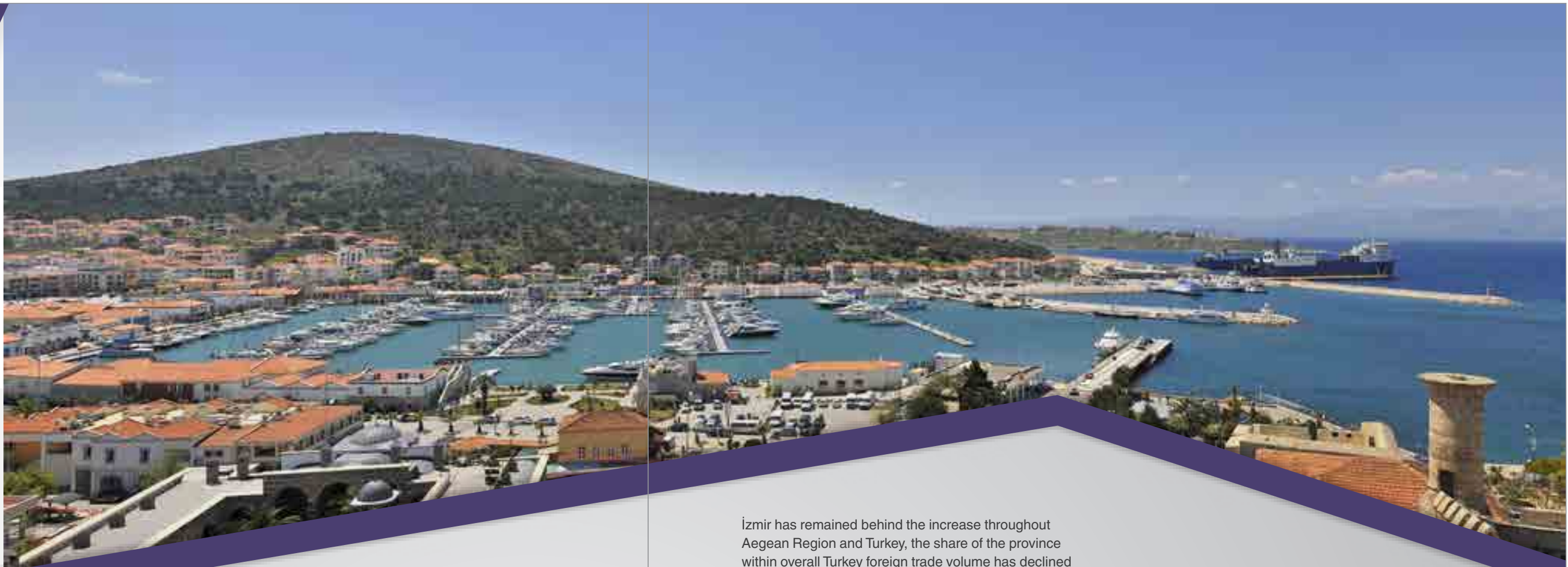
Trading volume of DE in TL has increased constantly between the founding year of 2005 and 2011 (DE,2013), rising to 440 billion TL in the year2011 but declined to 404 billion TL in the year 2012 (Figure 79). One of the primary reasons behind this decline is that some contracts dealt in DE were opened to access by alternative organisations (DE, 2013). Warrants and discounted contracts offered by İMKB and regulation of forex transactions as to be provided by organisations subject to Capital Markets Board inspection are among the developments considered in this framework. Another determinant of the decline experienced in 2012 was that a certain saturation has been reached in the market for DE-İMKB 30 derivative contracts that constitute a major portion of contracts dealt in DE.

The overall trading volume in TL recorded a recession of 8% in 2012 compared to the previous year, while the overall trading volume by item declined by 16%, from 74,300,000 to 62,474,000.

The decree of terminating the existence of DE in İzmir, which had been founded for ensuring the derivatives contracts to be dealt in a safe and stable manner and displayed a strong performance within a short while after establishment, was issued as per the regulation published on the OJ with date 17.11.2012 and issue no. 28470. Although carrying DE to İstanbul with this regulation is in line with the strategy of making İstanbul an international finance centre, it is considered to be a significant loss for İzmir finance sector.

Figure 79:
DE Trading Volume (TL)





3.d.5. Assessment

In spite of the decline of 1.4 points displayed in the year 2010, the share of services sector within İzmir GVA increased regularly during the 2004-2010 period and rose from 63.6% to 68.4%. According to year 2012 data, services sector takes the lead regarding the sectoral distribution of employment in İzmir with a ratio of 58.4%.

In this section, the logistics, trade, tourism and finance sub-sectors are assessed respectively, which were defined as prioritised for İzmir Region within services main sector according to conducted analysis studies.

Logistics sector, which enables meeting production and consumption networks and in this sense also serves the development of other sectors, is one of the fields gathering importance every day due to the experienced globalisation process. With investments realised in recent years in addition to the advantages that comes from its geopolitical location, Turkey also took its place as an important and growing actor in this sector. Logistics sector constitutes one of the significant and attractive fields of investment for İzmir, when the existing state and potential of the province is taken into consideration. The number of companies dealing in the sector increases day by day. According to İzmir Region Input-Output Analysis study,

17.7% of the production and 19.1% of the gross value added in İzmir are realised by the land, sea, air transport and transport via pipelines and communication sector. The sector also comes up as the 4th sector with the highest forward connection effect. Logistics sector was also included among sectors with clustering potential in İzmir. The province is among the leading regions of the country regarding logistics training.

Rapidly actualising highway and railway projects required for strengthening accessibility of İzmir, completion of the investments that will enable İzmir Port to regain its competitiveness, improvement of access to seaports located within Aliğa-Nemrut Bay, commissioning Northern Aegean (Çandarlı) Seaport that will be among the top 10 seaports throughout the world, and initialisation of activities in Kemalpaşa Logistics Village are prerequisites for the conversion of this potential that the province holds into economic asset. Furthermore, empowerment of the technological and institutional capacities of the companies dealing in the sector and universalisation of third party logistics services have to be supported.

İzmir, which contributes 7% of Turkey's overall trade volume and constitutes a basis with its seaports for 93% of Aegean Region export, has always been one of the trade centres of our country throughout history with its strong transportation opportunities, organised industrial zones, free zones, international fair and umbrella organisations forming the superstructure. However, an analysis of the indicators for the last 10 years, it is observed that the increase in the foreign trade volume of

İzmir has remained behind the increase throughout Aegean Region and Turkey, the share of the province within overall Turkey foreign trade volume has declined from 5.8% to 5%, and İzmir has begun to display foreign trade deficit since 2004 despite being one of the net exporter provinces in the past.

In order to prevent the losses experienced in this field in the province, which has been observed to belong among provinces with high export diversity and low commonness and open to development regarding medium and high technology product export; it is necessary to configure the economy of İzmir towards an export-oriented structure and to increase the export capacity of sectors in line with Turkey's 2023 export objectives.

As one of the prominent tourism centres of Turkey, İzmir displayed rapid development in tourism sector partly due to the effect of cruise tourism in recent years, and significant increases were observed in the number of foreign tourists visiting the province. However, it is difficult to say that the tourism potential of İzmir is utilised effectively. Tourists visiting İzmir comes from certain countries and concentrate on certain tourism centres, while alternative tourism types outside of sea tourism fail to become widespread at the desired levels. Furthermore, conducted perception studies reveal that İzmir has a low recognition at international scale.

Especially vitalising urban tourism that bear significant potential due to historical texture and culture, development of alternative tourism types such as health, nature, convention and fair tourism, increasing public and private investments by taking into consideration the preservation and sustainability principles, and increasing the level of service quality will serve to bring İzmir to higher positions in regards to number of visitors and obtained revenues.

It is important to actualise promotion strategy and develop a shared language and perception for improving the recognition of İzmir in the minds of both domestic and foreign tourists. Also, studies aimed at strengthening accessibility and increasing direct transportation channels to abroad countries have to be carried out.

It should be mentioned that the finance sector, which has been both the source and target of the global economic crisis' effects, maintained its position with relative success compared to EU and USA. In the year 2009 when the impact of the global crisis was felt most intensively, the deposit levels declined in many developed countries such as USA, Japan, England and France (compared to the year 2008), while a 11.7% increase was observed in the deposited money levels of Turkey. The state of İzmir differs not much from this situation inherent throughout Turkey. According to BAT data, the deposits amount existing in İzmir increased by 3.4 times during the 2004-2011 period.

The first Derivatives Exchange (DE) of Turkey was founded within İzmir in the year 2005, and establishment of DE has been a significant gain for deepening of finance sector in both Turkey and İzmir. However, although the decision to carry DE, which displayed a strong performance within a short while after establishment, to İstanbul, was in line with the strategy of making İstanbul an international finance centre, it is considered to be a significant loss for İzmir finance sector.

Environment



483 m³/year
available water supply
per capita

2,5 %
recycled domestic
solid waste ratio

32
the number of
"Blue Flag" winning
beaches

4.a. WATER AND WASTEWATER MANAGEMENT

According to DSİ 2011 hydrologic data, annual potable water potential in İzmir is 1,914,000,000 m³. Annual usable water potential per capita average was found out to be 483 m³. This value is estimated to be 1,498 m³/year-person as Turkey average¹⁰³. According to the water sufficiency scale recognised worldwide, annual water amount per capita should be a minimum of 2,000 m³. Areas with lower values are assumed to face water scarcity and those that have less than 1,000 m³ are defined as water poor. Therefore, management of water is of importance in İzmir that needs to be defined as water poor.

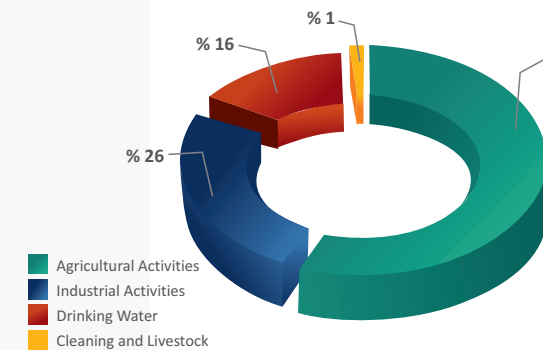
In terms of water potential, it is observed that 26% of the overall potable water potential comprises of groundwater and 74% comprise of surface water. 48% of the surface water potential of İzmir province belongs to Küçük Menderes Basin, 38% belongs to Northern Aegean Basin, while 14% belongs to Gediz Basin (DSİ, 2012).

In terms of resource amounts, surface water sources satisfy much of the water potential. Regarding utilisation of water on the other hand, groundwater utilisation ratio that was 90% in the year 2008 declined to 69% as of the year 2011. Compared to year 2008 data, it is observed that the surface water sources' share of source distribution increased while the groundwater utilisation ratios declined.

¹⁰³ The method of calculation used for annual water potential of Turkey and the method of calculation used for annual water potential of İzmir are different, and thus these two data are not comparable.

Considering the distribution of annual total water consumption in İzmir (589 hm³) by activity, it is observed that agricultural activities take up the first place (Figure 80).

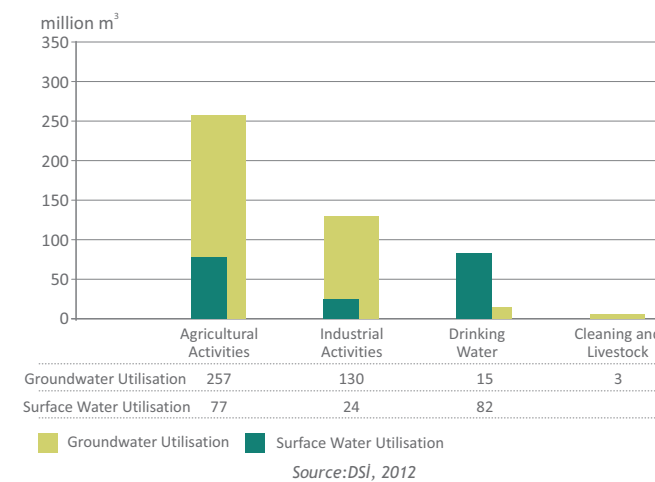
Figure 80:
Distribution of Water Utilisation by Activity



Source: DSİ, 2012

Furthermore, analysis of sources indicates that surface water is used most for drinking water (45%) and agriculture (42%) purposes, while groundwater is used most for agriculture (63%), followed by industry (32%) purposes (Figure 81).

Şekil 81:
Distribution of Annual Groundwater and Surface Water Utilisation by Activity Type

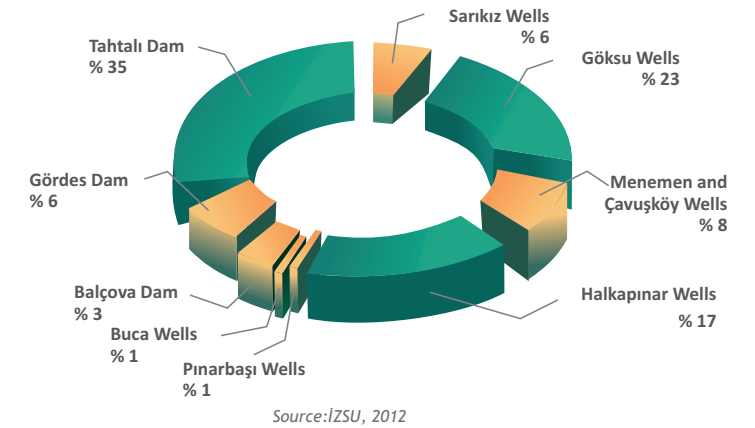


Source: DSİ, 2012

The share of population served with drinking and utility water within the overall municipality population in İzmir occurred to be 99% as of the year 2010, overtaking the Turkey average value (99%). On the other hand, the share of population served with drinking water treatment plant within overall municipality population rose from its 2006 value of 29% to 77% as of year 2010. This value is below that of İstanbul (87%) and Ankara (94%). İzmir performed below Turkey average of 49% in 2006, but rose above the Turkey average of 54% as of the year 2010 (TurkSTAT, 2012).

Furthermore, the distribution of 190,512,247 m³ water production that encompasses the water given to 11 districts covered by the former metropolitan borders

Figure 82:
Distribution of Year 2011 Water Production by Sources



Source: İZSU, 2012

(Konak, Karşıyaka, Çiğli, Bayraklı, Bornova, Buca, Gazıemir, Karabağlar, Balçova, Narlıdere and Güzelbahçe) and partially to Menemen and Urla districts after treatment by sources indicate that 75% of the production comes from Tahtalı Dam and Gökkuşu and Halkapınar Wells (Figure 82).

Examination of drinking water reveals that a treatment plant capacity of 1,140,630 m³/day total is active in the province. 35% of these plants were commissioned after 2008, and founded as to satisfy the investment demand defined in 2010-2013 İzmir Regional Plan.

When the total water consumption in İzmir is concerned, it is seen that daily water amount per capita is 407 L/person-day. On the other hand, the amount of water per capita within municipality service area is calculated as 175 L/person-day. The difference between these values reveals the high water amounts utilised especially for agricultural and industrial activities outside of drinking and utility water purposes. Furthermore, data on the change of drinking and utility water consumption within municipality service area by years reveals that water consumption per capita decreased until the year 2009, while gaining a mild rising trend following this year (Figure 83). One of the major reasons behind the change observed after 2007 is considered to be the water conservation campaign that included the objectives of preventing seepage and losses of water.

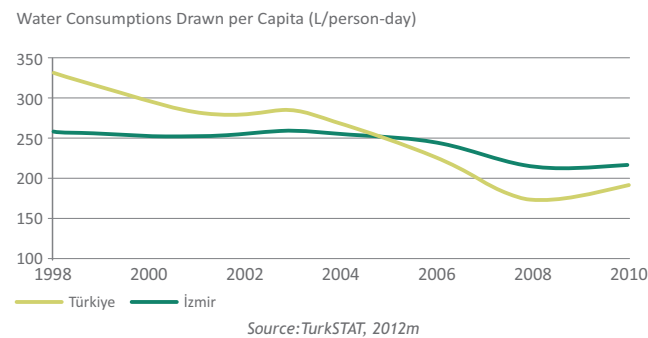
Figure 83:
Water consumption per Capita within Metropolitan Municipality Service Area, 2007-2011, L/person-day



Source: İZSU, 2012

When the daily water consumptions drawn per capita by all municipalities is compared to Turkey average, it is observed that İzmir had a consumption above that of Turkey average until the year 2005 but declined below Turkey consumption average after this year (Figure 84). In addition, water consumption at both levels is found to be decreasing by years.

Figure 84:
Daily Water Consumptions Drawn per Capita by Municipalities,
1998-2010, L/person-day



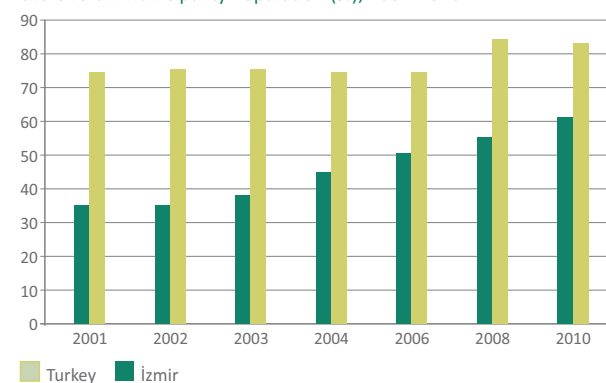
Prioritised districts in terms of drinking and utility water grids and services investments were determined to be Dikili and Kınık. The ratios of population served with treatment plant in Çeşme and Ödemiş districts within the overall municipality population were found out to be 81% and 14% respectively –lower than other districts. Another important determination regarding districts is that values of daily water amount drawn per capita in Çeşme and Bayındır districts occurred to be respectively 508 L/person-day and 540 L/person-day, considerably high compared to that of İzmir (192 L/person-day) and other districts. In terms of wastewater amounts, this ratio is high in Çeşme while low in Bayındır district. The high amount of water consumed in Bayındır is considered to arise due to ornamental plants cultivation and other agricultural



activities, while the high amount calculated for Çeşme is observed to emerge due to intensive touristic activities.

The ratio of population served with wastewater treatment plant (WTP) within the overall municipality population in İzmir display a stable growth trend (Figure 85). This value occurred to be 85% in the year 2010, considerably above the Turkey average of 62%. In developed countries, this same value varies between 85% and 100% especially in areas prominent in regards to tourism sector (EUROSTAT, 2011).

Figure 85:
Ratio of Population Served with Wastewater Treatment Plant within
the Overall Municipality Population (%), 2001-2010



There are a total of 27 wastewater treatment plants in operation in İzmir as of the end of year 2010 with a total installed capacity of 802,757 m³/day (10 biological, 13 advanced, 4 natural) (Ministry of Environment and Urbanisation, 2011). The total number of wastewater treatment plants in İzmir has displayed an increase of 60% since year 2008. In addition to this, 25% of all advanced wastewater treatment plants throughout Turkey are situated inside İzmir (TurkSTAT, 2012m). Between the years 2008 and 2011, several wastewater treatment plants with a total capacity of 199,306 m³/day were commissioned. In this framework, a certain level was achieved in Foça, Menemen, Kemalpaşa, Aliağa, Seferihisar, Torbalı, Urla, Bayındır, Selçuk, Menderes and Ödemiş districts. However, Beydağ, Tire and Kınık districts are observed to be inadequate in terms of wastewater treatment and thus considered prioritised districts in this regard. On the other hand, construction of an advanced biological treatment plant with a capacity of 25,000 m³/day is underway in Menderes district.

The ratio of population served with sewer grid within the overall municipality population in İzmir occurred to be 90% as of the year 2010, higher than the Turkey average of 88% (TurkSTAT, 2012m).

According to year 2010 TurkSTAT data, the share of population served with a sewerage grid within overall municipality population is relatively low in Bayındır, Çeşme, Karaburun and Dikili districts. Also, Karaburun

was observed to rank significantly low regarding the ratio of population served with treatment plant with a value of 22%. In regards to daily amount of wastewater produced per capita, Çeşme (504 litre/day-person), has excessive wastewater generation amounts that are higher than İzmir (227 litre/ day-person) and other districts.

4.b. SOLID WASTE MANAGEMENT

Total amount of domestic solid wastes within the municipal area of İzmir occurred to be approximately 4,227 tonnes/day as of the year 2010¹⁰⁴ (TurkSTAT, 2012m). In terms of ratio of population served with solid waste services within the overall population, it is observed that the ratio found out for İzmir as of the year 2010 (93%) (ratio within municipal population 100%) is approximately 10 points higher than those of Turkey and Aegean Region. On the other hand, these values were observed as 98% for Ankara and 99% for İstanbul.

Although at a desirable level in terms of solid waste collection, there are capacity deficiencies regarding disposal in İzmir. Since year 2007, wastes have been disposed of only in Harmandalı Sanitary Landfill Facility. Menemen and Uzundere facilities have been taken out of commission. The total amount of domestic solid waste disposed of in Harmandalı Facility occurred to be 3,145 tonnes/day as of 2011. In the projections conducted during the project design stage of the facility, approximately 3,000 tonnes/day waste capacity was foreseen for the 2014-2015 period. The factors effective in the facility life of use expiration occurred to be the rapid increase of waste amounts due to expansion of municipal borders and rising consumption levels. The total amount of waste disposed of in Harmandalı increases by an average of 10% each year. In this framework, there is a significant demand for establishing a second sanitary landfill facility in the region. During the 2012-2013 period, 10 different sites were assessed for establishing new domestic waste disposal plants, and 2 resulting alternatives were defined after elimination studies aided by geographical information systems. Actions towards receiving opinions from relevant institutions and conducting planning studies have been initialised.

There were 4 solid waste transfer stations with a total capacity of 1,304 tonnes/day capacity (Halkapınar, Kısık, Gümüldür, Gediz) in İzmir as of the year 2008, while this capacity increased to 2,493 tonnes/day in the year 2011. There are a total of 8 transfer stations in 2011, including Torbalı, Karşıyaka, Selçuk and Foça transfer stations.

There was a total of four unsanitary landfills in Aliağa, Kemalpaşa, Mordoğan and Torbalı in the year 2008 but Mordoğan and Torbalı landfills were shut down as of 2011.

Approximately 2.5% (79 tonnes/day) of the 3,145 tonnes of domestic solid wastes were collected within İBB borders within the context of recycling works during 2011. This value was 1% back in the year 2008. Regarding the composition of the waste collected in 2011 on the other hand, it is observed that 35.65% of collected amount comprised of recyclable wastes (İBB, 2012). This fact points out the necessity of increasing recovery rates in waste management. As of the year 2007, 11 licenced packaging waste collecting and sorting facilities located within 18 districts and 38 sub-district municipalities covered inside İBB borders and Environmental Protection and Packaging Waste Recovery and Recycling Foundation (ÇEVKO) formed a consortium to be named as İZGEP A.S. towards the purpose of reuse of packaging wastes (Ministry of Environment and Urbanisation, 2011). Implementations aimed at separate collection of wastes at their source are executed by district municipalities within the context of relevant legal regulations as of the year 2011. Official institution inspections have to be effective and supportive for such implementations to be made widespread and continuous.

In terms of amount of waste batteries collected in provinces as of year 2009, İzmir comes at the fourth place with a value of 26,094 kg/year following İstanbul, Ankara and Kocaeli. 10% of the entire amount of waste batteries collected throughout Turkey is obtained from İzmir. With a total collected waste batteries amount of 4,704 kg (9%), İzmir is ranked at the third place following İstanbul and Ankara. Also, İzmir ranks at the second place regarding the number of licensed waste battery collection vehicles with 25 vehicles following Ankara (Ministry of Environment and Urbanisation, 2011). All these facts point out the infrastructural power of İzmir regarding recovery and waste management activities.

In regards to the share of population provided with waste services within overall municipality population, Menemen and Selçuk districts (with a value of 95%) fall behind other districts.



¹⁰⁴ Calculated based on average municipal waste amount per capita that was presented as 1.26 (kg/person-day) within the waste statistics data set of TurkSTAT for the year 2010 and ABPRS data.

Also, when the average municipality waste amounts per person are considered, it is observed that these values are very high in Karaburun and Çeşme (4.77 – 3.52 kg/day-person), pointing out to the necessity of reducing wastes arising from touristic activities through recycling processes.

4.c. AIR QUALITY

The sources of air pollution in İzmir are fuels used in transportation, industrial plants and domestic heating –during winter months. According to İzmir Province Clean Air Plan prepared in the year 2001; it was indicated that industrial plants' sulphur dioxide (SO₂), domestic heating based smoke –i.e. airborne particulates (PM₁₀), traffic based nitrogen oxides (NO, NO₂ and NOx), volatile organic compounds and carbon monoxide (CO) have become more important sources for air pollution (İBB, 2008). Cement factories, stone quarries, crushed stone plants, asphalt plants and iron-steel factory that remained inside or in close proximity to the city due to errors made in positioning are the industrial plants that adversely impact the city's air quality. Especially the electric arc furnace iron and steel plants (plant producing steel from scraps), ship dismantling facilities, refinery, petrochemistry, gas filling facilities, rolling plants and other facilities, which are functioning in Aliağa and are all classified as “facilities with high pollution characteristic” within regulations, are the most important air pollutants in İzmir. The reason behind that is the pollutants discharged to atmosphere being carried away through long distances due to prevailing winds, carrying the pollution arising in Aliağa to the south, towards the city centre of İzmir (İBB, 2008).

There are 7 air quality measurement stations within İzmir, namely at Alsancak, Buca, Bornova, Karşıyaka, Güzelyalı, Çiğli and Buca. Also, the Ministry of Environment and Urbanisation collects measurement values from Gaziemir Measurement Station.



¹⁰⁵ PM10: Particulate matter with size below 10 µm.

However, there are no air quality measurement stations in industrial zones such as Aliağa, Torbalı, and Kemalpaşa. When the PM₁₀¹⁰⁵ and SO₂ values calculated through using the data obtained from measurement stations in İzmir as of year 2011 and the limit values defined under the Regulation on Air Quality Assessment and Management and the Regulation on the Control of Industry Based Air Pollution are examined, it is observed that the average PM₁₀ value for year in İzmir is not close to the year 2011 limit value defined for human health (Table 130).

Table 130:
PM₁₀ and SO₂ Existing and Limit Values

Parameter	Unit	Existing Value (2011 average)	Limit Value (2011)	Limit Value (2013)
PM ₁₀	µg/m ³	57	96	60
SO ₂	µg/m ³	16	175	125

Source: İBB, 2012

However, gradual reduction is stipulated within the context of relevant regulation. This limit value will be 125 for SO₂ and 60 for PM₁₀ in year 2013. This parameter was defined as 50 for European Union. Therefore, although the actual values remain below the defined limit values, it is significantly above the EU values planned to be reached gradually, and air quality improvements have to be made in terms of living quality. On the other hand, analysis of the data indicating the daily average levels calculated over instantaneous measurements on the website of air monitoring stations via the existing measurement stations reveal that the PM₁₀ level in the air considerably exceeds the threshold values especially during winter months.

Furthermore, permanent organic pollutants' sources, air and soil content levels have been researched by DEÜ Department of Environmental Engineering in the Aliağa-Nemrut area that houses intensive heavy industry. The results have showed that the region was heavily polluted regarding heavy metals and organic pollutants under particulate substance structure (İBB, 2008).

Although the average values of PM10 and SO₂ parameters at and around İzmir city centre have not exceeded existing limit values according to the measurements conducted, it is necessary to carry out actions towards resolution of problems mentioned regarding air pollution in İzmir due to the fact that the legislation to be updated as per EU approximation actions shall also consider the limit for the number of days when limit values are exceeded. Also, regular measurement stations have to be set up in Kemalpaşa, Torbalı and Aliağa districts. Aliağa and Nemrut areas are the places subject to heaviest air pollution due to industrial pollution.

Areas where cement factories are concentrated within İzmir borders also constitute problem regarding air pollution. Certain limits have to be set regarding the qualities of the fuels used for domestic heating and industry in the city, utilised fuels have to be inspected, and transition to natural gas regarding industry and domestic heating has been completed.

4.d. INDUSTRIAL POLLUTION AND POLLUTION CONTROL

İzmir accommodates 9 OIZ's that have been completely and partially commissioned (Aliağa, Atatürk, Buca, Kemalpaşa, İTOB Tekeli, Tire, Bergama, Kınık, Pancar), along with 4 OIZ's planned to be commissioned (Menemen, Ödemiş, Torbalı, Bağyurdu) (İzmir Provincial Directorate of Science, Industry and Technology, 2012). In addition, actively functioning Ege Free Zone and İzmir Free Zone are sites where industry is concentrated. Current states of OIZ's and free zones regarding wastewater treatment plants are explained under Table 131.

Table 131:
The State of Wastewater Treatment Plants (WTP) in the OIZs of İzmir

İzmir	Number of Active Companies	Information on the State of Plants
Aliağa	15	Domestic WTP present. One company uses chemical treatment.
Atatürk	563	WTP present. Deep sea discharge present.
Buca (Ege Giyim)	40	WTP present. (No wet processing)
Kemalpaşa	381	WTP present. 72 companies implement preliminary treatment.
İTOB	67	WTP present.
Tire	38	WTP present.
Bergama	1	WTP not present.
Kınık	1	WTP not present.
Pancar	1	WTP not present.
Ege Free Zone	224	WTP not present. 11 out of 127 manufacturer companies use preliminary treatment.
İZBAŞ	37	WTP present

Source: OIZ and Free Zone Administrations, 2011

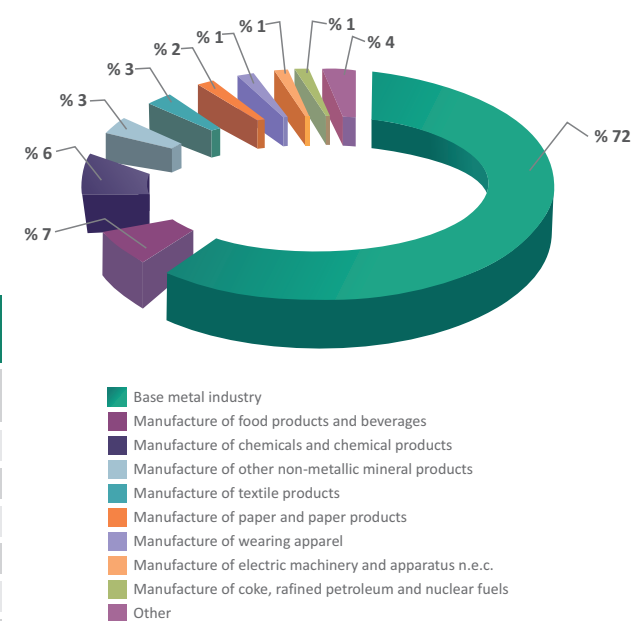
Environmental investments of WTP are observed to be required for Ege Free Zone and OIZ's waiting to be commissioned.

Industry's water consumption occurred to be approximately 26% of the overall water consumption in the region. A significant increase of 15% is observed compared to the year 2008. The amount of water used in industry increases with industrialisation, which is also the case in İzmir. Certain techniques such as recovery, reuse are being implemented for reduction of industrial water consumption. The water amount reused within industry in

İzmir is approximately 10% of the overall water amount, which was measured to be 33% as the average value for Turkey (TurkSTAT, 2008). Reuse ratio of water in industry is observed to be considerably low in İzmir.

The first five sectors with the highest water consumption in industry occurred to be, respectively, base metal industry, manufacture of food products and beverages, manufacture of chemicals and chemical products, manufacture of other mineral products excluding metals and manufacture of textile products (Figure 86).

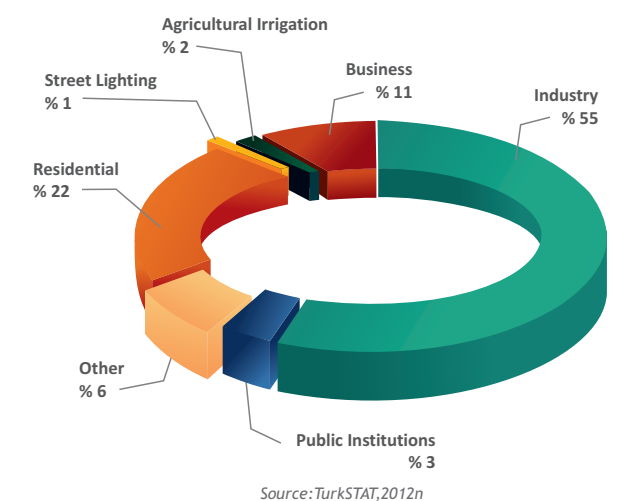
Figure 86:
Sectoral Distribution of Water Consumption of Manufacturing Industry within İzmir



Source: İZKA, TTGV and EBSO, 2012

According to the distribution of electricity consumption values per area of use, industrial establishments are observed as the greatest field of consumption in İzmir (Figure 87).

Figure 87:
Distribution of Electricity Consumption by Areas of Use as of the Year 2010

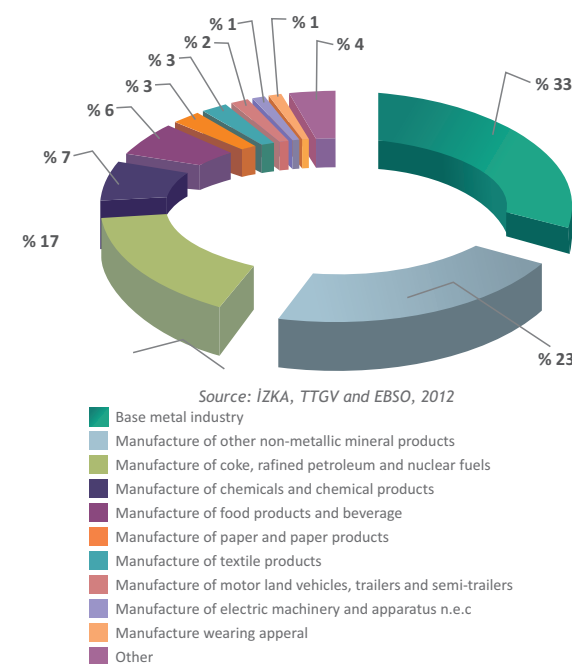


Source: TurkSTAT, 2012n

While Turkey average value for industrial electricity consumption per capita is 1,076 kWh, this same parameter is measured to be 2,091 kWh in İzmir, almost double the value of Turkey average. Utilisation of techniques and technologies that reduce energy consumption along with energy conservation shall contribute to reducing the amount of energy used in industry sector.

In terms of sectoral energy consumption distribution within the manufacture industry of İzmir, the highest share belongs to base metal industry with a value of 33%. (Figure 88). Manufacture of other mineral products excluding metals (23%) and manufacture of coke coal, refined petroleum products and nuclear fuels (17%) are other sectors with the highest energy consumption in İzmir after base metal industry.

Figure 88:
Sectoral Distribution of Energy Consumption within the Manufacturing Industry of İzmir



According to Ministry of Environment and Urbanisation data, a total of 378,504 tonnes hazardous wastes were generated by 3,574 enterprises as of year 2010. On the other hand, the amount of hazardous wastes produced solely in İzmir constitutes 25% of the total amount of hazardous wastes produced throughout Turkey, making İzmir rank at the first place in this regard compared to all other provinces. İzmir is followed by Kocaeli in this regard. Also, 89% of overall hazardous wastes produced throughout all Aegean Region provinces were generated in İzmir (Ministry of Environment and Urbanisation, 2011). When these hazardous waste production amounts are compared to the number and capacity of existing hazardous waste sanitary landfill sites and waste

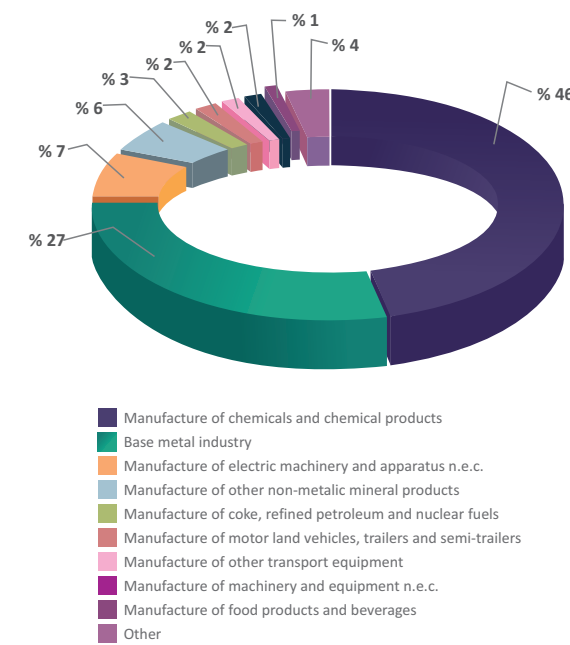
hazardous waste sanitary landfill sites and waste incineration plants, it is observed that the existing disposal capacity is not sufficient for disposal of these wastes. Furthermore, implementation of new regulations to be issued during EU approximation process required additional investments also in this field as is the case with all environmental topics.

6.8% of all industrial wastes generated throughout Turkey comprises of hazardous industrial wastes. This value is 5.8% in Aegean Region and 10.2% in İzmir province (TurkSTAT, 2008). There are 19 hazardous waste recovery facilities in İzmir. Three of these facilities have been licensed for recovery of aluminium slags and shavings. Also, five facilities are capable of realising the recycling of solvents and solvent based chemicals, cable wastes and contaminated packaging wastes. Finally, six facilities have been licenced for the recovery of contaminated metal shaving wastes. There are also four facilities in İzmir that hold temporary operation certificate for the activity of recovery of waste oil, waste metal shaving and waste roentgen bath water in İzmir province. Three facilities have been licenced for utilisation of wastes as additional fuel for energy recovery purposes. In line with the abovementioned licence, facilities use wastes with codes appropriate as per their licences (hazardous/non-hazardous) for additional fuel purposes.

There are 6 iron-steel plants functioning in İzmir. 470,580 tonnes/year slag waste arising from these plants corresponds to 10.5% of all slag waste produced by all facilities throughout Turkey. 47% of all slag wastes generated in İzmir are stored in an unsanitary manner (Ministry of Environment and Urbanisation, 2011). The flue dust wastes that constitutes major part of all hazardous wastes and arises from iron-steel plants in İzmir are collected separately from slag, and sent to the recovery plants located in Kayseri for recycling purposes. However, sometimes the flue dusts have to be stored inside factory sites due to the lack of a facility to process and recover flue dust in İzmir due to not being accepted by licenced facilities. There are no sanitary landfill facilities for hazardous wastes in İzmir. Therefore, hazardous wastes that are devoid of recovery chance and rejected by incineration plants, and wastes generated by incineration plants themselves create problems (İZKA, TTGV and EBSO, 2012).

Furthermore, the district constituting the most problem in terms of industrial and hazardous wastes in the province is Aliağa, which accommodates five iron-steel plants, two petrochemical plants and one ship dismantling site. Types of waste most commonly causing problems regarding disposal are the treatment sludge emerging from leather industry and the slag wastes -defined as non-hazardous waste- emerging from iron-steel industry.

Figure 89:
Sectoral Distribution of Hazardous Wastes within the Manufacturing Industry of İzmir



According to the distribution of hazardous wastes by manufacturing industry sub-sectors in İzmir; manufacture of chemicals and chemical products has the highest share with a value of 46%, followed by base metal industry (27%) and manufacture of machinery and equipment n.e.c. (7%) (Figure 89).

One of the reasons of the significant level of air pollution in İzmir is the presence of industry. The reasons of the particulate matter pollution observed in Belkahve, Naldöken, Doğanlar, Pınarbaşı, Işıkkent, Altındağ and Çamdibi sites are cement factories, steel production plants, crushed rock facilities, stone quarries, limestone quarries and asphalt construction sites. The refinery and petrochemical complex and iron-steel plants inside Aliağa Nemrut Heavy Industry Zone are facilities that generate significant air emissions. Also rolling mills, fertiliser, paper and chemical factories along with ship dismantling sites are among sources of emissions.

It has been mentioned also in different sources that the cement factories, stone quarry, crushed stone plants, asphalt plants and iron-steel factories near the city's vicinity were industrial plants of adverse impact to the city air quality. Especially the electric arc furnace iron and steel plants (plant producing steel from scraps), ship dismantling facilities, refinery, petrochemistry, gas filling facilities, rolling plants and other facilities, which are functioning in Aliağa and are all classified as "facilities with high pollution characteristic" within regulations, are highlighted as the most important air pollutants in İzmir (İZKA, TTGV and EBSO, 2012).

4.e. ECO-EFFICIENCY APPLICATIONS¹⁰⁶

Eco-efficiency is a sustainable development tool through which it is possible to realise more efficient production with higher environmental performance by providing less resource consumption and waste generation for the same amount of production via inclusion of the best techniques and technologies in the production process.

The Strategy Study for Universalisation of Clean Production (Eco-Efficiency) Applications in İzmir has been executed for the purposes of determining the regional capacity related to eco-efficiency (clean production) and making widespread use of relevant applications. The regional capacity in İzmir regarding eco-efficiency has been assessed under four main titles: "Institutional Capacity and Awareness Level", "Information Exchange Networks and Cooperation", "Financial Incentive Mechanisms", and "Policies and Strategies". The results of the survey study conducted by use of "Capacity Assessment Methodology" of United Nations Development Programme (UNDP) have been evaluated over different institution/organisation groups under the four axes. The assessment has been conducted over five different "institution groups" comprising of "regulating public institutions", "supporting public institutions", "universities", "industry representatives" and "consultancy companies".

According to the evaluations thus conducted, it has been found out that some of the stakeholders were having certain difficulties towards clearly separating the eco-efficiency approach from other environment-related approaches (e.g. pollution control). It was observed that "energy efficiency", the aspect of eco-efficiency most commonly known and implemented throughout our country, has held an important place within the projects, studies, publications, activities and trainings that were taken basis in the evaluation

It is observed that there are comprehensive and numerous studies regarding renewable energy in the region particularly due to the contributions of universities, and the success in this field strikes attention. When the evaluation is analysed within the framework of institutions when data on renewable energy are excluded, it is seen that the existing capacity in the region is mostly concentrated within certain institutions.

It has been observed that there were many cooperation and information exchange opportunities



¹⁰⁶ This section has been prepared by using "Report for the Strategy Study for Universalisation of Clean Production (Eco-Efficiency) Applications in İzmir".
http://www.izmirplanlilyorum.org/static/upload/file/ekoverimlilik_10_2012.pdf

existing in the region and that many institutions were ready to develop such cooperative initiatives. It is important to utilise this potential. Although there are various activities and publications aiming towards information exchange in the region, they are open to improvement particularly regarding eco-efficiency (clean production) aspect. There are plans and objectives towards directing existing and new financial sources - particularly supporting public institutions- to eco-efficiency (clean production applications. Redirecting such resources in a systematic manner and by being supported through a strong infrastructure and capacity is of importance.

12 criteria¹⁰⁷ were defined for making a comparison and prioritisation between sectors regarding eco-efficiency (clean production) applications. These criteria reflect the environmental state of sectoral structure, contribution to national economy, and future eco-efficiency potentials.

For the purpose of assessing the manufacturing industry sectors within the framework of determined criteria, the environmental statistics that have been published by TurkSTAT aimed at the manufacturing industry sector throughout Turkey were reduced to region scale by taking the regional sector's share within the sector throughout Turkey and these data were used in the analyses. In conclusion of the analyses conducted via the mentioned methods based on these criteria, the sectors prioritised for eco-efficiency (clean production) applications in İzmir were determined as below.

- Manufacture of basic metals
- Manufacture of chemicals and chemical products
- Manufacture of food products and beverages
- Manufacture of other non-metallic mineral products
- Manufacture of wearing apparel and textile products
- Manufacture of refined petroleum products

It is observed that sector-focus in eco-efficiency applications increases success throughout the world. Although it is possible to implement eco-efficiency applications at different levels in each different sector, sectoral prioritisation is of importance regarding effectiveness of universalisation activities. Therefore, it is considered that applications to be carried out in the abovementioned sectors will trigger eco-efficiency applications in the region.

¹⁰⁷ Criteria defined for being used in sectoral conformity analysis for eco-efficiency applications: Consumed water amount, consumed energy amount, discharged wastewater amount, generated solid waste amount, generated hazardous waste amount, greenhouse gas emissions, Herfindahl-Hirschman Index, sectoral employment, number of companies in sector, export share of sector, generated value added, share of regional sector within overall Turkey sector and eco-efficiency potential.

4.f. MARINE AND COASTAL AREAS

The treatment plant commissioned in the year 2000 for the purpose of eliminating domestic and industrial pollutants and preventing pollution in İzmir Bay within the framework of Grand Canal Project treats a portion of industrial wastes and 70% of domestic wastes pouring into the Bay and enables redirecting them into Middle Bay (Orta Körfez) over at Çiğli area. The treatment plant contains a biological system where nutrient elements such as nitrogen and phosphor can be treated (İZKA, 2009).

It is possible to mention that there have been certain declines in the faecal coliform concentrations of the Inner Bay (İç Körfez) following the construction of this treatment plant. Another important indicator of the environmental improvement at the Inner Bay is that the number of zoobenthic species increased by 60% to achieve 231 (İBB, 2008).

However, certain pollution inputs adversely affecting this improvement process still persist. Pollutant loads brought by Gediz and streams reaching the bay, agricultural pesticides dragged by surface and drainage waters formed due to agricultural activities inside Bay water catchment area, artificial and natural fertiliser loads, harbour and marina activities, and loads produced due to maritime traffic constitute main sources of pollutants. Various sized streams such as Sazlıca Stream, Kavaklı Stream, Bostanlı-İlica Streams, Tahtalı Stream, Bornova Stream, Manda Brook, Arap Brook, Melez Brook, Poligon Stream, Balçova Stream, Laka Stream, Kocasu Stream and Gediz River pour into İzmir Bay. These streams and Gediz River convey all the pollution generated within their basins to the bay. Especially Gediz River that conveys the wastewaters coming from Kemalpaşa Industrial Zones and Manisa province into the bay is one of the particularly significant pollutant branches (İBB, 2008). The impact of Gediz River, which runs through a wide basin and gets affected by industrial zones before pouring into the bay, should not be disregarded.

Besides the Bay, İzmir has significant assets of marine and coastal areas. 101 km of its entire 629 km coast is comprised of natural beaches. There were 32 beaches awarded with blue flag as of the year 2011.

Antalya and Muğla, competitor provinces of İzmir regarding sea tourism, have left İzmir behind in regards to the number of blue flagged beaches with 190 beaches and 76 beaches present respectively in these provinces. According to TÜRÇEV, authorised organisation forwarding of blue flags; although seas in İzmir region are usually clean, investments to be made on sewer infrastructures and WTPs in areas of tourism value are important due to the fact one of the criteria is the need for the existence of treatment plants.



Another issue of importance regarding marine and coastal areas is the protection zones bearing national and international significance. Especially Karaburun and Foça are the most important coastal areas where an integrated coast management approach should be embraced.

4.g. BASIN AREAS

Gediz, Küçük Menderes and Bakırçay rivers form three important basins. Gediz basin springs from Murat and Şaphane mountains within Kütahya province borders and flows into İzmir Gulf between Foça and Çamaltı Salt Mine. Total area of Gediz basin is 17,500 km² and within the basin reside Manisa with its 12 district centres, İzmir with its 4 district centres (Foça, Kemalpaşa, Menemen, Çiğli), Kütahya with its 1 district centre and Uşak with its city centre included. All studies conducted on the streams within the basin, which also houses the İzmir Bird Sanctuary (Kuş Cenneti) that has been declared Ramsar area¹⁰⁸ of international importance, indicate that Gediz River has Class IV water quality all along the basin length especially due to organic pollution and heavy metals (İzmir Provincial Directorate of Environment and Urbanisation, 2012). Compared to year 2009 data that indicated Class III water quality, it is observed that there is a rising pollution in Gediz River.

For the purpose of improving the water quality of Gediz basin, Gediz Basin Environment Protection Service Department has been founded and Gediz Basin Action Plan has been prepared and sent to all relevant institutions and organizations. Coordination between provinces and institutions is vital for realisation and completion of the activities envisaged within the context of this action plan.

Considering the domestic waste in Gediz basin, although all towns of Kemalpaşa have sewage system, and the WTP was completed in the year 2010. Menemen and Foça wastewater treatment plants were also commissioned to serve the population.

There are treatment plants in Kemalpaşa OIZ, Manisa OIZ and İZBAŞ located within Gediz Basin. The pollution experienced in the basin arises from Kütahya, Uşak, Manisa and İzmir provinces, and significant pollution is observed also on the branches joining Gediz River. The most important sources of water pollution seen in the basin are İzmir-Kemalpaşa and other OIZs, individually built industrial plants, and settlements without treatment plants, particularly Menemen. Control of pollution in Gediz basin constitutes responsibility for all four

¹⁰⁸ Ramsar Area means any areas protected according to Convention. Ramsar is a city in Iran, giving the Convention its name due to being the place where it was signed.

four provinces in the region. Gediz basin constitutes one of the most important crossroads regarding the relationship of İzmir with neighbouring provinces.

Industrialisation in settlements such as Manisa, Akhisar, Kemalpaşa, Kula, Menemen, Alaşehir and Salihli within the Gediz River basin is on a rapidly rising trend. Excluding a few OIZs in the region, all industrial facilities display an irregular and individual settlement pattern (İZSU, 2009).

The return waters from irrigation of Menemen Lowland, which is one of the largest irrigation areas of Gediz basin, are collected through drainage channels. Collected drainage waters are discharged directly to the sea without joining the main branch of Gediz River. However, irrigation return waters emerging from part of Manisa and Turgutlu lowlands and waters that may be subject to surface flow to reach the streams from these irrigation areas including Menemen Lowland along with irrigation surplus and drainage seepage waters cause pollution. Pesticides and fertilisers used senselessly in an uncontrolled manner by farmers follow surface flow through irrigation and precipitation and reach both the river and groundwater sources. Pressurised irrigation systems along with sustainable agriculture applications such as good agriculture and organic agriculture should be developed and the awareness of farmers should be raised, particularly in Menemen (İzmir Provincial Directorate of Environment and Forestry, 2009).

Gediz River Basin is one of the most important water basins within İzmir Metropolitan Municipality borders. Gediz River satisfy the drinking and utility water needs of both the basin and İzmir metropolis. Gediz Delta and wetland (İzmir Bird Sanctuary that shelters 210 bird and 308 plant species) bears special significance also due to being an area protected by law and included into the context of Ramsar Convention in the year 1997 (TMMOBChamber of Environmental Engineers, 2009).

Küçük Menderes basin covers the area between Gediz and Büyük Menderes rivers, and the river springs from Bozdağ and passing through Kiraz, Beydağ, Ödemiş, Tire, Bayındır, Torbalı, Selçuk districts it flows into Aegean Sea at Selçuk district of İzmir province. Facing pollution threat with a Class IV water quality, the basin is among important basins of West Anatolia awaiting development with its irrigable plain capacity of 70 thousand hectares. Basin underground water levels are falling in the basin and thus irrigation applications are aimed to be realized via developing the surface water sources. In this regard, Beydağ Dam is among important dams (İZKA, 2009).

The economic significance of Küçük Menderes basin renders its sustainability crucial and brings out the issue of preservation. Within the basin, Kiraz and Selçuk districts house WTPs. The treatment plant in Selçuk is natural treatment type. The treatment plant in Kiraz, on the other hand, is not being operated. Although Beydağ and Tire districts have sewerage systems, they do not have domestic WTPs. Since year 2008, wastewater treatment plants have been put into commission in Bayındır, Torbalı and Ödemiş districts within the basin. Solid wastes are stored in unsanitary manner at Küçük Menderes basin.

Only one solid waste disposal facility of Ödemiş Municipality is currently at project design stage.

Industrial development within the basin occurs along Torbalı-Tire-Ödemiş axis. Most of the establishments in the basin are facilities based on processing of agricultural products. According to the year 2007 data of İzmir Provincial Directorate of Environment and Forestry, approximately 550 establishments exist within Küçük Menders basin and approximately 54% of these do not have WTP. In some of the establishments, no process wastewater forms but instead only domestic wastewater is generated.

The waste that forms due to the excessively used chemical pesticides and fertilizer wastes within Küçük Menderes basin area pose threat for the basin. Also, the water level constantly decreases due to excess underground well drilling. Therefore awareness raising works should be conducted within the region.

The basin is of vital importance due to agriculture activities in all of the districts in the basin and great touristic value of Selçuk district which is where the basin waters reach sea (İzmir Provincial Directorate of Environment and Forestry, 2009).

Bakırçay River springs from the slopes of Kocadağ within Soma district of Manisa province, and passing near Bergama and Kınık, flows into Aegean Sea at Çandarlı. The most important pollution source of the basin is the coal preparation plants in Soma and the Soma Thermal Power Plant. Defined as polluted with water at Class III and Class IV quality, solid waste at all municipalities within the basin are stored in unsanitary manner.

There is one solid waste disposal facility in operation within the basin belonging to Bergama Municipality. A sewerage system exists but WTP does not exist in Kınık. Domestic wastewaters of all villages other than Terzihallier, Dağıstan, Göbeller, Karaveliler, Yukarıbey villages are discharged into Bakırçay River.

Agriculture is being done extensively at all districts situated within Bakırçay basin. Wrong irrigation techniques are implemented and excess pesticides are utilised. In addition to agriculture, tourism is also of considerable importance for the region. Acropolis, Asklepion, Bazalika and mosques located in Bergama, and Kozak Highland, along with Çandarlı Castle in Çandarlı are important centres of tourism (İzmir Provincial Directorate of Environment and Forestry, 2009).

The pollution within Bakırçay basin is caused mostly due to the processing and cooling waters of Soma Thermal Power Plant outside İzmir province borders, along with domestic wastewaters, industrial establishments such as olive oil and dairy products manufacturing, mining activities and agricultural activities (Gündoğdu, V.; Turhan, D. 2004).

4.h. BIOLOGICAL DIVERSITY AND SENSITIVE ECOSYSTEMS

According to İzmir Provincial Directorate of Food, Agriculture and Livestock, the lands of İzmir province that has a total acreage of 1.2 millionhectares comprise28.2%of agricultural lands, 4.2% of pasture and meadow lands, 40.6% of forests and heathlands, and 27%of non-agricultural lands. According to CORINE statistical data on İzmir province, it is observed that the land use changes during the 2000-2006 period occurred mostly as decline in forest and semi-natural areas and increase in artificial areas (Ministry of Environment and Urbanisation, 2011

Considering flora and vegetation in İzmir province, it is observed that plant species in need of protection are concentrated in Bozdağ, Nif Mountain, and Alaçatı Zeytineli coasts. Moreover, Gediz Delta, Küçük Menderes Delta and Gebekirse Lake are also rich in plant species.

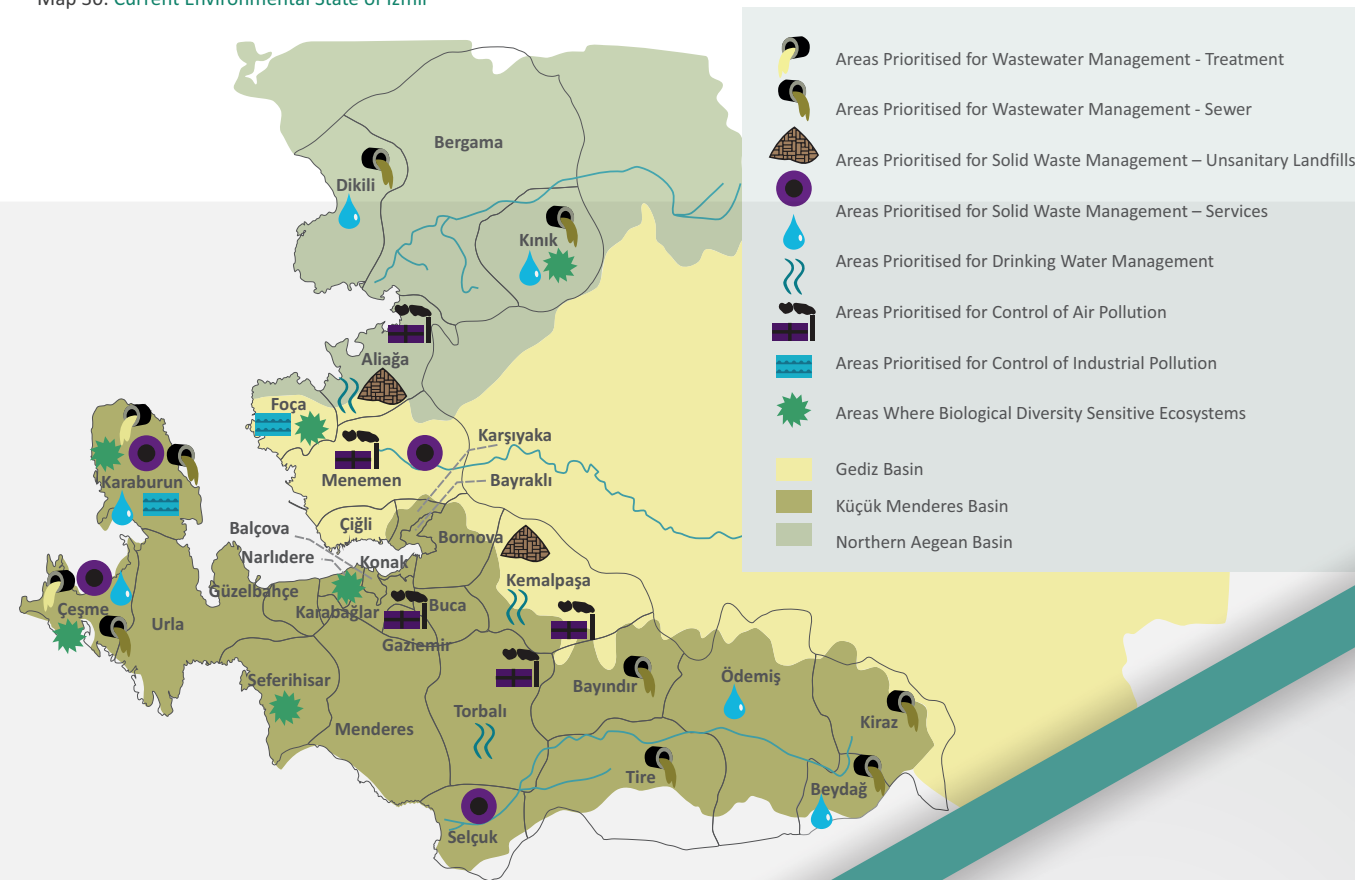


The most important issue to be emphasized considering the fauna of İzmir is that the coasts of İzmir constitute feeding and breeding grounds for the Mediterranean Monk Seal that is among the world's rarest 12 mammals and the most endangered species throughout Europe. Foça that is under protection and Karaburun Peninsula, under no protection, both offer sheltering, feeding and breeding grounds for the Mediterranean Monk Seal. Seals use the Ayıbalığı Cave in Karaburun for sleeping and birthing. On the other hand, the coasts between Aliağa and Menemen, at the west of Nemrut Port and at the north of Gediz Deltaalong with the coasts between İzmir and Çeşme and between Aydın and Kuşadası are also important feeding and breeding grounds for the seals. Turkey is one of the two countries that offer habitat for Mediterranean Seals. 300-350 out of 450-500 remaining Mediterranean Monk Seals live along the costs of our country and Greece. Besides Foça and Karaburun, another region of the same amount of importance for İzmir fauna is Gediz Delta that houses 210 out of 426 bird species existing in Turkey. Küçük Menderes Delta and Gebekirse Lake, mammals, birds and reptiles of fresh water, salt water, land and marsh environments are in abundance. There are two wildlife preservation areas (WPA) in İzmir, namely Bayındır-Ovacık WPA and Selçuk Gebekirse Lake WPA. The only site with a Special Environment Protection Area (SEPA) status in İzmir is in Foça. Foça was declared as a SEPA in the year 1990.

While significant due to its natural beauties, historical assets and mythological importance, the region has gained this status due to sheltering Mediterranean Monk Seals. Special environment protection areas defined according to international conventions are Foça that was designated as “Mediterranean Monk Seal Living and Breeding Ground” by Bern Convention, and Gediz Delta Bird Sanctuary that gained protected area status within the framework of Ramsar Convention in the year 1998 (İZKA, 2009).

Wetlands under protection within the province are İzmir Bird Sanctuary, Karaburun Sazlı Lake 1, MenemenSazlı Lake 2, Karşıyaka Yamanlar Karagöl Lake, Bornovaİkiz Lake, GaziemirOğlananası Lake, Selçuk Belevi Lake, Geberik and Barutçu Lakes. Water source protection areas cover Tahtalı, Alaçatı, Değirmendere and Balçova dams. Four different groups of protection areas exist for each of the dams.

Map 30: Current Environmental State of İzmir



4.i. ASSESSMENT

İzmir is a province rich in natural resources, and very important considering its energy resources, biological diversity, soil fertility, water basins and mineral deposits. Presence of very diverse urban, agricultural and industrial activities in İzmir increases the importance of environmental sustainability.

The most important environmental issue in the city is the basin pollution that arises due to domestic wastes, and agricultural and industrial activity wastes. Gediz, Küçük Menderes, Büyük Menderes and Bakırçay Rivers that are the source of 3 out of the total 26 water basins of Turkey also constitute the stream network of İzmir province.

Besides these important water sources, İzmir is also a city of agriculture and industry regarding its socioeconomic structure. The untreated wastewaters and solid wastes of Beydağ, Kiraz and Tire districts cause pollution of Küçük Menderes basin, while Bakırçay River is polluted due to partial wastewater problems experienced in Kınık.

Gediz Basin receives much of the pollution from Manisa, while also being exposed to intense pollution due to urban wastes and industrial activities in Kemalpaşa and Menemen districts. Especially the industrial activities in Kemalpaşa and senseless agricultural activities in Menemen are the greatest sources of pollution. Due to the economic value of Küçük Menderes and Gediz basins, their Class IV pollution levels cause important problems for the province.

Technical and financial supports are required for implementation of environment management systems aimed especially at industrial and agricultural activities in addition to treatment of domestic wastewaters in these areas. Likewise, there is great need for farmer trainings on sensible and modern agricultural applications especially in Gediz and Küçük Menderes basins.

Investments are required for sewer services in Bayındır, Çeşme, Karaburun and Dikili districts. This issue is of importance especially against potential odour problems to be faced in touristic areas. On the other hand, Karaburun was revealed to be an area prioritised for investment in terms of wastewater treatment plant services. Regarding wastewater production per capita, Çeşme has an excessive difference compared to other districts. Therefore, taking measures towards reducing water consumption in touristic activities in the district is also of importance.

There are two unsanitary landfill sites in Alioğa and Kemalpaşa. Menemen and Selçuk are districts in need of improvement regarding waste services. Karaburun and Çeşme are districts where measures should be taken towards domestic waste reduction. There is also need for investments regarding storage and disposal of hazardous wastes emerging from industries. 88% of all hazardous wastes emerging within Aegean Region arise due to industrial activities in İzmir. High amounts of waste and few number of hazardous waste disposal facilities cause problems, leading to illegal waste dumps.

Garbage poured into the bay over stream beds also cause problems. With the WTP commissioned back in the year 2000 in İzmir Bay, significant improvement was observed in the ecosystem. However, certain pollution inputs that adversely affect this rehabilitation process are still present in our day. Streams of various sizes such as Sazlıca Stream, Kavaklı Stream, Bostanlı-Ilıca Streams, Tahtalı Stream, Bornova Stream, Manda Brook, Arap Brook, Melez Brook, Poligon Stream, Balçova Stream, Laka Stream and Kocasu Stream and Gediz River pour into İzmir Bay. These streams and Gediz River convey all pollution emerging within their basins into the bay. Especially Gediz River that conveys the wastewaters coming from Manisa province into the bay is one of the particularly significant pollutant branches.

Air pollution is another significant environmental problem in İzmir. Especially the industrial air pollution arising from Alioğa causes serious problems for the entire city. Also, it will be possible to reduce pollution arising due to domestic heating through utilisation of the significant geothermal renewable energy resources in the province and universalisation of natural gas.



İzmir houses important sensitive ecosystems. Foça is one of the 14 SEPA zones throughout Turkey, and shelters Mediterranean Monk Seals. Gediz Delta was declared as a Ramsar area of international significance. Gediz Delta houses 210 out of 426 bird species existing in Turkey, which include 28 species such as spur-winged plover, Dalmatian pelican, common kestrel, Eurasian thick-knee and ruddy sheldrake that are endangered worldwide. There are 700 plant species, of which 11 are endemic species. Furthermore, Kemalpaşa (Nif Mountain), Çeşme (Alaçatı, Zeytinli), Karaburun, Ödemiş (Bozdağ) and Selçuk also shelter special species.

İzmir is a province that is in the process of converting its richness of natural and cultural assets into tourism assets. The fact that economy of İzmir is also based on industry and agriculture increases the importance of preventing and controlling the environmental pollution emerging from these fields.

Table 132:
Distribution of Environmental Demands by Districts

[illegible]



Infrastructure And Accessibili



13.951

The number of automobiles
per a hundred thousand
people according to
2012 data

39,9 %

the share of public
investments in
transportation/
communication
in İzmir

1.791.768

The total number of 2011
railway passengers

Accessibility is one of the main actors of regional development. Increase of accessibility in a region will present positive effects also regarding employment and investment due to providing wider workforce market and investment opportunities. When compared to region's other provinces, the accessibility level of İzmir comes at the top, while the province usually ranks at the third place throughout the country following İstanbul and Ankara (Kara, 2008).

5.a. TRANSPORTATION INFRASTRUCTURE

A total of 2,971,564,000 TL transportation investment was made in İzmir between the years 2003 and 2011. When the sectoral distribution of year 2011 public investment expenditures is inspected, it is seen that the highest share of investment (29.6%) has been made in the transportation/communication sector throughout Turkey. 39.9% of overall İzmir public investments (243 million TL) was made in the transportation/communication sector. This value corresponds to 82% of overall Aegean Region investments and 2.3% of overall Turkey investments in this field (İZKA and Development Bank, 2012).

Regarding the sectoral distribution of year 2012 public expenditures, transportation received a share of 47% with an investment total of 563 million TL.

5.a.1. National and International Connections of İzmir

As the biggest city of Aegean Region and third biggest city of Turkey, İzmir has a dense passenger and freight traffic. İzmir, being the centre of Aegean Region, also connects the agriculture, industry and tourism areas together with a traffic stretching from north to south. In addition to this, the province benefits from international connections due to the cruise port and largest export port features of the seaport along with Adnan Menderes Airport.

İzmir connects to all neighbouring provinces directly via highways, and benefits from İzmir Beltway, İzmir-Çeşme Motorway and İzmir-Aydın Motorway. The motorway route to connect İzmir to Bursa over Manisa is being designed towards the east of the city to Kemalpaşa-Turgutlu direction.

State highways connecting İzmir with surrounding provinces are generally in the form of divided roads. There are two highway lines towards the north and south of İzmir. The highway that stretches towards east of İzmir passes over Uşak and Afyon to reach Ankara. This road connects the interior regions of Aegean Region and Central Anatolia to Aegean Sea (Map 31).

Due to being at the west of Anatolia Peninsula, İzmir has the characteristics of a portal to foreign countries via maritime transport. Although the province has a high potential regarding maritime accessibility, it fails to use this advantage effectively at national and international platforms.

5.a.1.a. Highways

The share of land traffic within overall passenger and freight transport of Turkey is considerably high. In EU member states, the share of highways is 45% for freight

transportation and 79% for passenger transportation, while the same values are observed to be 92% and 96% respectively in our country as of the year 2011 (İZKA and Development Bank, 2012).

Of the total 5,903 km highway network within İzmir provincial borders, 1,295 km comprises of state and province highways, 213 km comprises of motorways, 4,395 km comprises of village roads (Table 133). Aegean Region highways network has a share of 10.9% within the overall Turkey highways network, while İzmir province's highways network receives a share of 14.6% within Aegean Region highways network. İzmir province comes out to be the fifth among all provinces and first among Aegean Region provinces regarding provincial and state highways (TurkSTAT, 2011a).

Table 133:
Road Lengths of İzmir, Aegean Region and Turkey

Road Type/Region	İzmir	Aegean Region	Türkiye
Motorway	213	264	2.119
Province and State Highway	1.295	7.287	62.930
Village Road	4.395	32.819	305.227
Total	5.903	40.370	370.276

Source: TurkSTAT, 2011a

Map 31: Highways and Motorways Map of İzmir and Vicinity



Source: İBB, 2012c

5.a.1.b. Railways

The first railroad establishment inside Anatolian lands was the 130-kilometre İzmir-Aydın line completed in the year 1866 after being undertaken by an English company in the year 1856. Due to the fact that the first railroad line was commissioned in İzmir, the province has a leading and special place within railroad transportation sector.

According to TCDD statistics, the length of mainline transportation on İzmir-Eskişehir, İzmir-Ankara, İzmir-Bandırma, İzmir-Denizli and İzmir-Isparta lines corresponds to 3.4% (331 km) of the overall mainline length throughout Turkey. İzmir-Ödemiş, İzmir-Uşak and İzmir-Bandırma lines also allow for regional line passenger transportation. Railroad transport opportunities exist to industrial areas located along Menemen-Aliağa, Kemalpaşa-Manisa, Tire-Torbalı axes (TCDD, 2012b).

Table 134:
Railways in the Region and throughout Turkey, 2007-2011, (km)

Regions	2007	2008	2009	2010	2011	2011 Pay (%)
İzmir	325	331	331	331	331	3,4
Aegean	1,632	1,686	1,695	1,695	1,695	1.5
Turkey	8,697	8,699	9,080	9,594	9,642	100

Source:TurkSTAT, 2011a

In terms of railroad networks, Aegean Region was observed to cover a 17.5% ratio of Turkey overall railroad network length as of the year 2011 (Table134). The share of İzmir province within the railroad network of Aegean Region was found out to be 19.5%, and the same ratio within Turkey was found out to be 3.4%. İzmir province is at the sixth place among 81 provinces in terms of railroad length.

Table 135:
Railroad Lines in İzmir, 2010

Railroad Line	Km
Basmane-Halkapınar	2,7
Menemen-Aliağa	26
Halkapınar-Çiğli	13,2
Alsancak-Şirinyer	6
Şirinyer-Buca	2,5
Şirinyer-A.Menderes Havalimanı	11,7
Alsancak-Halkapınar	2,7
Basmane-Şirinyer	5,4
A.Menderes-Kaklık	268,1
Çiğli-Manisa	50,6
Torbalı-Ödemiş	62,5
Çatal-Tire	10,8

Source: TCDD, 2012b

Although passengers, bulk cargo, container and other load transportation may be realised with railroads, it is not possible to mention that railroad transportation has developed sufficiently in İzmir, which had obtained the culture of railroads very long years ago. Railroad lines in the province and their lengths are given in Table 135.

According to the railroad network access index results, İzmir is ranked at the thirs place following İstanbul and Mersin. The total number of passengers in the year 2011 occurred to be 1,791,768, having risen by over 18% compared to the previous year. The amount of freight transported over railways occurred to be 2,395,447 tonnes, displaying a 9% decline compared to the previous year. This decline is caused by decrease of both incoming and outgoing freight amounts (TCDD, 2012b).

High Speed Train (HST) project that will reduce the travel time between İzmir and Ankara (824 km) from 16 hours to 3.5 hours will have a length of 663 km if built to reach İzmir over Manisa and 624 km if built to reach over Kemalpaşa. With the completion of İzmir-Ankara High Speed Train (HST) project planned by TCDD to be commissioned in the year 2015, transportation of 6 million passengers is estimated. Construction was started on the Polatlı-Afyonkarahisar section of the project in June 2012. İzmir-İstanbul HST project has not yet been taken into public investment programme, and preparation studies are still underway (UBAK, 2012c).

5.a.1.c. Airways

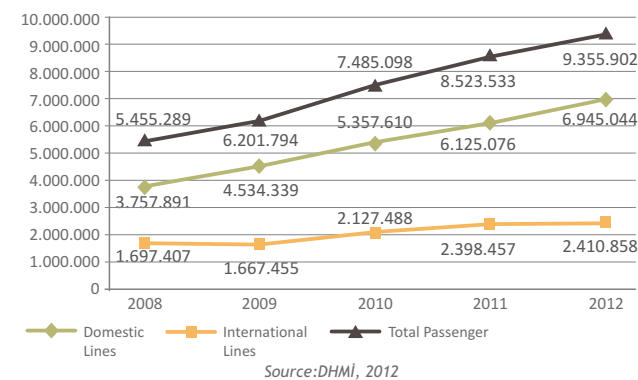
A province's airways accessibility is defined as a correlation of travel time to nearest airport, airport flight traffic and the number of connections with other airports. İzmir ranks at the fourth place in terms of airways accessibility level following İstanbul, Ankara and Antalya. Of the three airports in İzmir province; Adnan Menderes Airport is located in Gaziemir district, Selçuk Airport is located in Selçuk district, and Çiğli-Kaklık military airport is located in Çiğli district borders.

State Airports Authority (Devlet Hava Meydanları İşletmesi - DHMİ) Adnan Menderes Airport commissioned in year 1987 is the most important point in the air traffic of İzmir and the region. International lines terminal was renewed in year 2006 and the construction of the new domestic lines terminal was started in year 2012. Throughout the construction period of the domestic lines terminal that is planned to be completed in the year 2014, the international lines terminal is used for all passenger traffic. The new domestic lines terminal that will reach twice the size of the international lines terminal is expected to answer a total of 25 million passengers and increase the passenger capacity of Adnan Menderes Airport by 2.5 times.

The capacity of the terminal which had served within a closed area of 28,500 square metres up until the year 2012 will be increased to 204,500 square metres and the total investment amount is considered to be 300 million Euros.

An increase of over 50% occurred in the total number of arriving/departing passengers in İzmir during the last four years. An increase of 13.4% occurred for domestic lines and coupled by an increase of 0.52% for international lines compared to the previous year in 2012, and the total number of passengers exceeded 9.3 million (Figure 90).

Figure 90:
Adnan Menderes Airport, Number of Arriving-Departing Passengers, 2008-2012



As of the end of October 2012, direct flights to 3 continents and 36 countries were made from İzmir Adnan Menderes Airport. No direct flights are realised from İzmir to America and Australia continents, and flights to some European cities are performed as connected via İstanbul. International flights are realised by 60 airline companies to 103 destinations. The number of foreign airports to which flights are realised rose from 83 in year 2009 to 106 in year 2011 (Table 136). For domestic lines, there are flights to 10 provinces by six airlines companies.

Table 136:
Number of Foreign Airports with Direct Flights from Adnan Menderes Airport

Year	Number*
2009	83
2010	96
2011	101
2012	100

Source: DHMİ, 2012
*Comprises of the number of foreign airports to which commercial flights were performed within the year.

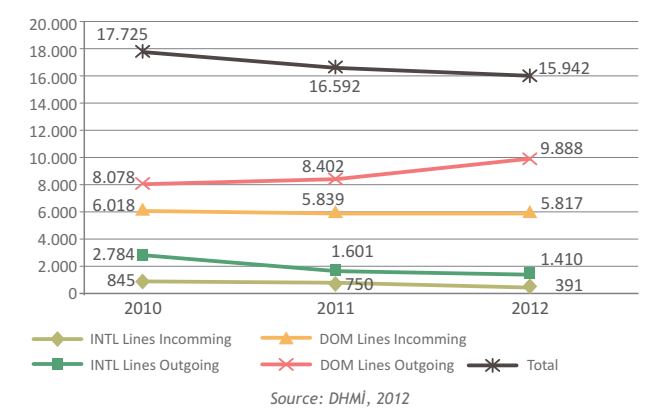
İzmir Adnan Menderes Airport is at the fifth place regarding the number of flights, while ranking at the fourth place in both number of passengers and freights (cargo, mail and luggage) indicators. A total of 73,152 flights were realised in the year 2012, comprising of 18,139 international lines and 55,013 domestic lines flights, where 26% of the number of passengers comprised of

international lines passengers. In terms of flight frequency, it is seen that April-September months have recorded an average of 228 flights, while October-March months have recorded an average of 172 flights. Lowest number of flights was observed during January and February months, while the highest number of flights was observed during the touristic boom season of July and August months (DHMİ, 2012).

Passenger by nationality statistics show that the passengers who used Adnan Menderes Airport in the year 2012 comprised 33% of Turkish, 23% of German, 7% of French, 6% of Dutch and English, and 5% of Belgian passengers.

When the cargo data belonging to the last three years are examined, a decline up to 50% may be observed in the incoming and outgoing cargo amounts especially for international lines. This situation is considered to be caused by the global economic crisis. For domestic lines, incoming cargo amount declined by 10%, while the outgoing cargo amount displayed an increase of 15% (Figure 91).

Figure 91:
Adnan Menderes Airport Cargo Transport Data*, 2010-2012, (tonnes)



Selçuk Airport that was built in the year 1990 is the second civilian airport of İzmir, and used for touristic purposes along with training flights of Turkish Aviation Association (THK). The airport is on İzmir-Selçuk-Kuşadası highway, at 3 km distance to Selçuk district and 1 km distance to Ephesus antique city.

For the purpose of facilitating İzmir air traffic and contributing to regional tourism, construction of new airports are also planned in addition to the existing airports. Vecihi Hürkuş Airport that is planned to be commissioned in this context by building civilian terminal facilities on Military Kaklık Airport at the north of İzmir is envisaged to address especially the north of the city and seaports area.Çeşme Airport to be established for providing airways access to Çeşme and Alaçatı tourism centres at the west of İzmir is also among projects planned for construction.

5.a.1.d. Maritime

İzmir has a considerable large potential also regarding national and international maritime transport due to its coastline. 5 out of 12 port administrations functioning under İzmir Regional Directorate of the Under secretariat of Maritime Affairs are located within İzmir provincial borders. These are situated in İzmir, Çeşme, Dikili, Foça and Aliğa. İzmir Port, Çeşme Port, ports in Aliğa-Nemrut and Dikili districts are important points for maritime transportation. Çeşme and İzmir seaports are also active in terms of passenger transportation. Maritime transport in İzmir has an important place also within intracity (urban) transportation, which is studied in the section titled intracity transportation.

There are ferry cruises from Çeşme Port to Chios Island, from Seferihisar Port to Samos Island and from Dikili Port to Lesbos Island. At the same time, passenger transportation is realised through ferries between Çeşme and Ancona-Italy. Round cruises previously performed to/from Brindisi have been cancelled.

It is observed that considerable progress has been made for the cruise tourism started back in year 2003. While 3,271 passengers visited İzmir with 5 cruises in year 2003, these values increased respectively to 510,042 passengers and 286 cruises as of year 2012; bringing the number of cruise tourists that visited İzmir in the last eight years to 2,611,272 people.

Regarding the construction of an independent cruise port that will separate the passenger section from İzmir Port; two new piers are planned to be built in the place of the existing pier of which economic life has expired through Build-Operate-Transfer (BOT) model.While the current seaport allows two new generation cruises and one ship each of 150-220 metres length to berth at the port, while the new pier is planned to allow 5 new generation cruise ships to berth simultaneously at the renewed seaport. The renewed port is aimed to be the largest and most modern main cruise port of the Mediterranean Sea.

“İzmir Bay and Port Rehabilitation Project” of TCDD and İZSU is being commenced for the purposes of cleansing İzmir Bay to make it swimmable again and increase trade volume by opening the port to third generation ships. Within the context of the project, opening a circulation canal with 8 metres depth, 13 kilometres long and 250 metres wide is planned at the northern axis of the bay. The aim is for having water come from middle bay to the south bay, exiting from the north with circulation, increasing clean water entrance to the bay, and improving the ecological quality of the bay. The project shall begin to be implemented following the completion of the Environmental Impact Assessment (EIA) report.

5.a.2. IntracityTransportation

The development level of the established transportation system has become an important indicator of the development of cities. Intracity transportation is of vital importance also for the inhabitants of a city. Intracity transportation in İzmir is realised over highway, railway and maritime transportation methods. Of 1,250,000 average passengers daily, 74% are transported through highways, 23% are transported through railways and 3% are transported through maritime lines.

Within the context of “Transportation Transformation Project” commenced by İBB in the year 2000, bridges, under/overpasses, and modern railway transport vehicles such as subways and tramways are planned to be actualised. İzmir Transportation Master Plan (İTMP) was designed as to regulate the transport and traffic issues, and reveal future projects of transportation infrastructure of İzmir until the year 2030.

The smart, environment-friendly and handicap-free “Full Adaptive Traffic Management, Surveillance and Information System”, which is implemented in many developed cities throughout the world, is planned to be executed in İzmir for the first time ever in Turkey. With this system to be executed by İBB, junctions will be managed by smart junction control devices through fibre optic cables, while traffic surveillances are to be carried out through Traffic Electronic Surveillance System (TEDES) in electronic manner. Administration of mass transit shall be carried out electronically, and instant information shall be supplied to citizens via internet, cell phones and call centres.



5.a.2.a. Highway

74% of the urban mass transit load of İzmir is addressed with buses by General Directorate of ESHOT. Especially with the utilisation of underground train and suburban railway (İZBAN) system,the share of highways within transportation has begun to decline over the years (Table 137).

Table 137:
ESHOT and İZULAŞ Total Numbers of Buses, Lines and Passengers

Year	Number of Passengers Served	Total Number of Lines	Total Number of Buses
2010	274,950,978	2,807,529	1,418
2011	266,341,550	2,875,805	1,379
2012	268,884,520	2,864,891	1,370

Source: ESHOT, 2012

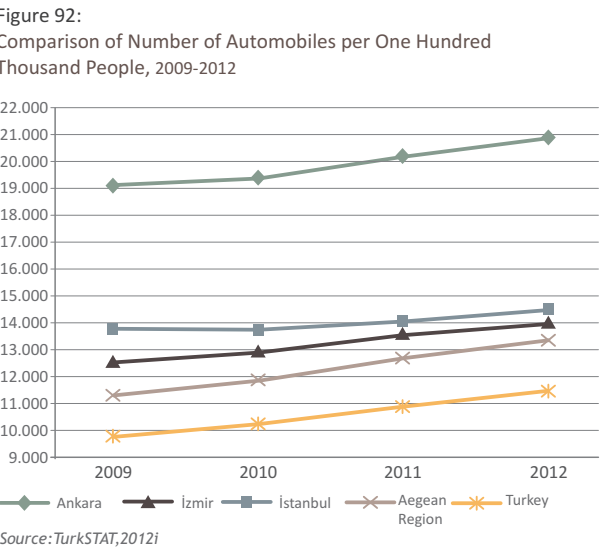
In addition to buses; minibuses, taxies, taxi-buses and shuttles are also used for mass transit on land routes. No significant change is observed in the numbers of such services (Table 138).

Table 138:
Number of Mini-Buses, Taxies, Taxi-Buses and Shuttles Operating City Centre

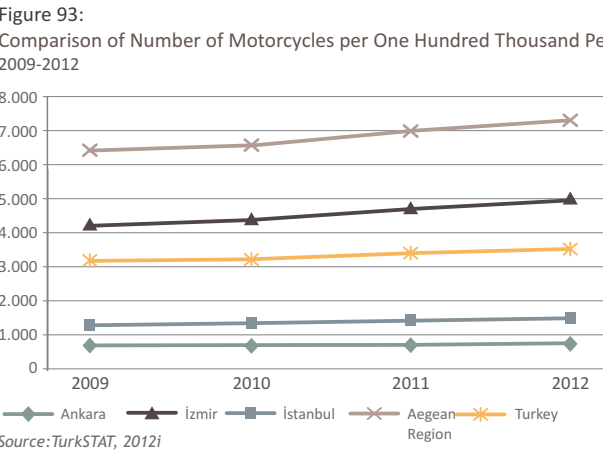
Year	Taxi	Taxi-Bus	Minibus	Shuttle
2010	2.625	195	1.117	2.746
2011	2.628	195	1.117	2.746
2012	2.628	195	1.117	2.747

Source: İzmir Provincial Directorate of Security, 2012

On the other hand, the number of vehicles in İzmir is on the rise day by day. More than half of the motor vehicles in İzmir are comprised of automobiles. Motor vehicles in İzmir constitute 6% of all motor land vehicles throughout Turkey, and 36% all motor land vehicles throughout Aegean Region.



According to year 2012 data, 13,951 automobiles correspond to every one hundred thousand people in İzmir, which is 20,858 in Ankara, and 14,506 in İstanbul. The increase in the number of automobiles per one hundred thousand people in İzmir during 2009-2012 period occurred to be over 11% (Figure 92). With these values, İzmir remains above the Aegean and Turkey averages in terms of number of automobiles per capita, while behind İstanbul and Ankara. The contribution of İzmir within the overall automobile stock occurs to be 6.5% within Turkey and 43% within Aegean Region.

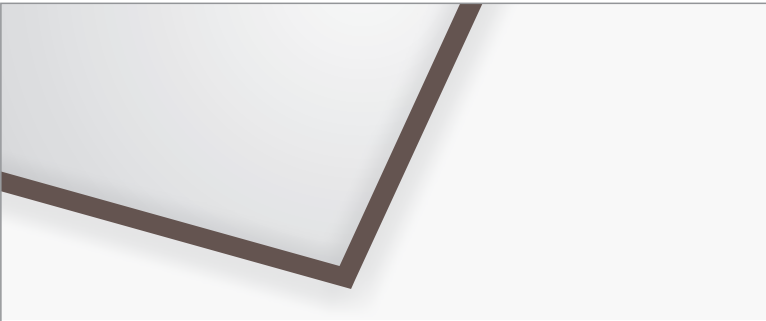


When the number of motorcycles per one hundred thousand people is analysed, it is observed that with a value of 4,947, İzmir remains below the Aegean Region average (7,308) but above that of İstanbul (1,491) and Ankara (727).The number of motorcycles per capita increased by 17% during the 2009-2012 period (Figure 93).

The constant increase of motor vehicles cause rising levels of traffic density, air pollution and parking demands. In addition to areas such as Konak and Alsancak where business and social life get concentrated, parking demands spread day by day also to other central districts. Construction of one multi-storey parking garage in Alsancak and Hatay Pazaryeri and Hasan Tahsin multi-storey parking garages in Hatay by İBB are underway, aiming to resolve the parking demands. Furthermore, underground car park next to Alsancak Atatürk Gymnasium and Kültürpark underground parking garage have been commissioned for the purpose of satisfying the parking demands of Alsancak and surrounding area. Actions aimed at developing, universalising and encouraging mass transit for urban transportation will play important roles regarding controlling the increasing traffic pressure especially at city centre and accompanying parking demands.

The city accommodates a total of 10,809 parking spaces, comprising of 3,900 spaces at outdoor car parks, 4,970 spaces at indoor car parks, and 1,939 spaces at Mustafa Kemal Coast Boulevard parks. In addition, construction of parking garages of 600 car capacity in Karşıyaka Alaybey and Üçkuyular bus terminal area each, along with Buca Kasaplar Square Underground Parking Garage and new car parks at Evka 3 and in Çiğli district is planned (İBB, 2012c).

Source: İZDENİZ, 2012



Widespread use of İZBAN services was also effective on the decline in the number of passengers after the year 2010, which had risen during the 2008-2010 period, The existing number of maritime lines has to be increased and maritime transport has to be made more attractive in İzmir, which offers a strong potential for maritime transit. In this context, maritime transit has to be developed and the integration between different transport modes has to be strengthened.

For the purpose of replacing the existing boats with new and modern boats, a new passenger ship procurement is being held by İBB for 15 catamaran type new passenger boats with 400 passenger capacity each for a total cost of 117 million Euros. Delivery of new environment-friendly and handicapped-friendly boats shall be realised between years 2013 and 2017. (İBB, 2012b)

In addition to this, works towards renewal of the existing piers in bay area as to adapt to the new passenger ships are underway. Internal modernisation works have commenced in Konak and Karşıyaka piers. Implementation at Bostanlı, Alsancak, Pasaport and Üçkuyular ports shall commence after relevant project designs are completed. furthermore, new piers are planned to be built in Mavişehir and Karantina (İBB, 2012b).

After the new ships commence operations, maritime transit utilisation shall be further strengthened by making runs to districts such as Urla, Foça, Mordoğan and Karaburun especially in the summer season depending on demand.

With the “Design Strategy for the Project of Strengthening the Connection between Citizens of İzmir” study on coastal usage of İzmir, it is aimed to rearrange the 40 km coastline that encircles the bay from Mavişehir to İnciraltı Urban Forest with an innovative, creative and participative approach, and redesigned in the form of four different areas. Within the project context, execution of applications such as city terraces, sea balconies, floating platforms and urban beach is envisaged for ensuring the citizens of İzmir to integrate more with the sea (İBB, 2012b).



Survey studies conducted by UBAK regarding Karşıyaka, Bayraklı, İnciraltı, Urla-Çeşmealtı and Şakran marinas for the purpose of strengthening İzmir yacht tourism capacity are underway. Furthermore, Karaburun, Yenifoça, Şifneand Seferihisar-Ürkmez marinas are planned to be procured by use of BOT model (UBAK, 2012c).

5.a.2.d. Pedestrian and Bicycle Transportation

Cycling (bicycle) is a form of transportation required to be promoted for being a green transportation method and enabling active living. Making use of bicycles widespread is possible through initially creating the required infrastructure.In the current state, many cyclists enter traffic without the required infrastructure. Bicycle routes are either invaded by vehicles and other uses, or used completely by pedestrian or vehicle traffic. This situation reduces the efficient and safe usability of the system. In recent years, incentives towards establishment of infrastructure required for bicycle routes also started to come up; bicycle transportation has to be considered in a manner designed for integration with other transport types.

Examples throughout the world show that cycling may be used as a manner of transportation in all cities when the required infrastructure is established. Smart Bicycle System is a system that supports use of bicycles within urban transportation. Commonly used throughout European cities, this system operates under the principle of renting bicycles from stations located at certain points of the city, and return to any one of these stations after being used. In this manner, bicycles can be used between other transit systems or throughout the entire trip. This system that has been used in İstanbul between Kadıköy and Kartal was put into service in İzmir by Karşıyaka Municipality.

Existing bicycle routes in İzmir are concentrated around the bay area, stretching from Karşıyaka to Sasalı, from Konak to Alsancak Seaport and to Üçkuyular. Initially a continuous bicycle route on the coastline stretching from İnciraltı to Sasalı has to be established and Smart Bicycle System has to be implemented for transportation to the district centres along this route.

Existing bicycle routes in İzmir have a total length of 25.8 km. Actions aimed at increasing existing routes are underway. Bicycle routes planned according to İUAP are considered under four sections comprising of north line (22.9 km), east line (24.5 km), southeast line (13.9 km) and south line (37.5km). In this framework, the total length of bicycle routes is planned to reach 98.8 km(İBB, 2009).

5.b. ENERGY INFRASTRUCTURE

İzmir performs production towards electricity consumption demands with an installed power of 2,584 MWh. No increase was noted in the electricity production installed power value of Aegean Regionand İzmir after the year 2008. Turkey's electricity production plant installed power value increased by 10.6% in the year 2010, and by 6.8% in the year 2011. The share of İzmir that was 6.2% in 2008 declined to 5.2% as of the year 2011 (Table 142).

Table 142:
Change of Electricity Production Installed Power, 2008-2012, (MWh)

Year	İzmir	Aegean Region	Turkey	İzmir/Aegean Region (%)	İzmir/Turkey (%)
2008	2,584	6,835	41,817.2	37.8	6.2
2009	2,584	6,835	44,761.2	37.8	5.8
2010	2,584	6,835	49,524.1	37.8	5.2

Source: TEİAŞ, 2012

There are no hydroelectric power plants established in İzmir province. Karaağaç, Kocayatak and Ortaköy hydroelectric power plants planned to be built on Gediz River are planned to have a total installed power of 29.91 MW, and an annual average electrical energy amount of 120.04 GWh. The natural gas fuelled thermal power plant established in Aliağa has a total installed power of 180 MW.

It is indicated that the existing overall installed power of Turkey that is measured to be approximately 54,000 MW has to be increased to 80,000 MW based on the low estimate scenario of ETKB, and to 96,000 MW based on the high estimate scenario of ETKB during the period until the year 2020 in order to cover the rising energy demand.

As of the year 2011, Turkey realised a total of 229,395.10 GWh electricity production with an increase of 18.187,4 million kWh increase that corresponded to 8.6% compared to previous year with its total installed power of 52,911 MW. During the same period, electricity consumption occurred to be 230,306.3 million kWh with an increase of 19,872.4 million kWh that corresponded to a change of 9.4% compared to previous year (TEİAŞ, 2011).

As of the year 2010 İzmir constituted 8.7% of total Turkey consumption and 54.9% of total Aegean Region consumption. Electricity consumption increased by 9.7% throughout Turkey compared to previous year, while İzmir displayed an increase of 11.1%. 15,700 GWh electricity consumption value that İzmir had in 2008 decreased by 14.7% in the year 2009, which was attributed to the global economic crisis, while it rose again by 11.1% in the year 2010, with a realisation of 14,900 GWh (Table 143).

Table 143:
Change of Electricity Consumption Values, 2008-2010, (GWh)

Year	İzmir	Aegean Region	Turkey	İzmir/Aegean Region (%)	İzmir/Turkey (%)
2008	15.700	27.182	161.947,6	57,7	9,7
2009	13.392	24.267	156.894,1	55,2	8,5
2010	14.900	27.158	172.050,6	54,9	8,7

Source:TurkSTAT, 2011f

In terms of number of utility subscribers, it is seen that the highest decline was observed in industrial subscribers, displaying a five-point drop in the last three years. It is observed that the highest share of electricity consumption in İzmir province belonged to industrial segment with a value of 36%, followed by residential segment with 34.5%, commercial segment with 11.8%, and public institutions with 5% as of the year 2012. Remaining consumption belongs to lighting, agricultural irrigation and other uses (Table 144).

Table 144:
Electricity Consumption of İzmir Province by Subscribers (MWh), 2010-2012

Type of Subscriber	2010		2011		2012	
	Number of Subscribers	Consumption (Mwh)	Number of Subscribers	Consumption (Mwh)	Number of Subscribers	Consumption (Mwh)
Industry	2,562	4,258,326	2,309	4,417,829	2,438	3,842,865
House	1,535,771	3,215,344	1,569,716	3,618,061	1,600,270	3,686,053
Commerce	224,589	1,330,978	231,126	1,201,841	234,323	1,257,248
Public Institution	6,789	451,198	7,079	503,356	7,295	532,582
Lighting	6,130	143,494	7,001	165,171	7,553	181,211
Other	22,100	849,528	23,310	629,662	72,257	1,192,668
Total	1,797,941	10,248,868	1,840,541	10,535,920	1,924,136	10,692,626

Source: Gediz Elektrik Dağıtım A.Ş., 2012

5.c. TECHNOLOGICAL INFRASTRUCTURE

5.c.1. Information and Communication Technologies¹⁰⁹

The issue and information and information technologies took up significant place on the country's agenda and entered even the curriculums in the last five years. "Epistemology" and "Information and Communication Technology" elective lessons have been begun to be given at high school level. Informatics technology lesson is provided in 63 schools within 23 districts of İzmir. Services are provided in the "Network Operation", "Computer Technical Service", "Database Programming" and "Web Programming" branches.

The development route of İzmir regarding information and communication technologies is in line with the development of Turkey in this regard. The first computer in our country had been used by the General Directorate of Stat Highways back in the 1960s. Due to the rapid transformation and progress that started after 1980s, infrastructure investments have been started and the first personal computers began entering Turkey in the 1990s.

The first international connection was established in April 1993 within the body of Middle East Technical University (METU). However, even prior to that BITNET connection was established from İzmir over Ege University to European Academic and Research Network (EARN) network, although at a smaller scale.

First computer engineering education was started within the body of Ege University in İzmir during the 1980s. 4th National Informatics Assembly of the Informatics Association of Turkey (TBD) was also held in İzmir in the year 1982. There are 55 computer engineering departments in various universities of Turkey, with a graduate count of 3,000 per year. In İzmir, education on computer engineering and related branches is offered within seven out of nine universities as of the year 2012.

In addition to undergraduate level computer engineering departments, there are also undergraduate level software

engineering department within İEÜ, GÜ and İÜ, and mathematics and computer sciences department in İÜ.

Regarding postgraduate level education programmes, EÜ Computer Sciences and Engineering carries on joint doctorate programmes with both İYTE and İÜ. It is observed that İEÜ "Informatics Technologies Graduate Program" and "Computer Games and Technology Graduate Program" differ from other programmes. In this context, there are a total of 35 undergraduate, and 21 graduate/postgraduate programmes in İzmir, offering a quota of 723 students at undergraduate level (Table 145).

Table 145:
Undergraduate and Postgraduate Education Programmes on Information and Communication Field in İzmir

Universities Offering Education on Computer Engineering and Related Fields	Number of Undergraduate Programmes	Quota	Date for Commencing Education	Number of Postgraduate Programmes
Dokuz Eylül University	2	135	1995	4
Ege University	1	105	1982	7
Gediz University*	3	50	2009	0
İzmir University of Economics*	10	158	2002	2
İzmir University*	11	130	2008	4
İzmir Institute of Technology	1	55	1997	2
Yaşar University*	7	90	2003	2
	35	723	-	21

Source:İZKA and İYTE, 2012

* Number of programmes in foundation universities differs based on type of scholarship.

With the "Governing Regulation on Technology Development Zones" published in the OJ with date 19.06.2002 and issue no. 24790, it was decreed in November 2002 that individuals and entities producing

software in these zones shall be kept exempt from income tax and corporate tax. The most important development concerning İzmir in this regard occurred to be the establishment of İZTEKGEB in the same year. Detailed information on TDZs has been included under 'Industry' section.

Within the context of communication technologies, İBBput into service "Address Information System", "Plan Decision Query", "İzmir Mobile City Guide" application, "Cemetery Information System" and "Electronic Numbering Documents" and e-municipality applications.

5.c.2. Telecommunication

Services in telecommunication field have been provided in Turkey since the year 1840.



¹⁰⁹ This section was prepared by using "Development Strategy Based on Information Society" conducted by İZKA-İYTE cooperation. For detailed information: http://www.izmirplanliyorum.org/static/upload/file/izmir_bilgi_toplumu_temelli_kalkinma_stratejisi.pdf

Since the mid-1980s, reform policies have been significantly effective on telecommunication system. In this period, Turkey opened to foreign markets, while also finding the opportunity to renew and develop its information and communication infrastructure. Telecommunication system has been seen as the key to Turkey's expansion into foreign markets, and thus telecommunication services were digitised throughout 1980s, catching up to the technological level of the new era. In this period, communication network expanded by three times, and the entire country met with high quality telephone services.

As of the end of December 2012, İzmir houses approximately 2.8 million fixed telephone terminal capacity, 921,000 fixed telephone line subscribers, 3.85 million mobile telephone subscribers and 129,000 Cable TV subscribers. According to this, İzmir accommodates 7% of the fixed telephone terminal capacity, 921,000 fixed telephone line subscribers, 6% of mobile telephone subscribers and base stations, and 10% of Cable TV subscribers throughout Turkey (Table 146).

Table 146:
Fixed Telephone Access Lines, Cable TV and GSM Subscribers in Turkey and İzmir

Type	İzmir	Turkey	Share of İzmir (%)
Fixed Telephone Terminal Capacity	2,821,867	39,237,454	7.19
Fixed Telephone Line Subscribers *	921,806	13,461,701	6.85
Mobile Telephone Line Subscribers	3,850,890	67,680,547	5.69
Number of Base Stations	3,206	52,341	6.12
Cable TV Subscribers	129,135	1,250,593	10.33

Source: Information and Communication Technologies Authority, 2012

*Wholesale line rental service is not included in İzmir values due to absence of data at province level.

Digital wireless wide area network has been established by İBB for the purposes of backing up the existing cable communication infrastructure and providing uninterrupted communication during natural disasters. Base stations of the system are located in Aliağa (Samurlu), Menderes (Akkaya), Karaburun (Akdağ), Kemalpaşa (Sıralık), Tire (Çayırılı), Bornova (Kurudağ), Karşıyaka (Yamanlar), Seferihisar (Turgut), Torbalı (Kuşçuburun), Konak (Kadifekale), Buca (Toros), and Basmane and Çankaya subway stations. İBB established coverage of 90% within city centre and 80% in other areas within its municipal borders.

5.c.3. Internet

The coverage of internet services and utilisation of these services in İzmir are in line with the countrywide population ratio and economic development. The province ranks at the third place throughout the country in terms of household

internet access and e-government services utilisation, following İstanbul and Ankara.

According to TBD 2012 Assessment Report, the ratio of households with access to internet is 47.2% throughout Turkey. This ratio occurs to be 55.5% for urban areas and 27.3% for rural areas. 70% of internet access is realised from houses, while 16% is realised over internet cafes, and 5.9% is realised over public access points with wireless connection capability. İzmir comes at the second place regarding the number of internet cafes (1,793 cafes) throughout Turkey.

According to the year 2012 study of Intel conducted on 3,000 young people within 13-29 years age group throughout 26 provinces of Turkey, the province with the highest regular internet access occurred to be İzmir with a ratio of 79.6%. According to the same study, the time young people spends daily on social networks was measured to be an average of 53.5 minutes, while this time period was observed to decline as the age increases (Table 147).

Table 147:
Statistics on Internet Subscribers

Type	İzmir	Turkey
xDSL Internet Subscribers	474,310	6,649,885
Cable Internet Subscribers	46,215	500,220
Fibre Internet Subscribers	84,751	645,068
Other Fixed Internet Subscribers	8,757	114,632
Mobile Internet Subscribers	682,203	12,161,900
Total	1,296,236	20,071,705

Source: Information and Communication Technologies Authority, 2012

As the largest public local area network project of Turkey in terms of cable length, İZMİRNET aims for İBB, district municipalities and other relevant institutions and organisations to utilise advanced technologies for communication and coordination at İzmir metropolis area scale towards increasing city administration effectiveness and offering contemporary services to citizens and universalising such services. As of the end of year 2012, the length of fibre cable that forms an independent telecommunication infrastructure reached 180 km.



5.d. LOCATION

Located at the westernmost edge of Turkey, İzmir mixed together the Anatolian customs and traditions and its culture that developed in line with western style over its open nature as a port and trade city throughout the history. The province empowered its culture tourism by uniting with the deep historical heritage and antique civilisations, belief tourism with accommodation of different beliefs, thermal tourism with geothermal resources and facilities, and eco-tourism with its natural assets such as sea, sand, sun. İzmir is also a suitable metropolis for convention tourism with its high-standard facilities, and annual fairs and festivals. İzmir is the port of a wide hinterland stretching from Çanakkale to Fethiye. The presence of five seaports –including one that is the largest container port of the country- along with the to-be-commissioned Northern Aegean (Çandarlı) Seaport reveals the province's power within the region.

In addition to these, aspects such as the possibility of connecting to national highways and railways, presence of an active international airport that will reach 25 million passenger capacity with renewed sections in 2014, and the layout of the production centres supporting export and feeding the province at the city periphery strengthen the location-based advantage of İzmir.

When the trade relationship of İzmir distributed over approximately 200 countries is examined, it is observed that the top four countries to which most export is made as of the year 2011 are located in Europe continent. The fifth country is USA. It is striking that the other countries included in the top ten are also located in Europe. United Arab Emirates (UAE) from Middle East market and China

from Asian market are at the tenth and eleventh places respectively. In terms of the ratio of export made, it is observed that approximately 40% of overall export is made to European countries.

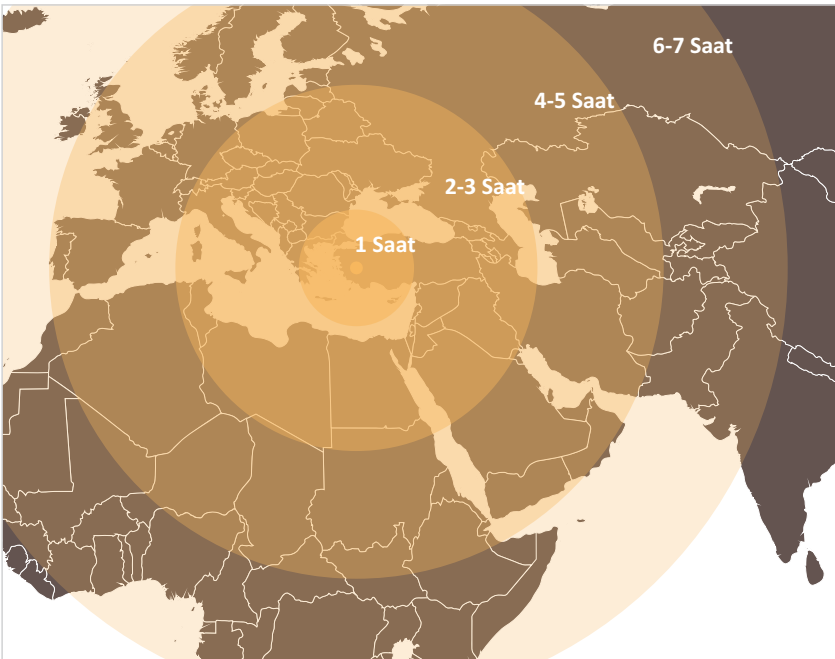
İzmir is located at a flight distance of 3 to 5 hours to all European and Middle Eastern countries within the top ten countries subject to highest export amounts except USA and China (Map 34).

In the 81 Provinces Situational Report, potential countries to which export may be made have been defined based on specific provinces. This analysis, defined as supplementary country analysis, is of importance due to displaying countries to which a province may redirect its export and make a natural partner based on its import structure. According to this, supplementary countries of İzmir were defined as Denmark, Algeria and UAE (Ministry of Science, Industry and Technology, 2011b).

Considering that İzmir is located at three hours flight distance to Denmark, four hours to UAE and five hours to Algeria, coupled with the possibility to reach Algeria via maritime transport, it has to be assessed which products may be subject to export to these countries.

In our day when competition is shifted from national to local scale, it is vital for cities to focus on competition and increase their competitiveness. It is necessary that cities' export performances are analysed, their strategies are defined, their future positions determined, and policies allowing for them to develop their competitiveness in the future are designed. In this sense, İzmir has to utilise its potential, steer towards product and country diversity, and reach different markets.

Map 34: Countries by Flight Distance (Time) to İzmir



5.e. URBAN QUALITY OF LIVING AND HOUSES

House, considered to be one of the fundamental needs of an individual arising from his/her right for accommodation, is the primary aspect that constitutes the built environment of a city. With the constantly growing need for healthy, sustainable and high-quality living spaces, residential sector in our country entered into a development process in terms of both quantity and quality. İzmir is also one of the cities where the impact of these developments is felt significantly.

Table 148: Distribution of Households by Building Construction Year, 2011

Province	Building Construction Year (%)							
	1945 and before	1946-1960	1961-1970	1971-1980	1981-1990	1991-2000	2001 and later	Unknown
İstanbul	0.6	1.4	5.1	14.5	21.1	29.1	17.9	10.2
Ankara	0.7	1.5	5.3	11.4	14.8	24.6	34.2	7.6
İzmir	2.0	3.0	6.4	14.5	19.9	22.9	15.4	15.8
Turkey	1.5	2.7	5.9	13.4	18.9	24.6	21.8	11.3

Source: TurkSTAT, 2011d

In TurkSTAT year 2000 Building Census Statistics, İzmir province house stock was indicated as 1,140,731¹¹⁰ (TurkSTAT, 2000). Approximately 46% of the buildings' construction date goes back to 1990 or earlier periods. This ratio is higher than that of İstanbul (43%) and Ankara (34%). The ratio of buildings built in year 2001 or later is the lowest among all three metropolitan cities with a value of 15.4% (Table 148).

Dominance of buildings with older construction years, illegal and irregular settlement areas, and deficiencies emerging from physical and technical inadequacies of existing housing areas are revealed as major residential problems. There is a certain lack of sufficient urban gaps, common public spaces and green areas. In this framework, although seems to be adequate in quantity in result of population movements that lead to constant growing and spreading of the city in recent years; it is mentionable that there is a serious residential problem in terms of quality (İBB, 2012c).



According to the year 2007 data included within İzmir Urban Health Profile study, active green area size per citizen was indicated as 3.46 m2 (İBB, 2008).

According to Turkey Earthquake Map published in year 1996, İzmir is located inside 1st grade seismic zone. Thus, the issue of structural safety is of vital importance. There is a significant amount of building stock concentrated on unreliable areas with high earthquake and landslide risk (İBB, 2012c). İzmir is one of the provinces prioritised regarding urban transformation works to be implemented

within the context of the Law no. 6306 on Transforming Areas under Disaster Risk and Article 73 of the Municipality Law no. 5393. In this framework, several works related to urban transportation are currently underway. Areas declared for urban transformation within these two laws' scopes reached 931.4 ha as of the midpoint of year 2013. These areas are classified as follows:

Within the coverage of Law no. 6306

(Total: 627 ha):

- Karabağlar: 540 ha
- Menemen: 44 ha
- Narlıdere: 43 ha

Within the coverage of Law no. 5393

(Total: 304.4 ha):

- Gaziemir (Aktepe-Emrez): 121,7 ha
- Bayındır (Necati Uza-Yenice-Hatay): 13 ha
- Torbalı (Çaybaşı): 6,3 ha
- Karabağlar (Uzundere): 31,5 ha
- Konak (Ballıkuyu-Ege): 54 ha
- Bayraklı (Cengizhan-Alparslan-F. Edip Baksı): 60 ha
- Karşıyaka (Örnekköy): 17,9 ha

¹¹⁰ Estimated to be 1,266,330 as of the end of year 2011 (GYODER, 2012).

Table 149:
Distribution of Households by Their Residential Ownership Status, 2011

Province	Number of Households	Ownership Status (%)			
		Owner	Tenant	Lodging Resident	Not Owner But Does Not Pay Rent
İstanbul	3.699.930	60,6	31,5	0,9	7,0
Ankara	1.435.174	60,9	30,2	2,9	6,0
İzmir	1.213.331	63,0	26,5	1,1	9,4
Türkiye	19.481.678	67,3	23,8	1,5	7,3

Source: TurkSTAT, 2011d

Data on the ownership state of the house stock in İzmir reveal that the ratio of home owner households in the province is higher than that of İstanbul and Ankara, while lower than the Turkey average. On the other hand, the ratio of tenants is lower than the other two major cities, while higher than the Turkey average (Table 149).

It is observed that the houses constructed in the newly developing residential areas of İzmir province are built dominantly by private sector and address high income level segments. This situation adversely affects the ability to get accommodation of individuals with different socio-economic conditions –particularly low income level segments (İBB, 2012c). Due to also being a tourism centre, İzmir also possess many houses as secondary residences. Utilisation of secondary houses, which are concentrated mostly along the coasts of Dikili, Foça, Urla, Çeşme, Seferihisar and Menderes districts, is of importance both for efficient use of the stock (which is a significant resource) and for regional economy.

The number of residential building construction permits received in İzmir reveals that construction sector has shown a significant leap since the year 2004, and peaked in the year 2011 (Table 150).

Table 150:
Residential Building Construction Permits and Building Use Permits Received in İzmir, 2003-2011

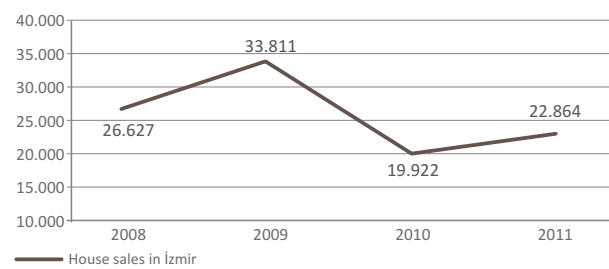
Year	Construction Permits (Number of Apartments)	Share within Turkey (%)	Use Permits (Number of Apartments)	Share within Turkey (%)
2003	7,531	3.71	13,710	8.42
2004	12,402	3.76	13,232	8.03
2005	21,120	3.87	16,825	6.75
2006	30,332	5.07	18,885	6.42
2007	21,394	3.68	19,394	5.96
2008	22,212	4.43	22,638	6.35
2009	20,775	4.02	28,549	7.09
2010	31,054	3.41	25,771	6.02
2011	40,497	6.30	39,461	7.21

Source: Calculated by using TurkSTAT Building Permit Statistics data, GYODER, 2012

Building use permits (certificates of habitability) received in line with house constructions are also on a rising trend. As of the end of year 2011, 6.3% of building construction permits and 7.2% of building use permits throughout entire Turkey were received in İzmir.

İzmir province received a share between 5.5% and 5.7% from Turkey overall house sales in the last three years (Figure 94). Regarding house sales, an increase of 27% occurred in the year 2009 compared to the year 2008, while the house sales value declined by 41% in the year 2010 during the impact of economic crisis, falling behind even the level of 2008. Although sales entered a rising trend in the year 2011, the level reached 3 years before could not yet be reached (GYODER, 2012).

Figure 94:
House Sales in İzmir, 2008-2011



Source: Calculated by using TurkSTAT House Sales Statistics data, GYODER, 2012

According to data from Reidin House Prices and Rents Index that monitors house sale prices and house rents throughout Turkey and in selected provinces, house prices in İzmir increased by 20.9% between the year 2007 and October 2012. This increase is over the 16% overall Turkey increase, along with the 18.8% increase in İstanbul and the 11.5% increase in Ankara. During the same period, an increase of 12.9% occurred in the house rents in İzmir, which is in line with the increases that occurred in Turkey, İstanbul and Ankara (GYODER, 2012).

In terms of housing financing, İzmir is the third province with the highest amounts of personal housing loan utilisation throughout Turkey. Personal housing loans used in İzmir as of the year 2011 occurred to be 5.6 million TL, corresponding to 7.5% of overall personal housing loans used throughout Turkey (BRSA, 2012). According to this, financial sources play an important role for the access to housing opportunities of the households in İzmir.

Expectations from the future point towards that the housing demand in İzmir will rise in line with the population increase and demographical changes. It is estimated that the overall housing demand during the 2013-2020 period will occur to be 283,000, comprising of 163,000 due to increase of households, 80,000 due to urban transformation and 40,000 due to renovation (GYODER, 2012).

It is important for the newly built houses to be safe, addressing different needs and affordable, also housing environments to be sufficient in terms of urban standards such as green areas and social facilities that the existing city lacks. terms of urban standards such as green areas and social facilities that the existing city lacks.





5.f. ASSESSMENT

For the environment to be revitalised and for increasing the regional, national and international competitiveness, the standing of İzmir in regards to accessibility that is already suitable should be further strengthened. To that end, transportation connections to neighbouring cities, İstanbul and Ankara should be improved, planned and commenced major transportation investments should be rapidly completed, and direct flights to abroad countries departing from İzmir should be diversified and the number of flights should be increased.

Completing major logistics infrastructure investments, particularly İzmir Port, Northern Aegean (Çandarlı) Port and Kemalpaşa Logistics Village, and strengthening all seaports based on combined transportation, particularly integrating seaports with railroads will ensure the logistics potential to be activated.

Decreasing the share of highways, increasing the share of maritime lines and rail systems for urban transportation, and encouraging the public in that direction are necessary actions. To that end, rail systems should be developed, maritime transit system should be improved and integration of different types of transportation with each other should be increased. Spreading the areas allocated for pedestrian and bicycle transportation modes is another field of importance in this regard.

In order to develop the leading status of İzmir towards becoming a city of information, efforts should be made especially towards regaining and maintaining the qualified workforce lost to outside of region, regarding which İzmir should reveal its superiority against other provinces in terms of fields such as environment, natural resources and quality of living and create alternatives.

Ratio of internet use regarding the citizen-government communication is still at a low level. Especially public institutions and local administrations should increase their efforts towards internet utilisation for information exchange and circulation. This communication has to be realised in a fast and secure manner.

In regards to housing infrastructure, especially urban transformation works aimed at reduction of disaster risks are revealed to be prominent in İzmir. The objective is construction of houses that are healthy, accessible and addressing different household demands in both urban transformation and other housing developments. Ensuring efficient use of the secondary houses, which are of considerable significance in the region, is another prominent issue.

Annex end References



ANNEX-1: Nomenclature of Units for Territorial Statistics (NUTS)
Level 2 Regions

TRA1	Erzurum, Erzincan, Bayburt
TRA2	Ağrı, Kars, Iğdır, Ardahan
TRB1	Malatya, Elazığ, Bingöl, Tunceli
TRB2	Van, Muş, Bitlis, Hakkari
TRC1	Gaziantep, Adıyaman, Kilis
TRC2	Şanlıurfa, Diyarbakır
TRC3	Mardin, Batman, Şırnak, Siirt
TR10	İstanbul
TR21	Tekirdağ, Edirne, Kırklareli
TR22	Balıkesir, Çanakkale
TR31	İzmir
TR32	Aydın, Denizli, Muğla
TR33	Manisa, Afyon, Kütahya, Uşak
TR41	Bursa, Eskişehir, Bilecik
TR42	Kocaeli, Sakarya, Düzce, Bolu, Yalova
TR51	Ankara
TR52	Konya, Karaman
TR61	Antalya, Isparta, Burdur
TR62	Adana, Mersin
TR63	Hatay, Kahramanmaraş, Osmaniye
TR71	Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir
TR72	Kayseri, Sivas, Yozgat
TR81	Zonguldak, Karabük, Bartın
TR82	Kastamonu, Çankırı, Sinop
TR83	Samsun, Tokat, Çorum, Amasya
TR90	Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane

ANNEX-2: Gross Regional Product (NUTS Level 2 Regions, Thousand Dollars)

Code	Region	2004	2008	2011
TR10	İstanbul	108.430.481	205.185.630	213.540.645
TR51	Ankara	32.915.996	63.202.774	65.776.347
TR41	Bursa, Eskişehir, Bilecik	24.637.040	49.209.880	51.213.672
TR31	İzmir	26.401.754	48.505.424	50.480.531
TR42	Kocaeli, Sakarya, Düzce, Bolu, Yalova	22.837.302	45.654.763	47.513.793
TR62	Adana, Mersin	15.872.985	29.628.281	30.834.724
TR61	Antalya, Isparta, Burdur	15.325.568	28.605.155	29.769.937
TR33	Manisa, Afyon, Kütahya, Uşak	13.568.623	26.893.105	27.988.173
TR32	Aydın, Denizli, Muğla	14.951.187	26.744.157	27.833.161
TR83	Samsun, Tokat, Çorum, Amasya	10.987.421	20.962.939	21.816.535
TR21	Tekirdağ, Edirne, Kırklareli	9.783.777	20.169.848	20.991.150
TR90	Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane	9.798.800	19.624.761	20.423.867
TR63	Hatay, Kahramanmaraş, Osmaniye	9.495.117	19.000.385	19.774.067
TR52	Konya, Karaman	9.384.685	17.601.827	18.318.561
TR72	Kayseri, Sivas, Yozgat	9.293.681	17.418.493	18.127.762
TR22	Balıkesir, Çanakkale	8.004.011	16.024.417	16.676.920
TRC2	Şanlıurfa, Diyarbakır	7.379.908	12.539.894	13.050.509
TRC1	Gaziantep, Adıyaman, Kilis	6.339.000	11.713.671	12.190.643
TR71	Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir	6.037.825	11.236.107	11.693.634
TR81	Zonguldak, Karabük, Bartın	5.937.480	9.901.212	10.304.382
TRB1	Malatya, Elazığ, Bingöl, Tunceli	5.338.387	9.893.149	10.295.991
TRC3	Mardin, Batman, Şırnak, Siirt	3.905.890	8.253.474	8.589.549
TRB2	Van, Muş, Bitlis, Hakkari	3.995.233	7.522.283	7.828.585
TRA1	Erzurum, Erzincan, Bayburt	3.736.116	6.562.661	6.829.888
TR82	Kastamonu, Çankırı, Sinop	3.383.260	5.461.382	5.683.765
TRA2	Ağrı, Kars, Iğdır, Ardahan	2.671.165	4.565.313	4.751.210
TR00	Turkey	390.412.690	742.080.982	772.298.000

Aliağa Port Administration, 2013: Data Obtained from Institution

Aliağa Chamber of Commerce, 2012: Data Obtained from Institution

Aydoğuş, O. 2011: Girdi-Çıktı Modellerine Giriş, Reviewed Third Print, Efil Publishing House, Ankara

Aykaç Yanardağ, A.; Yanardağ, M.Ö. 2009: İzmir'de Turizm Çeşitleri ve Turizm Yatırımları İhtiyaç Analizi, İzmir

BRSA, 2012: Banking Regulation and Supervision Agency Official Internet Site, <http://www.BRSA.org.tr>

Information and Communication Technologies Authority, 2012: Data Obtained from Institution

Ministry of Science, Industry and Technology, 2011: Data Obtained from Institution

Ministry of Science, Industry and Technology, 2011b: Situational Report of 81 Provinces, Ankara. Ministry of Science, Industry and Technology, 2012a: Statistical Information of R&D Centres ,<http://sagm.sanayi.gov.tr/DocumentList.aspx?catID=244&lng=tr>, access date: 13.12.2012

Ministry of Science, Industry and Technology, 2012b: Distribution of Organised Industrial Zones by Geographical Regions, <http://www.sanayi.gov.tr/Files/Attachments/OtherFiles/osb-8-genel-bolge-dagilim-30012012111320.xls>, access date: 25.01.2012

Ministry of Science, Industry and Technology, 2013: Official Internet Site,<http://www.sanayi.gov.tr/Pages.aspx?pagelD=810&lng=tr>, access date: 02.08.2013

Brookings, 2011: Global Metro Monitor 2011: Volatility, Growth and Recovery, The Brookings Institution Metropolitan Policy Program

Brookings, 2012: Global Metro Monitor 2012: Slowdown, Recovery and Interdependence, The Brookings Institution Metropolitan Policy Program

BÜGEM, 2012a: Documents on Organic Agriculture, <http://www.tugem.gov.tr/UploadDocument/D20090908114258.27543.html>, access date: 12.11.2012

BÜGEM, 2012b: Official Internet Site, http://www.tugem.gov.tr/document/guncel_veriler.pdf, access date: 12.11.2012

Ministry of Environment and Urbanisation, 2011: 2011 Environmental Status Report for Turkey, Ankara

Ministry of Environment and Urbanisation, 2013: İzmir Integrated Coastal Area Management and Planning Draft Project, <http://www.csb.gov.tr/gm/mpgm/index.php?Sayfa=sayfa&Tur=webmenu&Id=261>, access date: 20.08.2013

DHİMİ, 2012: Data Obtained from Institution

Dikili Port Administration, 2013: Data Obtained from Institution

SPO, 2006: 9th Development Plan 2007-2013, SPO Publications, Ankara

SPO, 2007: 9th Development Plan– Special Commission Report on Good Governance in Public Sector, SPO Publications, Ankara

DSİ, 2012: Data Obtained from Institution

DTM, 2011: Province by Province Foreign Trade Potential Report, Ankara

Ministry of Economy, 2012: Statistics on Investment Incentives, <http://www.ekonomi.gov.tr/index.cfm?sayfa=EE7EE7B1-D8D3-8566-45201CE77E5F0FDD>, access date: 14.12.2012

Ministry of Economy, 2013: Statistics on Free Zones, <http://www.ekonomi.gov.tr/index.cfm?sayfa=DB0F9C70-D8D3-8566-452017EB264254F4>, access date: 18.01.2013

EİE, 2012: Official Internet Site, <http://www.eie.gov.tr/>

EMRA, 2012: Official Internet Site, <http://www.EMRA.org.tr/>

ERG, 2011: Assessment Annotation on PISA 2009 Results, Education Reform Initiative

ERG, 2012: Education Monitoring Report 2011, Education Reform Initiative

ESHOT, 2012: Data Obtained from Institution

EUROSTAT, 2011: Official Internet Site, <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=tgs00110&plugin=1>, access date: 30.11.2012

EUROSTAT, 2012a: Population Density in European Union NUTS 2 Regions, http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database, access date: 04.12.2012

EUROSTAT, 2012b: Workforce Survey, http://epp.eurostat.ec.europa.eu/portal/page/portal/employment_unemployment_ifs/data/main_tables, access date: 13.12.2012

Gediz Elektrik Dağıtım A.S., 2012: Data Obtained from Institution

GEM, 2012: 2011 Extended Report: Entrepreneurs and Entrepreneurial Employees Across the Globe, BABSON, Universidad del Desarrollo, Università Tun USAul Razak

GTHB, 2012: Turkey Organic Agriculture Strategic Plan (2012-2016), General Directorate of Plant Based Production, Ankara

Gündoğdu, V.; Turhan, D. 2004: Bakırçay Havzası Kirlilik Etüdü Çalışması, DEÜ Faculty of Engineering – Journal of Sciences and Engineering, Volume 6, Issue: 3, İzmir

GYODER, 2012: İzmir Real Estate Sector Assessments and Projections (İzmir Gayrimenkul Sektörü Değerlendirme ve Öngörüler), GYODER Publications, İstanbul

ILO, 2011: Global Employment Trends 2011: The Challenge Of A Jobs Recovery, http://www.ilo.org/global/publications/books/WCMS_150440/lang--en/index.htm, access date: 13.02.2013

ILO, 2012: Global Employment Trends 2012: Preventing A Deeper Jobs Crisis, http://www.ilo.org/global/research/global-reports/global-employment-trends/WCMS_171571/lang--en/index.htm, access date: 14.02.2013

ILO, 2013: Global Employment Trends 2013: Recovering From A Second Jobs Dip, http://www.ilo.org/global/research/global-reports/global-employment-trends/2013/WCMS_202215/lang--en/index.htm, access date: 13.02.2013

IMF, 2012: World Economic Outlook Database April 2012

İBB, 2008: İzmir Urban Healthcare Profile, İzmir

İBB, 2009: İzmir Transportation Master Plan, İzmir

İBB, 2012a: İzmir Metropolitan Municipality Official Internet Site, <http://www.izmir.bel.tr/Details.asp?textID=10501>, access date: 12.11.2012

İBB, 2012b: Data Obtained from Institution

İBB, 2012c: İzmir Metropolitan Municipality 1/25.000 Scale İzmir Metropolitan Area Landscape Plan Study Report

İBB, 2012d: Urban Transformation Projects, <http://www.izmir.bel.tr/projelerb.asp?plD=56&psID=0>, access date: 13.02.2013

İEÜ, 2011: İzmir Workforce Market Survey, İEÜ Publications, İzmir

İGTHİM, 2012: Year 2011 Agricultural Structure Statistics, <http://cey.izmirtarim.gov.tr/tarveri/tar%C4%B1msalyap%C4%B1/2011/index2011.htm>, access date: 03.08.2012

İÖİ, 2012: İzmir Province Renewable Energy Sector Analysis, İzmir

İSO, 2012: 500 Largest Industrial Establishments of Turkey 2012, <http://www.iso.org.tr/tr/web/besyuzbuyuk/turkiye-nin-500-buyuk-sanayi-kurulusu--iso-500-raporunun-sonuclari.html>, access date: 28.08.2013

İŞKUR, 2012a: İzmir Workforce Market Demand Survey News Bulletin-2012, İzmir.

İŞKUR, 2012b: Meeting with Institution

İZBAN A.S., 2012: Official Internet Site, <http://www.izban.com.tr>

İZDENİZ, 2012: Official Internet Site, <http://www.izdeniz.com.tr>

İZFAŞ, 2012: Fair Statistics 2012, access date: 20.12.2012

İZKA, 2008: Strategic and Growing Sectors for İzmir, İzmir

İZKA, 2009: İzmir Situational Analysis, İzmir

İZKA, 2010a: İzmir Clustering Analysis, İzmir

İZKA, 2010b: Result Report of Field Survey for Development of İzmir's Clustering Strategy (Unpublished Report), İzmir

İZKA, 2010c: İzmir HVAC Cluster Roadmap (Unpublished Report), İzmir

İZKA, 2010d: İzmir Processed Fruits and Vegetables Cluster Roadmap (Unpublished Report)

İZKA, 2012: İzmir Clustering Strategy 2013-2018, http://www.izmiryenilik.org/phocadownload/izka_rapor/izmir_izmir_kumelenme_stratejisi_2013-2018.pdf, access date: 13.02.2013

İZKA, 2013: Assessment Report of the Survey for Determination of Demands in Specialised Investment Fields(Unpublished Report)

İZKA and DEÜ, 2012: İzmir Cultural Economy Inventory and Development Strategy,http://izka.org.tr/files/planlama/2_bolge_plani_dokumanlari/2014-2023/izmir_kultur_stratejisi.pdf, access date: 13.02.2013

İZKA, EBİLTEM and TurkSTAT, 2012: İzmir Regional Innovation Strategy, İzmir

İZKA and EBİLTEM, 2012a: İzmir Regional R&D and Innovation Capacity Analysis, http://www.izmiryenilik.org/phocadownload/izka_rapor/izmir_bolgesel_arge_ve_yenilik_kapasitesi_analizi_l_rapor_2011.pdf, access date: 13.02.2013

İZKA and EBİLTEM, 2012b: Situational Analysis of İzmir R&D and Innovation Ecosystem, http://www.izmiryenilik.org/phocadownload/izka_rapor/izmir_yenilik_ekosistem_raporu.pdf, access date: 13.02.2013

İZKA and EÜ, 2012a: İzmir Civil Society Research, http://izka.org.tr/files/ppkb/izmir_STK_Analizi_Nihai_Raporu_web.pdf, access date: 13.02.2013

İZKA and EÜ, 2012b: İzmir Regional Input-Output Analysis, http://izka.org.tr/files/ppkb/izmir_Bolgesel_GC_Modeli_Raporu_web.pdf, access date: 13.02.2013

İZKA and İKÇÜ, 2012: İzmir Aquaculture Strategy Preparation, http://izka.org.tr/files/planlama/2_bolge_plani_dokumanlari/2014-2023/izmir-suurunleri_stratejisi.pdf, access date: 13.02.2013

İZKA and İYTE, 2012: İzmir Information Society Strategy, http://izka.org.tr/files/planlama/1_Ust_Olcekli_Plan_Programlar/izmirbilgitoplumukalkinma_strateji.pdf, access date: 13.02.2013

İZKA and Development Bank, 2012: İzmir Province Potential Investment Titles Research, http://www.izka.org.tr/files/2013/01/izka_kalkinmabankasi_web.pdf, access date: 13.02.2013

İZKA and TEPAV, 2012: İzmir Local Entrepreneurship Ecosystem Strategy Document, http://izka.org.tr/files/planlama/4_sektorel_arastirmalar_strateji_dok/strateji_dokumanlari/izmirgirisimcilikekosistemi.pdf, access date: 13.02.2013

İZKA, TTGV and EBSO, 2012: Report for theStrategy Study for Universalisation of Clean Production (Eco-Efficiency) Applications in İzmir, İzmir

İZKA and TurkSTAT, 2012a: İzmir Regional Innovation Strategy Field Analysis, http://www.izmiryenilik.org/phocadownload/izka_rapor/izka_yenilik_rapor.pdf, access date: 13.02.2013

İZKA and TurkSTAT, 2012b: Study on the Investment Environment of Foreign Capital Enterprises in İzmir, http://www.izmiriplaniyorum.org/static/upload/file/dogrudan_yabanci_sermayeli_girisimlerin_yatirim_ortami_deger.pdf, access date: 13.02.2013

İZKA and YÜ, 2012: İzmir Tourism Strategy Situational Analysis, http://izka.org.tr/files/planlama/2_bolge_plani_dokumanlari/2014-2023/izmir_turizm_mevcut_durum_rapor.pdf, access date: 13.02.2013

İzmir ASPB Provincial Directorate, 2012: Meeting with Institution

İzmir Provincial Directorate of Science, Industry and Technology, 2012: Year 2011 Situational Report on Industry and Commerce

İzmir Provincial Directorate of Environment and Forestry, 2009: Data Obtained from Institution

İzmir Provincial Directorate of Environment and Urbanisation, 2012: Data Obtained from Institution

İzmir İl Emniyet Müdürlüğü, 2012: Data Obtained from Institution

İzmir Provincial Directorate of Culture and Tourism, 2012: Data Obtained from Institution

İzmir İl MEM, 2012: Meeting with Institution: İzmir Provincial Directorate of National Education

İzmir Provincial Directorate of Health, 2012: Data Obtained from Institution

İzmir Metro A.S., 2012: Official Internet Site, http://www.izmirmetro.com.tr

İZSU, 2009: Data Obtained from Institution

İZSU, 2012: Data Obtained from Institution

İZTEKGEB, 2012: Data Obtained from Institution

Ministry of Development, 2012a: Year 2012 Investment Programme: Distribution of Public Investments by Provinces, Ministry of DevelopmentPublications, Ankara

Ministry of Development, 2012b: International Economic Indicators, http://www.xn--kalknma-ufb.gov.tr/DocObjects/View/14852/Uluslararası%C4%B1_Ekonomik_G%C3%B6stergeler-2012.pdf, access date: 18.02.2013

Kara, M. 2008: The Context of Regional Competitiveness and Its Reflections on Regional Development Policies (Bölgesel Rekabet Edebilirlik Kavramı ve Bölgesel Kalkınma Politikalarına Yansımaları - Dissertation), Ankara

KOÇ-ERG, 2012: What is Working Out Regarding Vocational Education and Why?: Policy Recommendations on School-Enterprise Cooperation, Koç Holding and Education Reform Initiative, İstanbul

KOGM, 2012: Turkey Cooperatives Strategy and Action Plan 2012-2016, Ankara

Köseleci, N. 2012: Updated Situational Analysis on Vocational and Technical Education, Koç Holding and Education Reform Initiative, İstanbul

Ministry of Culture and Tourism, 2007: Turkey Tourism Strategy 2023, Ankara

London Consultancy Agency of Culture and Promotion, 2012: England Market Report

MEB, 2009: Ministry of National Education 2010-2014 Strategic Plan, Ankara

MEB, 2012: Statistics of National Education, Formal Education 2011-2012

MTA, 2012: Official Internet Site, www.mta.gov.tr

MÜSİAD, 2010: Logistics Sector Report 2010, MÜSİAD Publications, İstanbul

OAİB, 2012: Ornamental Plants Sector Report, http://www.susbitkileri.org.tr/tr/arastirma-raporlari/sus-bitkileri-sektor-raporu, access date: 12.11.2012

OECD, 2006: Competitive Cities in the Global Economy, OECD Publishing

OECD, 2008: OECD Statistics,http://www.oecd.org/statistics, access date: 13.12.2012

OECD, 2009: How Regions Grow: Trends and Analysis, OECD Publishing

OECD, 2011a: Society at a Glance 2011: OECD Indicators, http://www.oecd-ilibrary.org/social-issues-migration-health, access date: 13.12.2012

OECD, 2011b: Divided We Stand: Why Inequalities Keep Rising, OECD Publishing, http://www.oecd-ilibrary.org/social-issues-migration-health/the-causes-of-growing-inequalities-in-oecd-countries_9789264119536-en, access date: 14.12.2012

OECD, 2012: Education at a Glance: Highlights, OECD Publishing

OECD, 2013: OECD Statistics,http://www.oecd.org/statistics, access date: 30.07.2013

OGM, 2013: Forestry Statistics within the context of Official Statistics Programme, http://www.ogm.gov.tr/, access date: 25.04.2013

Organic Agriculture Information System, 2012: Internet Site,http://organik.tarim.gov.tr/veri/default.asp, access date: 12.11.2012

Ministry of Forestry and Water Affairs, 2013: TUBİS TurkeyInformation System, http://tubis.ormansu.gov.tr/Default.aspx, access date: 08.01.2013

Ömürbek N.; Altın F.G. 2009: A Study on the Implementation of Healthcare Informatics Systems: The Example of İzmir, SDÜ Faculty of Arts and Sciences Social Sciences Journal, Issue: 19, Isparta

ÖSYM, 2012: 2011-2012 Education Year Higher Education Statistics

Ministry of Health, 2012a: Healthcare Statistics Yearbook 2011, Ankara

Ministry of Health, 2012b: Health Tourism Internet Site, www.saglikturizmi.gov.tr

Ministry of Health, 2012c: Health Tourism Statistics

Ministry of Industry and Commerce, 2011: Data Obtained from Institution

SGK, 2011: Statistics Yearbook 2011, http://www.sgk.gov.tr/wps/portal/tr/kurumsal/istatistikler/sgk_istatistik_yilliklari, access date: 15.02.2013

TBB, 2013: The Banks Association of Turkey Official Internet Site

TCDD, 2012a: 2007-2011 Statistics Yearbook, Ankara

TCDD, 2012b: Official Internet Site

TEİAŞ, 2011: Türkiye Elektrik İletim A.Ş. Activity Report, Ankara

TEİAŞ, 2012: Data Obtained from Institution

TESEV, 2008: Good Governance Manual (İyi Yönetişim El Kitabı), TESEV Publications, İstanbul

The World Bank, 2012: Connecting to Compete 2012: The Logistics Performance Index and Its Indicators

TKB, 2010: Ministry of Agriculture and Rural Affairs Strategic Plan (2010-2014), Ankara

TKB, 2011: Rural Development Plan (2010-2013), Ankara

TMMOB Chamber of Environmental Engineers, 2009: İzmir Environmental Status Report, İzmir

TOBB, 2012: Turkey Transportation and Logistics Assembly Sector Report 2011, TOBB Publications, Ankara

Topçu, P. 2012: Policies on Protection and Effective Utilisation of Agricultural Lands (Tarım Arazilerinin Korunması ve Etkin Kullanılmasına Yönelik Politikalar - Dissertation), Ministry of Development, Ankara

TPI, 2011: Data Obtained from Institution

TPI, 2013: Registered Geographic Indications, <http://www.tpe.gov.tr/portal/default2.jsp?sayfa=431>, access date: 14.02.2013

TRGM, 2010: Determination of the General Status of Turkey's Agricultural Enterprises and Adequate Income Enterprise Size, Ankara

Tuğay, M.E. 2012: Manners to Increase Plant Based Production in Turkey's Agriculture, Agricultural Sciences Research Journal (Tarım Bilimleri Araştırma Dergisi), 2012.

TÜBİTAK, 2004: National Science and Technology Policies 2003-2023 Strategy Document, Ankara

TÜBİTAK, 2012: Official Internet Site, <http://www.tubitak.gov.tr>

TurkSTAT, 2000: Building Census Statistics, Ankara

TurkSTAT, 2003: Household Budget Survey 2002-2005, access date: 27.12.2012

TurkSTAT, 2008: Regional Monitoring Indicators 2007, TR31 İzmir, TurkSTAT Publications, Ankara

TurkSTAT, 2009a: Results of the Poverty Study, access date: 14.01.2013

TurkSTAT, 2009b: Annual Statistics on Industry and Commerce

TurkSTAT, 2010: Study on the Problems and Expectations of Handicapped People, access date: 19.02.2013

TurkSTAT, 2011a: İzmir According to Selected Indicators 2011, TurkSTAT Publications, Ankara

TurkSTAT, 2011b: Study on Income and Living Conditions 2011, <http://www.tuik.gov.tr/PreHaberBultenleri.do?id=10902>, access date: 10.12.2012

TurkSTAT, 2011c: Household Workforce Survey, access date: 16.01.2013

TurkSTAT, 2011d: Population and Residence Statistics, access date: 19.02.2013

TurkSTAT, 2011e: Foreign Trade Statistics, access date: 14.03.2013

TurkSTAT, 2011f: Regional Energy Statistics

TurkSTAT, 2012a: Results of 2012 Address Based Population Registry System, <http://tuikapp.tuik.gov.tr/adnksdagitapp/adnks.zul>, access date: 11.02.2013

TurkSTAT, 2012b: General Census Results, access date: 13.08.2012

TurkSTAT, 2012c: Data Obtained from İzmir Regional Directorate

TurkSTAT, 2012d: Migration Statistics, access date: 14.08.2013

TurkSTAT, 2012e: Cultural Statistics Database, access date: 14.01.2013

TurkSTAT, 2012f: Culture Statistics 2011, TurkSTAT Publications, Ankara

TurkSTAT, 2012g: Workforce Statistics

TurkSTAT, 2012h: Regional Calculations, access date: 08.01.2013

TurkSTAT, 2012i: Regional Statistics

TurkSTAT, 2012j: Regional Gross Value Added Statistics, access date: 08.01.2013

TurkSTAT, 2012k: Regional Foreign Trade Statistics Database, access date: 15.02.2013

TurkSTAT, 2012l: Environment Statistics, access date: 5.11.2012

TurkSTAT, 2012m: Wastewater Statistics, access date: 5.11.2012

TurkSTAT, 2012n: Regional Energy Statistics, access date: 5.11.2012

TurkSTAT, 2013: Regional Calculations, access date: 10.10.2013

TÜRÇEV, 2012: Mavi Bayrak Internet Site, www.mavibayrak.org.tr

TÜREB, 2012: Turkey Wind Energy Statistics Report, Ankara

Türker, M. Gençel, B. 2010, The Effects of Land Consolidation and Modern Irrigation Systems to Effective Usage of Water Resources in Turkey, International Symposium for Water and Wastewater Management, Konya.

TÜRKONFED, 2012: Orta Gelir Tuzağından Çıkış: Hangi Türkiye?, Volume 1: Makro-Bölgesel-Sektörel Analiz, İstanbul

TÜSİAD, 2011: Vision 2050 Turkey, TÜSİAD Publications, İstanbul

Tüysüz, N. 2011: Importance of Social Capital for Economic Development and Calculation of Social Capital Index, Ministry of Development, Ankara

TYD, 2012: Association of Tourism Writers and Journalists, <http://www.ttyd.org.tr/turizm-istatistikleri.html>, access date: 13.12.2012

TZOB, 2010: Agricultural and Economic Report 2007-2010, <http://www.tzob.org.tr/Detail.aspx?pages=ZirailktisadiRpr.htm>, access date: 10.01.2013

UBAK, 2011: Turkey Transportation and Communication Strategy: Objective 2023, Ankara

UBAK, 2012a: Ministry of Transportation, Maritime Affairs and Communication – Institutional Financial State and Expectations Report, Ankara

UBAK, 2012b: Ministry of Transportation, Maritime Affairs and Communication 2011 Activity Report, Ankara

UBAK, 2012c: Ministry of Transportation, Maritime Affairs and Communication Official Internet Site

UN, 2010: Creative Economy: A Feasible Development Option

UNCTAD, 2012: Entrepreneurship Policy Framework and Implementation Guidance, New York and Geneva

UNDP, 2011: Human Development Report 2011

UNICEF, 2011: Global Inequality: Beyond the Bottom Billion - A Rapid Review of Income Distribution in 141 Countries, New York

UNWTO, 2012a: World Tourism Barometer 2012

UNWTO, 2012b: Official Internet Site

UNWTO, 2012c: Tourism Highlights 2012

URAP, 2013: University Ranking by Academic Performance, <http://tr.urapcenter.org/2012/>access date: 17.07.2013

URAK, 2010: Interprovincial Competitiveness Index 2009-2010, İstanbul

DE, 2013: Derivatives Exchange Official Internet Site, <http://www.vob.org.tr>

WHO, 2011: World Health Statistics 2011, WHO Library Cataloguing-in-Publication Data

WTO, 2012a: Slow Global Growth to Hit Trade in 2012 and 2013 WTO Says, http://www.wto.org/english/news_e/pres12_e/pr676_e.htm, access date: 21.09.2012

WTO, 2012b: World Trade Report 2012

YDTA, 2010: Turkey Agriculture Sector Report, İstanbul

YÖK, 2010: Situational Reporton Turkey Healthcare Education and Healthcare Workforce, Ankara

YÖK, 2012: Official Internet Site, <http://www.yok.gov.tr>

Special thanks to:

- Sistaş Çelik Dövme Sanayi ve Ticaret A.Ş.
- Kansai Altan Boya Sanayi ve Ticaret A.Ş.
- İzmir Banliyö Sistemi Taşımacılığı A.Ş.
- Ekin Koleji
- Akuvatur Su Ürünleri Ticaret ve Sanayi A.Ş.

for their contribution to visual products used apart from the photo archives of İZKA and Bia Halkla İlişkiler Reklam San. Tic. Ltd. Şti.