REPUBLIC OF TURKEY
MINISTRY OF INDUSTRY
AND TECHNOLOGY

İZMİR
DEVELOPMENT
AGENCY

ANALYSIS OF THE CREATIVE INDUSTRIES IN TURKEY AT NUTS-2 REGIONS LEVEL: FOCUS ON İZMİR

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ABBREVIATIONS

3D	Three-dimensional
AI	Artificial Intelligence
AR	Augmented Reality
DCMS	Department for Digital, Culture, Media and Sports
EC	European Commission
EU	European Union
FTVRP	Film, TV, Video, Radio and Photography Activities
GB	Gigabyte
GDP	Gross Domestic Product
IMF	International Monetary Fund
IT	Information Technology
ITSCS	Information Technologies, Software and Computer Services Activities
MGL	Museums, Galleries and Libraries Activities
MPVA	Music, Performing and Visual Arts Activities
NUTS-2	Nomenclature of Units for Territorial Statistics - Level 2
OECD	Organisation for Economic Cooperation and Development
PPI	Producer Price Index
R&D	Research and Development
S3	Smart Specialisation Strategies
SME	Small and Medium-Sized Enterprises
SSI	Social Security Institution
STEM	Science, Technology, Engineering and Mathematics
TURKSTAT	Turkish Statistical Institution
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Program
UNESCO	United Nations Education Science and Culture Organisation
UNIDO	United Nations Industrial Development Organisation
VR	Virtual Reality
WDI	World Development Indicators
WEF	World Economic Forum

NOMENCLATURE OF UNITS FOR TERRITORIAL STATISTICS - LEVEL 2 (NUTS-2) REGIONS OF TURKEY

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)
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)

Preface

Industrialization is one of the critical moments in human history, and the basic dynamic that has shaped our world for about 250 years. We are experiencing an era in which automation has become dominant in manufacturing techniques during the present phase of industrialization. In the publication article, "Industry 4.0" is depicted as a process in which machines replace human labor during production. So, what happens to human labor while machines continue to stand out in production? Does it lose meaning? Does it lose importance? Or does it change form? So, the concept of "creative industries" emerges as a concept of the new form of human labor in this new phase of industrialization.

It is possible to define creative industries as industries that work on the basis of talent. Although there are changing approaches in the classification of the industries in the concept and these sectors, the publication has agreed that these industries produce more added value and create more jobs than the other sectors. The available statistical data also supports this determination. Therefore, developed countries, particularly Anglo-Saxon countries, place special emphasis on the development of creative industries and carry out important projects to become a center of attraction for these industries.

There are virtually no data-driven and comparative studies on the number of creative industries in Turkey that have started to come to the fore in recent years with rising exports in the TV and film industry as well as the gaming and software industry. This report is the result of a joint study of competent academicians and our Agency Experts. We have prepared our creative industries in order to establish their position in our country by comparing them with OECD countries both nationally and regionally, and to create an information base for policy activities to be implemented in the TR31 Izmir Region for the development of creative industries.

This project is the first structural analysis in our country in the field of creative industries and incorporates "firsts" in many analyzes. Some of these are the first to offer creative ecosystem analysis for the Izmir region of TR31, a distinction between creative industries and digital industries, a separation of creative activity and creative profession, creative spread and co-placement, a comparison of creative industries at the IBBS-2 Regions with the Three-Star Analysis method.

For an inclusive and sustainable growth, it is critical to produce the information that drives the production process and represents the actual added value. Achieving this success in today's reality is directly related to having a say in creative industries. Therefore, developing talent-based industries is an important policy area for increasing the competitiveness of countries and regions. I hope that this publication will contribute to the policy design processes of all decision-making actors at national and regional levels, and I wholeheartedly congratulate everyone who have contributed to the project.

Dr. Mehmet YAVUZ

Secretary General

Executive Summary

Recently, there has been growing interest the creative industries across the world, for three main reasons: Firstly, they have high potential for growth. Secondly, they are closely linked with innovation and prosperity. Thirdly, they contribute to the international competitiveness of countries. The creative industries are defined as “those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property” (DCMS, 2001). These are industries which convert new technological developments into practice the fastest; which launch innovative products, applications, services and business processes much faster than other sectors; and which have high value added. **The creative industries make a direct contribution to economic growth through the creative outputs they generate, while also playing an important role in increasing the creative potential of the economy by making their creative products available to other industries** (Chapain et al., 2010). These industries lead not only to an increase in physical output, but also to increases in human capital. Potentially, they could be leader industries that enable the growth of the economy; they have the potential to spread the innovations they develop within other fields (the spillover effect) thus they encourage creativity and innovation in all sectors of the economy; and they have the capability to attract qualified labour and investment. Therefore, the creative industries have a strategic importance for all regions aiming inclusive and sustainable growth and development. There are no structural analyses at either regional or national level in regards to the potential of TR31-İzmir region and Turkey in literature. This study will fill that gap. It consists of four chapters. In the first chapter, we provide the definitions and classifications of the creative industries, followed by an explanation of the relationship of these industries with digital technologies and their role in regional policies. In the second chapter, we conduct structural analyses of creative industries at regional, national and international level. In the third chapter, we investigate the creative goods trade. In the last chapter, we explain an ecosystem approach for creative industries and conduct a survey with the objective of determining the creative industries ecosystem of İzmir.

The Definition of Creative Industry, its Relationship with Technology and its Role in Regional Policies

There is no consensus on the definition or classification of creative industries. The most commonly used definitions were offered by the United Nations, European Union and DCMS. For the purposes of this study, the definition and classification by the DCMS (1998, 2001 and 2014) have been used. According to this, there are nine main creative industry groups and 31 creative industries within these main groups. The main creative industry groups are:

- Advertising and Marketing,
- Architecture
- Crafts
- Design
- Film, TV, Video, Radio and Photography (FTVRP)
- Information Technologies, Software and Computer Services (ITSCS)
- Publishing
- Museums, Galleries and Libraries (MGL)
- Music, Performing and Visual Arts (MPVA)

The Creative Industries and Intellectual Property Rights

The creative industries generate highly creative content, and thus the protection of intellectual property is fundamental. Technological developments and digitisation made it easy to reproduce and distribute works subject to copyright. This situation may be undesirable for owners of the works or owners of copyrights. If creative individuals fail to receive recompense for the time, energy and financial investments expended throughout the creation process, this may damage their motivation to continue developing creative products. Consequently, an effective copyright system is required for the development of these industries.

The Relationship Between Creative Industries and Digital Technology

Rapidly developing technologies have significantly changed the value chain (creation/development, production, distribution, marketing and consumption processes) of the creative industries. In other words, digital technologies present very important opportunities for the creative industries in fields such as new product development, new business model development, new distribution channels and new market opportunities, and lower production costs. Technological advances that support the development of creative industries include artificial intelligence (AI), virtual reality (VR), augmented reality (AR) and blockchain:

- **Artificial intelligence** can be used very effectively in the creation, production, marketing/sales and consumption stages of creative industries such as music, film, video games, art and design.
- **Virtual reality and augmented reality** facilitate content creation and experiencing processes in the creative industries, and lower the costs.
- **Blockchain technology** can facilitate intellectual property rights and content management for digital works (books, music, art, games, photography, text etc.) produced by the creative industries. This becomes apparent particularly in preventing unauthorised use and ensuring fairer payments for content owners.

Their Role in Regional Policies

The advanced digital production technologies of the fourth industrial revolution radically altered the nature of production and led to the restructuring of regional policies. One of the priorities of new regional policies is the modernisation of production based on digital technologies and structural transformation. The creative industries have a significant role to play in this process of transformation, carried out by smart specialisation strategies. The reason behind this is that these industries play a pioneering role in developing technological innovations and spreading them within the economy and society (UNIDO, 2019; KEA, 2019 and European Parliament, 2016).

"Creative labour", that is capable of synthesising knowledge and skills from science, technology and the arts, is present at the source of these innovations. The digital transformation of the economy increased the demand for such creative labour; it is estimated that creative skills will become even more important as technology advances, and that individuals who specialise in creative occupations will be among those to benefit the most from the digital age (Bakhshi et al., 2015). Therefore, strengthening the creative industries in the context of smart specialisation strategies will assist in the transformation of production from traditional to modern structures, and accelerate the processes of creation of new businesses and employment, and gaining new skills. This situation will also help to convert the threats that digital transformation may pose to production structure and labour into opportunities (OECD, 2019b).

The creative industries also have a positive impact on processes such as reducing inequality and spreading prosperity into all segments of society. These industries strengthen participation in cultural, social, economic and political life, particularly by women and young people. They also provide a significant contribution to sustainable and inclusive regional/rural development by increasing entrepreneurship capacities and employment levels (UNIDO, 2014).

Structural Analysis of Creative Industries

In the second chapter, structural analyses at regional (NUTS-2 level), national and international level are conducted on the creative industries by looking at production, value added, employment statistics etc. Regional level analyses are conducted in more detail, particularly focusing on TR31-İzmir region.

National Analysis

In this chapter, the creative industries are analysed, first collectively and then separately. The term "creative economy" is used to indicate this group of industries collectively. **In 2017, the creative economy in Turkey had a turnover of approximately $28 billion, production amounting to $25 billion, $7 billion of value added and 344,000 employees. These industries comprised 3% of overall production, 2% of national turnover and 1% of employment in Turkey.** Although no significant change is observable in turnover and production of the creative economy between 2010 and 2017, there was an increase of 25% in value added, 43% in employment and 34% in number of enterprises during the same period.

The value added ratio (share of value added within production) of the creative economy is higher than that of all other traditional sectors. This ratio is 22% for manufacturing, 15% for the construction sector and 28% for the creative economy.

In addition to this, a second benchmark has been used in order to prevent misleading results due to the high shares of construction and manufacturing industries within the economy when determining the strategic importance of the creative industries to the economy. The benchmark tool compares the share of an industry's value added in Turkey to the share of the industry's production in Turkey. This ratio being equal to 1 would mean that the share of the industry in question within the overall value added in Turkey is equal to the share of the industry within the overall production in Turkey. The ratio is 1.04 for creative economy, and 0.83 for manufacturing and 0.53 for construction. In other words, the creative industries provide a higher contribution to the country's value added compared to the share they receive from countrywide production.

In this study, all of the creative industries in Turkey are analysed in comparison with each other. We found that *computer programming activities* are the industry with the best performance among all creative industries in Turkey, when assessed collectively in terms of turnover, value added, efficiency and employment indicators. The closest runner-up was *computer consultancy activities*.

International Analysis

Turkey's creative economy is analysed in comparison with the creative economies of 16 OECD countries. While Turkey's creative economy ranked around the middle of the OECD countries list for almost all indicators (turnover, production, value added etc.) in terms of absolute values, Turkey moved down the list when relative values (ratio of relevant indicators to GDP) were considered. The countries with the highest ratio of value added within OECD countries are Germany (65%), the United Kingdom (55%) and Spain (54%). Turkey has the lowest value added ratio. The value added ratio of the creative economy in Turkey is only around half of these countries.

When compared to OECD countries, *computer programming activities* is the industry with the best relative state among all creative industries in Turkey. The value added of this industry is 52%, which is higher than that of many OECD countries.

Regional Analysis (NUTS-2 Level)

The most recent data on creative industries at regional level comes from 2015. The five regions where creative economy has the highest turnover in 2015 are TR10 (İstanbul), TR51 (Ankara), TR42 (Kocaeli, Sakarya, Düzce, Bolu, Yalova), TR31 (İzmir) and TR61 (Antalya, Isparta, Burdur), in order. The shares of these regions within the overall creative economy of Turkey are: TR10, 73.9%; TR51, 9.7%; TR42, 3.4%; TR31, 2.6% and TR61, 2.5%. These five regions alone account for more than 90% of the overall turnover of the creative economy in Turkey.

When one considers the number of employees working in the creative industries, the order above somewhat changes. The regions that provided the highest employment in creative industries (as of 2015) are TR10 (167,000 employees), TR51 (35,000 employees), TR31 (13,000 employees), TR61 (12,000 employees) and TR41 (9,000 employees).

Specialisation: Location Quotient (LQ) is used to determine whether or not the NUTS-2 regions display specialisation (agglomeration) in creative industries. These coefficients are calculated separately for the creative economy of a region and the creative industries therein.

We note three regions where the creative economy displayed specialisation. These are TR10 (İstanbul), TR51 (Ankara) and TR61 (Antalya, Isparta, Burdur). Although the creative economy doesn't display specialisation outside these three regions, the region closest to the critical LQ value is TR31 (İzmir).

Alongside the creative economy, we also looked at regional agglomerations of creative industries. Regions displaying specialisation for the nine main creative industry groups are as follows: ***Advertising and Marketing:*** TR10 and TR51; ***Architecture***: TR10, TR41, TR51 and TR61; ***Crafts***: TR10; ***Design***: TR10, TR21 and TR32; ***Film, TV, Video, Radio and Photography:*** TR10, TR51 and TR61; ***Information Technologies, Software and Computer Services:*** TR10, TR31 and TR51; ***Publishing:*** TR10 and TR51; ***Museums, Galleries and Libraries:*** TR10 and TR42; ***Music, Performing and Visual Arts:*** TR10 and TR61.

When the specialisation within sub-creative industry groups is analysed, we note that the TR10 region displayed specialisation in all creative industries, while TR51, TR61 and TR31 regions displayed specialisation in 17, 7 and 5 industries, respectively.

Creative Spillover and Co-location: While creative industries provide a direct contribution to the creativity capacity of the region they operate in through their activities, they also provide indirect contributions to the other areas of the economy through spillover effects. Thus, there is a "creative spillover" in the regions where such industries exist. In order to find empirical evidence of the presence of creative spillover, we analysed whether or not co-location trends exist among creative industries, and between the creative industries and other innovative industries (e.g. high technology industries and knowledge intensive business services). To that end, correlation analysis is used, and the results are as follows:

- **The advertising and marketing industry** displays co-location with all other creative industries, other than crafts. However, the degrees vary.
- **Architecture** usually has a low degree correlation with the other creative industries. There is a medium degree of correlation only with film, TV, video, radio and photography (FTVRP).
- **Crafts** does not display co-location with any other creative industries.
- In regions where the **Design** industry displays specialisation, FTVRP activities, ITSCS activities, and MPVA activities were also observed to display specialisation. The co-location correlation between the design industry and these other industries is medium. The design industry also displays co-location with MGL activities, albeit at a low level.
- A high level of correlation exists between the **FTVRP activities** and ITSCS, and MPVA.
- In regions where **museums, galleries and libraries** display specialisation, MPVA activities also display specialisation.

The results of the correlation analysis conducted between creative industries and other innovative industries are as follows:

- Creative industries display co-location more with knowledge intensive business services (KIBS), and less with high technology industries.
- There are two industries within the creative industries that display co-location with high technology industries: music and ITSCS activities. However, this co-location correlation is at a low level.
- KIBS display high levels of co-location with four creative industries (advertising-marketing, FTVRP, ITSCS and MPVA); medium levels of co-location with two creative industries (design and MGL), and low levels of co-location with one creative industry (architecture).
- No statistically significant correlation is found to exist between crafts and publishing and any high technology industries or KIBS.

TR-31 Region Analysis

As of 2015, the total turnover of the creative industries in İzmir was $544 million with 12,971 employees. The share of İzmir's creative industries within Turkey's overall creative economy turnover and employments were 2.6% and 4.6%, respectively. The share of these industries within the total turnover of İzmir was 0.6%, while the share of the same within overall employment in the province was 0.9%.

When creative industries in İzmir are examined in terms of turnover, the highest share goes to *advertising agencies* with a value of 23.3%. This is followed by *computer programming activities* with a value of 19% and *manufacture of jewellery* and *related articles* with a value of 16%. The total turnover of the five industries with the highest turnover shares (industries coded as 7311, 6201, 3212, 5813 and 6202) correspond to 78% of the overall creative economy turnover of İzmir.

When we examine employment shares of the creative industries in İzmir, the first two places are occupied again by *advertising agencies* and *computer programming activities.* While architectural activities takes up a lower place in the turnover list, it ranks in third place in employment with a value of 10.6%. The total employment of the five industries with the highest employment shares (industries coded as 7311, 6201, 7111, 5813 and 6202) correspond to 76% of the overall creative economy employment of İzmir.

Specialisation in Creative Industries in İzmir: As of 2010, İzmir displayed specialisation in *operation of arts facilities, advertising agencies and photographic activities,* but the specialisation in these activities disappeared by 2015.

The specialisation noted in 2010 in İzmir regarding *motion picture projection activities and cultural education activities* continued to be present in 2015, but the specialisation degrees declined.

Certain creative industries in İzmir that did not display specialisation in 2010 did display specialisation as of 2015. These are: *other publishing activities, computer programming activities and publishing of newspapers.*

Three Star Analysis: Three star analysis was conducted to define the clustering potential of creative industries in İzmir. In this analysis, each industry is assessed regarding specialisation, size and dominance. The term *candidate cluster* is used for the industries that fulfilled one criterion, the term *potential cluster* is used for the industries that fulfilled two criteria, and the term *mature cluster* is used for the industries that fulfilled all three criteria.

According to the three star analysis results for İzmir in 2015, ***computer programming activities received three stars and was defined to be the only creative industry that constituted a mature cluster in the region.*** While this industry received only one star by fulfilling the size criterion in 2010, it demonstrated rapid progress in the next five years, eventually fulfilling all three clustering criteria. According to Turkish Statistical Institute (TURKSTAT) data, an increase of more than four times in employment and more than seven times in the number of companies was observed in the relevant industry within these five years.

The following creative industries in İzmir received two stars in 2015, defined as potential clusters: publishing of newspapers, other publishing activities, motion *picture projection activities, advertising agencies and cultural education.* While ***advertising agencies*** displayed mature cluster characteristics in İzmir as of 2010, the industry lost this characteristic in 2015. The specialisation coefficient calculated for the industry is still very close to the threshold value of 1, and thus is the strongest candidate industry for ascending to the mature cluster group in İzmir. Supporting this industry may rapidly bring it back to its former level.

There are 15 industries in İzmir that fulfilled only the size criterion and thus received only one star. Among these, ***specialised design activities*** is noted to possess important potential. The specialisation coefficient of the industry is calculated as 0.90, close to the critical threshold value. In the event this industry is supported to grow via appropriate incentives, it seems capable of ascending to the potential cluster group.

Digital Industries in İzmir: DAs mentioned before, creative industries are the industries that apply new technological tools and advances in digital technology the fastest. Therefore, there is a close correlation between creative industries and digital industries. Taking into consideration such correlation, this report also handled the topic of how İzmir rates in terms of digital industries. Digital industries in İzmir produce 5.1% of Turkey's overall digital economy turnover and employ 2.3% of all employees working in this field. These industries comprise 1.3% of the total turnover in İzmir and 1% of the total employment.

The top five digital industries that take up the largest shares are the industries coded as 4652, 6110, 4651, 6201 and 6120. These represent 77% of the total turnover and 69% of the total employment of the digital economy of İzmir.

Computer programming activities, which sits within both creative and digital industries, has an important place within the digital economy of İzmir and within its creative economy.

Creative Occupations in İzmir: In the era of digital transformation, it is estimated that occupations requiring creative skills will become even more important, and that individuals specialised in creative occupations will be among those to benefit most from the digital age. In line with this perspective, this report explores the present state of creative occupations in İzmir. While measuring the creative labour potential of a region, one must take into consideration not only those who perform the occupations in creative industries but also those who perform creative occupations in other industries. In this respect, there are 542,000 creative professionals working in all industries throughout Turkey, of whom 31,000 work in İzmir. This corresponds to around 1.6% of the total labour force in İzmir. *Crafts* and *advertising-marketing* have the highest number of employees among the creative occupations in İzmir. The total employment in these groups corresponds to over 50% of the total creative professionals in İzmir. The third group in İzmir with the highest number of employees is *design*, at approximately 3,600 employees and corresponding to approximately 11.5% of the total number of people employed in creative occupations in İzmir.

Digital Occupations in İzmir: Creative and digital occupations contribute to each other. There are some creative occupations that are also defined as digital occupations. In today's world, digital occupations have a significant role in the development of a region, alongside creative occupations. As of 2019, there were 101,000 digital professionals in Turkey, of whom 5.7% were employed in İzmir. With this ratio, İzmir was the third highest employment region in this field. 37% and 26% of employees in digital occupations in İzmir work as *software developers and information and communications technology user support technicians, respectively.*

Creative Goods Trade

In the third chapter, the creative goods trade is analysed at three levels (international, national and regional). Analyses are conducted for seven product groups (crafts, audial and visual goods, design, new media, performing arts, publishing, visual arts).

Global Creative Goods Trade

The most recent data on the global creative goods trade comes from 2015. In that year, it reached $510 billion and Turkey ranked 12th in the world with a creative goods export value of $8.7 billion (up from 19th place with a value of $3.3 billion in 2005). Creative goods trade comprises approximately 3% of the overall global goods exports.

Turkey's share of global creative goods exports is 1.7%. Considering that, according to UNCTAD data, Turkey's share within global goods exports was approximately 1% in 2015, the country's share of the creative goods trade should not be underestimated.

Among countries with a trade surplus of creative goods worldwide, Turkey stands in fourth place.

Turkey's Creative Goods Trade

The most up-to-date data on Turkey's creative goods trade that can be obtained from national data sources (TURKSTAT) is from 2019, when Turkey's creative goods exports totalled $11 billion. In the same year, Turkey's creative goods import was approximately $3.6 billion. Thus, the annual trade surplus of Turkey's creative goods exceeds $7 billion.

More than 60% of Turkey's creative goods trade comprises design products, and crafts products comprises 30%. In regard to global crafts exports, Turkey is the second highest exporter with a share value of 8%. Turkey is also among the top 10 exporter countries in the world for design products exports.

The top three countries to which Turkey exported creative goods in 2005 were the USA, Germany and Russia. Significant changes occurred in the order of countries receiving creative goods exports by Turkey during the decade between 2005 and 2015. In 2015, the highest number of Turkey's creative goods exports went to the United Arab Emirates. This was followed by Iraq, Iran and Saudi Arabia. A regional shift occurred regarding Turkey's creative goods exports in this time period.

Regional Creative Goods Trade

The creative goods trade in different NUTS-2 regions is compared in this report by means of Balassa index. According to the results, İzmir has comparative advantage for two creative products groups. These are new media and visual arts. İzmir has a specialisation level even exceeding other regions that have a comparative advantage in these product groups.

Creative Industries Ecosystem

The increasing role of knowledge in production processes and the resulting change in the global economy makes a dynamic interaction environment necessary for innovation and technology generation. In other words, the formation of living ecosystems will accelerate knowledge generation. In the coming period, economies that have ecosystems where creativity, knowledge and technology feed each other will have a more advantageous position with regards to growth and competition. In line with this, we have included a map of İzmir's creative industries ecosystem. The interactions of the various actors comprising the map, and their contributions to the ecosystem, are considered and evaluated at micro, mezzo and macro levels.

General Evaluation

Our findings reveal that creative economy policy should be prepared and monitored at a national level. Furthermore, there is a need for data to be compiled at both national and regional level by TURKSTAT, which should be published periodically so that the creative industries can be monitored. Strategy studies should be conducted with the aim of integrating digital technologies into the creative industries.

İzmir stands at the threshold of specialisation in the creative economy. We conclude that three industries should be supported as priorities in İzmir: computer programming activities; advertisement agencies and design.

CHAPTER 1

Creative Industries: Definition, Technology and Regional Policies

1.1. Definitions And Classifications

In this chapter we will define the concept of creativity, as well as the definitions and classifications of creative industries and creative occupations.

1.1.1. Creativity

The concept of creativity comes from the Latin verb "creare", which means to produce or to generate. This is important in many different disciplines, and had not been used in the meaning of 'creativity of humans" for hundreds of years. The first printed reference to the act of creating by humans is a theatre history book published by Adolphus Ward in 1875. It took more than 50 years for this concept to enter into standard dictionaries and languages outside English, during which period important social transformations happened, including two world wars. Before this, it was believed that creativity belonged to a few geniuses. After World War II, more scientific studies were carried out, and it gradually came to be accepted that creative potential is inherent to all humans. Interest in the things that reveal such potential also increased, including environmental and social conditions, and individual factors (Glăveanu and Kaufman, 2018: 10).

More recently, the act of creation has been evaluated holistically, including the physical and emotional aspects as well as the effects of physical and socio-cultural environment of an individual. (Changeux, 2005). Considered in the context of problem solving, the act of creating may be defined as generating beneficial and interesting ideas that are novel and possessing social value (Simon, 1983; Santagata, 2009 and Amabile, 2018).

Cities or regions that bring together new knowledge, new art forms, new technologies, creative people, social, physical and knowledge-based capital, and ensure that they are integrated in a productive manner, provide an environment suitable for the generation of new knowledge (Florida, 2018: 23). People and companies in these regions internalise the benefits in the form of a rich knowledge base and have the opportunity to create further new knowledge.

The creative industries comprise one significant aspect of this environment. These industries, which integrate cultural knowledge transferred from generation to generation with new technologies, and convert them into beneficial inputs, make it possible for people to increase their individual prosperity and potential, to attract individuals and companies with creative ideas to the region, to develop new business models, to spread the use of new technologies, and to form a social learning platform that increases trust and willingness to cooperate between people. Thus, the creative industries provide a significant contribution to enriching the knowledge base in a city/region, increasing the generation of new knowledge with social value (Santagata, 2009 and KEA, 2009).

1.1.2. Creative Industries

The rapid development and increased use of information technologies since the 1990s has led to a structural transformation in the economy. This process has been called various concepts, including new economy, knowledge economy and network economy. In this new era, the significance of the creative industries has constantly increased due to following reasons: i)the domination of knowledge and information in all areas of economy (production, distribution and consumption), ii) product value being defined mainly based on the software and information content and iii) the rapid growth of services and cultural sectors possessing creative content (OECD, 1998; Flew, 2002).

The concept of the creative industries was used for the first time in the Creative Nation report published by the Australian Government in 1994. Subsequently, in 1997, the UK government underlined the importance of these industries for prosperity and employment in its new economy policies (UNIDO, 2014). Recently, many countries have granted a significant place to the creative industries in their new industrialisation policies, due to their contribution to the development and widespread use of digital technologies, as well as to sustainable and inclusive growth (UNIDO, 2019; KEA, 2019 and European Parliament, 2016). Consequently, there are many studies regarding the creative industries within international literature. The most commonly used definitions are from the UK's Department for Digital, Culture, Media and Sports (DCMS), the UN and the EU European Union (Domenech and Rausell-Köster, 2018).

INFO BOX 1.1: DEPARTMENT FOR DIGITAL, CULTURE, MEDIA AND SPORTS (DCMS)

The DCMS is a department within the United Kingdom government. It was founded in 1997 and its field of activity and name have changed since then. While the initial name of the institution was Department of Culture, Media and Sports, the word "digital" was added to become Department of Digital, Culture, Media and Sports on the 25th anniversary of its founding (3rd of July 2017). This change was made as it undertook new and important responsibilities for the development of digital technologies, and half of its policies now cover digital sectors (telecommunication, data protection, internet safety, cyber skills, relevant fields of media and creative industries) (DCMS, 2017). Integrating creative industries and digital policies within the body of the DCMS reflects the close relationship between the creative industries and the technology sector. This development means that the requirements of creative industries are also taken into account in critical fields such as digital infrastructure and artificial intelligence when the government is making policies (Bakhshi, 2019).

DCMS Definition

The first study analysing the contributions of creative industries and designing policies for their development was published by the DCMS in 1998. This study, a *Creative Industries Mapping Document*[1], was re-published in 2001, underlining the necessity of taking into account the creative industries within policies at national, regional and local level (Flew, 2002 and DCMS, 2001).

The DCMS (2001) defines the creative industries as: "those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property".

"Intellectual property" in this definition represents intellectual assets that must not be imitated or copied, or used for commercial benefits without consent from the producer. These are protected under legal and regulatory mechanisms, primarily copyrights, patents, trademarks (Santagata, 2009: 157).

The DCMS's creative industry definition has changed, as shown in Figure 1.1. The DCMS had categorised the creative industries under 13 groups in the Mapping Document published in 1998. In 2014, it redefined the creative industries through *dynamic mapping* [2]and collected them under 9 main groups (for a full list of the creative industries, please see Table 2.1). The DCMS regularly publishes the value added, employment, exports and number of businesses statistics on these industries under the name creative industries economic estimates[3] since 2002.

Figure 1.1. DCMS Creative Industries Classification

1998	2014
▸ Advertising	▸ Advertising and Marketing
▸ Architecture	▸ Architecture
▸ Crafts	▸ Crafts
▸ Design	▸ Design: Product, Graphic ve Fashion
▸ Fashion Design	▸ Film, TV, Video, Radio and Photography
▸ Film	▸ Information Technologies, Software and Computer Services
▸ Television and Radio	▸ Publishing
▸ Interactive Entertainment Software	▸ Museums, Galleries and Libraries
▸ Music	▸ Music, Performing and Visual Arts
▸ Performing Arts	
▸ Software	
▸ Antika	
▸ Publishing	

1 https://www.creativitycultureeducation.org/publication/creative-industries-mapping-document-1998/

2 A dynamic mapping method includes three steps: determining creative occupations, calculating the ratio of employees working in creative occupations for each industry (creative intensity) and defining the industries that have creative intensity over a predefined threshold as creative industries (Bakhshi et al., 2015a; Bakhshi et al., 2013a; Bakhshi et al. 2013b; DCMS, 2016a). This method based on creative skills is of importance in being able to generate reliable statistics, creating a coherent group from different industries and making comparisons at international level (Bakhshi et al., 2015a, Nathan et al., 2015).

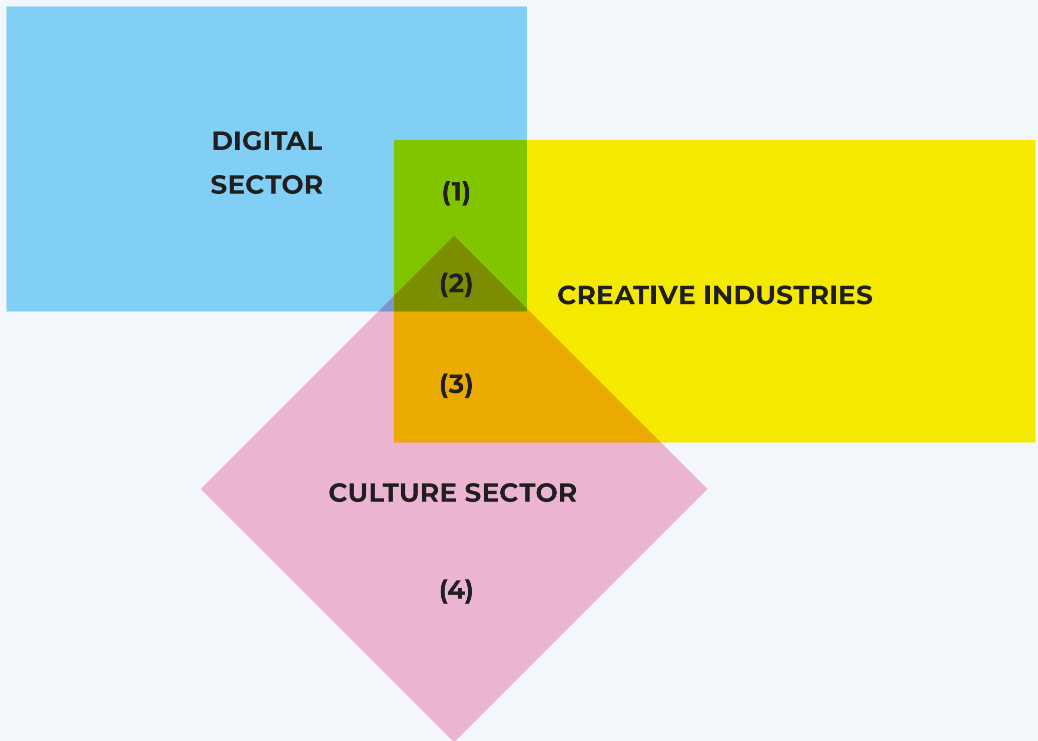
3 https://www.gov.uk/government/collections/creative-industries-economic-estimates

INFO BOX 1.2: CREATIVE INDUSTRY, DIGITAL SECTOR AND CULTURAL SECTOR RELATIONSHIP

The Digital sector encompasses core activities regarding digitisation; information technologies, products and services; online platforms; and various activities based on such platforms such as sharing economy (IMF, 2018). In other words, the digital sector "covers all activities regarding products, technologies, services and systems related to digital knowledge" (Taymaz, 2018). A major portion of the creative industries (Publishing; IT Software and Computer Services; Film, TV, Video, Radio and Photography; Design etc.) remain within the "digital intensive sectors" classification (OECD, 2011a; Calvino et al., 2018).

The Culture sector encompasses activities at whose core lies a cultural object. Although the creative industries and culture sectors are defined differently, they cover many common activities.

Figure 1.2: The Relationship between the Creative Industries, the Digital Sector and the Cultural Sector



1. Publishing, computer games and broadcasting other software programs, computer programming and consultancy activities
2. Film, TV, Music, Radio
3. Art and museum activities
4. Cultural Heritage, reproduction of recorded media, production of musical instruments, retail trade of music and video recordings, operation of historical sites and structures and similar touristic places

Source: DCMS (2019: 6)

Not: See Appendix Table 1.1 for the creative industries, culture sector and digital sector classification of the DCMS.
See Appendix Table 1.2. and 1.3. for information on the culture sectors in İzmir,

United Nations (UNCTAD/ UNESCO/ UNDP) Definition

The UN, with its United Nations Conference on Trade and Development (UNCTAD) XI conference in Sao Paulo, Brazil in 2004, ensured that the concept of the creative industries entered the international economy and development agenda (UNCTAD, 2008: 12). UNCTAD, United Nations Educational, Scientific and Cultural Organization (UNESCO) and United Nations Development Programme (UNDP) cooperated to publish creative economy reports. The UNCTAD reports underlined the significant rise in the importance of the creative economy within international trade, and developed a comprehensive framework for understanding and defining the operation of this sector within the economy (see UNCTAD, 2008, 2010 and UNESCO, 2013)

UNCTAD defines the creative industries as the *"creation, production and distribution stages of products and services that use creativity and intellectual capital as the primary input"* (UNCTAD, 2008: 13). These industries *"constitute a set of knowledge-based activities, focused on but not limited to arts, potentially generating revenues from trade and intellectual property rights, and comprise tangible products and intangible intellectual or artistic services with creative content, economic value and market objectives"* (UNIDO, 2014: 7).

Similarly, UNESCO defines the creative industries as "wealth and employment-generating industries with individual creativity, talent and skills as their origin, which can create and exploit intellectual property. (UNIDO, 2014: 7). According to these definitions, creative industries represent "a very wide innovative product group that also includes the products and services produced through innovation based research and software development activities by culture industries" (UNCTAD, 2008; UNCTAD, 2010 and UNESCO, 2013).

The creative industries cover the activities that occur because of the interaction between different sub-sectors. As shown in Figure 1.3; these activities are categorised into four main groups: arts, cultural heritage, media and functional creativity, by taking into consideration their characteristics. (UNCTAD, 2008 and UNCTAD, 2010).

The UN ensures the protection of culture through the projects it supports particularly in developing countries while also encouraging human-centred growth and contributing to socialisation, cultural diversity and environmental sustainability (UNCTAD, 2010; UNESCO, 2013 and UNIDO, 2014).

Figure 1.3: Classification of Creative Industries by UNCTAD/UNESCO

Source: UNIDO (2014)

European Union Definition

In the EU, the cultural and creative industries (CCI)[4] are defined as "those industries that are based on cultural values, cultural diversity, individual and/or collective creativity, skills and talent with the potential to generate innovation, wealth and jobs through the creation of social and economic value, in particular from intellectual property" (Domenech and Rausell-Köster, 2018). These industries cover 11 sub-sectors, namely advertising; architecture; archiving, library activities and cultural heritage; books and publishing; cultural education; design and visual arts; music; performing arts and artistic creativity; radio and TV, software and games; video and film[5] (EC, 2016: 14). The EU uses a different classification for the culture sector[6].

INFO BOX 1.3: CREATIVE EUROPE PROGRAMME

The Creative Europe Programme encompasses two separate periods: 2014-2020 and 2021-2027:

2014-2020 Creative Europe Programme: This programme has two main purposes. The first is conserving the culture and language diversity of Europe and contributing to its cultural heritage. The second is increasing the competitiveness of the cultural and creative industries, especially the audio-visual sector, encouraging sustainable and inclusive growth. The Creative Europe Programme comprises three sub programmes. The purpose of the **Media** sub programme is to ensure that professionals employed in audio-visual sectors gain skills/qualification to be able to compete at international levels, that digital technologies are used, and that new approaches and business models are tested. The purpose of the **Culture** sub programme is to ensure that those in cultural and creative occupations develop their skills, talents and technical know-how to enable them to establish international connections, embrace digital technologies, and test new approaches and business models for expanding the target groups. The **Cultural and Creative Sector Guarantee Facility** was established as a third sub programme for facilitating access to finance by SMEs and micro level enterprises in relevant sectors and providing technical assistance (European Parliament, 2013).

2021-2027 Yaratıcı Avrupa Programı: Bir önceki programın devamı niteliğinde olan ve genel amaçlar açısından bir farklılık taşımayan bu yeni programda, kültürel ve yaratıcı sektörlerin birtakım zorluklarla karşı karşıya olduğu ve bu nedenle çeşitli faaliyetler, projeler aracılığı ile güçlendirilmeleri gerektiği belirtilmiştir. Dünya ekonomisinde yaşanan dijital dönüşümün, kültürel ve yaratıcı faaliyet değer zincirine olan etkisi ve küresel ölçekte yol açtığı yoğun rekabet üzerine vurgu yapılan programda, bu sektörlerin yeni iş modelleri geliştirebilme ve dijital teknolojilerden daha çok yararlanabilme konusunda destekleneceği ifade edilmiştir. AB, özellikle görsel-işitsel endüstrilerin rekabetçiliklerinin güçlendirilmesi ve kültürel ve dilsel çeşitliliğinin artırılması için yasalar, politik destek ve fonlama konusunda önemli destek sağlamaktadır. Bireyler ve işletmeler için çevrimiçi dünyaya erişiminin iyileştirilmesi için planlanan "Dijital Tek Pazar" stratejisi buna örnek olarak verilebilir (European Parliament, 2018).

The EU has supported the cultural and creative sectors for a long time through various programmes[7] (European Parliament, 2013). The most comprehensive of these in recent years is the Creative Europe Programme, which aims to strengthen the competitiveness of the cultural and creative sectors in the digital age and to facilitate their access to finance (for information, see Info Box 1.3).

4 In EU documents, the concepts of "cultural and creative sectors" and "cultural and creative industries" are used interchangeably. However, national calculations on cultural and creative industries are not comparable (due to member states using different industry definitions) (EC, 2012a; EC, 2016 and KEA, 2019.)

5 see EC (2016) for EU cultural and creative industries classification according to NACE Rev.2.

6 see EUROSTAT (2018) for EU culture sector classification according to NACE Rev.2.

7 "MEDIA Program" carried out in accordance to European Parliament and European Council decision no. 1718/ 2006/EC, "Culture Program" carried out in accordance to decision no. 1855/2006/EC, "MEDIA Mundus Program" carried out in accordance to decision no. 1041/2009/EC, "European Culture Capitals Program" carried out in accordance to decision no. 1622/2006/EC, and "Europe Cultural Heritage Label Initiative" carried out in accordance to decision no. 1194/2011/EU may be given as examples (European Parliament, 2013).

1.1.3. Creative Occupations

Digital transformation has two major impacts on the labour market. The first is robots, digital technologies and computer-controlled machines replacing human labour: in other words, the automation of existing jobs. It is projected that 75 million people will lose their jobs to robots and automation, but 133 million new job opportunities will appear before 2022. The second impact is that new jobs with higher labour productivity appear. It is estimated that 14% of the existing jobs will disappear, and 32% will undergo radical changes within the coming 15-20 years (Acemoğlu and Restrepo, 2017; WEF, 2018a and OECD, 2019a: 3).

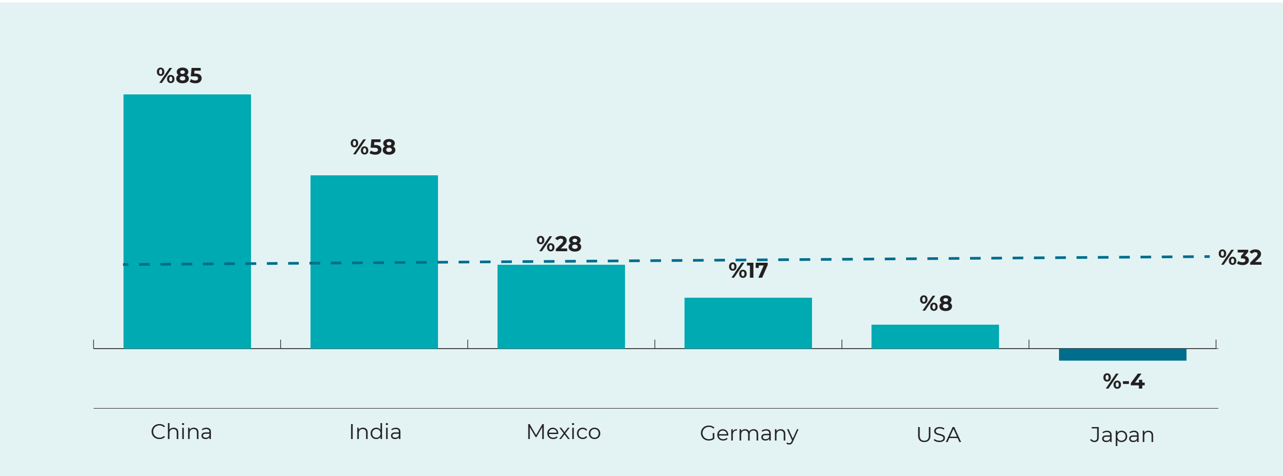
On the other hand, it is estimated that digital transformation will have positive impacts on the creative labour market. As seen in Graph 1.1, there is a projected 32% increase in global creative labour demand as of 2030. The increase in China and India is projected at 85% and 58% respectively, much higher than the world average.

New fields of work and new occupations from rapid digital transformation necessitate developing the skills of the present labour force or acquiring new skills. It is predicted that the demand for basic cognitive and physical skills will decrease while the demand for high level cognitive, social and technological skills will increase due to automation. (McKinsey & Company, 2020).

Integration of cognitive skills with creative learning is key to adapting to digital transformation (OECD, 2017a; KEA, 2019 and Bakhshi and Yang, 2018). It is estimated that the importance of creativity in directing the digital economy will increase day by day, and occupations requiring creative skills as well as technical skills will become prominent in the future (Bakhshi et al., 2015b). Computer controlled equipments' capacity to mimic human labour in foreseeable, repetitive and physical activities is very high. However, they cannot yet replace human labour in occupations where creativity and expertise are necessary. On the other hand, computers have supplementary roles in making creative skills more efficient in many occupations closely related to advancing technologies.

For example, musicians can develop their work in creative ways with computers, architects can realise their designs in more detail and in less time by using 3D (three-dimensional) printers to provide visually rich prototypes for their clients, and dancers can perform globally with virtual reality technology (Bakhshi et al., 2015b and Bakhshi and Yang, 2018).

Graph 1.1: Estimated Change of Creative Labour Demand in Selected Countries as of 2030 (%)



Source: WEF, 2018b: 10

INFO BOX 1.4: CREATIVE OCCUPATIONS

Nathan et al. (2015) defined creative occupations in accordance with SOC2010 classifications. In this study, ISCO-08 definitions were taken into consideration, as follows:

Service Generation Occupations:

- **Advertising and Marketing:** Sales and Marketing Managers, Advertising and Public Relations Managers, Public Relations Professionals, Advertising and Marketing Professionals
- **Architecture:** Architects, Town and Traffic Planners, Civil Engineering technicians
- **Design:** Product, Graphic and Fashion Design; Graphic and Multimedia Designers, Product and Garment Designers, Interior Designers and Decorators
- **Information Technologies, Software and Computer Services *:** Information and Communications Technology Services Managers, System Analysts, Software Developers, Web and Multimedia Developers

Content Production Occupations:

- **Crafts:** Blacksmiths, Hammersmiths and Forging Press Workers, Handicraft Workers in Textile, Leather and Related Materials, Potters and Related Workers, Cabinet-makers and Related Workers, Sign writers, Decorative Painters, Engravers and Etchers
- **Film, TV, Video, Radio and Photography:** Film, Stage and Related Directors and Producers, Photographers, Broadcasting and Audiovisual technicians
- **Publishing:** Journalists, Authors and Related Writers
- **Museums** Galleries and Libraries; Librarians and Related Information Professionals, Archivists and Curators
- **Music, Performing Arts and Visual Arts:** Visual Artists, Actors, Other Arts Teachers, Musicians, Singers and Composers

** The occupations included in this group are also included in the digital and STEM occupation group.*

1.2. Digital Technologies And Intellectual Property Rights

The digital economy and rapidly changing technologies have considerably altered the creative industries value chain (creation/development, production, distribution, marketing and consumption processes) (EC, 2017a). This development significantly increased the importance of protecting creative skills and activities through comprehensive intellectual property rights regulations based on new technologies.

1.2.1. Impacts of Digital Technologies

The increasing integration between the digital and physical worlds alters existing power balances and enables creators (content producers) to access fundamental resources without the need for traditional intermediaries. Furthermore, digital technologies provide very significant opportunities for the creative industries, such as new products, new business model development, new distribution channels, market opportunities and lower production costs (EC, 2016: 4 and KEA, 2019: 34).

There are numerous instances of digital technology applications in the value chain of the creative industries. In this regard, artificial intelligence, virtual reality, augmented reality and blockchain technologies particularly stand out (WEF, 2018b).

Artificial Intelligence

Artificial intelligence is a concept to define the ability of machines to perform human-like cognitive functions (such as learning, understanding, reasoning or interacting). Big data analytics, comprising tools and techniques used for examining, analysing, processing and interpreting large amounts of data from various sources, provided important contributions to the development of artificial intelligence (OECD, 2017a and 2017b). Artificial intelligence has the potential to create an income of between $3.5 billion and $5.8 billion annually. The contribution of the media and entertainment sector to this income is between 2.9% and 6.9% (McKinsey & Company, 2018).

Applications related to artificial intelligence are used very effectively in the creation, production, marketing/sales and consumption stages of the creative industries, such as music, film, video games, arts and design. Through applications of AI, it becomes possible to create specific kinds of content, to transmit it to other objects and users, and to enable users to interact with such content. Detailed data on content viewing and preferences are constantly analysed by artificial intelligence, new content is personalised for the user and the structure of such content is altered dynamically (Caramiaux et al., 2019). Examples include films presented on Netflix, music listened to on Spotify or products purchased on Amazon (Moore and Tambini, 2018). Likewise, product recommendations specific to the user, successfully implemented by companies such as Amazon and Netflix, provide significant increases in product sales. Through this and similar implementations in marketing and sales processes, artificial intelligence provides a significant value added increase within the creative industries value chain (McKinsey & Company, 2018).

Another example of artificial intelligence application is its use by major press organisations (Associated Press, The Washington Post etc.) for news production. In this wise, AI can offer significant time savings (WEF, 2018b). In the field of music, artificial intelligence can produce instrumental sounds never before heard by humans. In 2018, an album called 'I am AI [8]' was launched, featuring songs composed by artificial intelligence, and an album called 'Hello World[9]' was composed cooperatively by two AI systems.

8 see https://www.tarynsouthern.com/album for detailed information.

9 see https://www.helloworldalbum.net/ for detailed information.

INFO BOX 1.5: DIGITAL ECONOMY

The concept of digital economy may be defined in the simplest sense as an economy based on digital technologies such as artificial intelligence, internet of things, big data analytics, augmented and virtual reality, blockchain and 3D printers (EC, 2014; Rouse, 2017 and OECD, 2017a). Nowadays, this concept is more frequently used when analysing the economic and social impacts of digital transformation (UNCTAD, 2019 and OECD, 2018: 11). The concept of the digital economy covers digital platforms and the activities they enable, and in a broader sense all activities that utilise digital data – from agriculture to R&D (IMF, 2018). Digital data and digital platforms are two important factors that give direction to the rapid expansion of the digital economy (UNCTAD, 2019).

Digital data is defined as converting analogue data and processes (e.g. audio, video, printed text) into machine-readable formats. Through this transformation (digitisation), information is able to be stored in computer bytes (Tapscott, 1996). The most important feature of digital data is that it can be processed, stored, filtered, tracked, defined, reproduced and transmitted without limits, without losing any content, at very high speeds and with a negligible cost (OECD, 2017a and UNCTAD, 2019). Data traffic has massively increased in recent years: it has increased 466-fold in the past 15 years, reaching 46,600 GB per second as of 2017. This is estimated to grow to 150,700 GB per second in 2022 (UNCTAD, 2019). (As of the 3rd of September 2020, internet data traffic was at 99,615 GB per second*).

Digital platforms are the online mechanisms that act as intermediaries for consumers to access products and services, and also act as intermediaries for businesses to find clients, thus bringing together multiple parties. These platforms are both intermediaries and infrastructure. For instance, Facebook is an intermediary for bringing together users, advertisers and companies, and at the same time is an infrastructure enabling users to create profile pages (UNCTAD, 2019 and OECD, 2017a). As the number of clients benefitting from digital platforms increase, the data produced increases proportionally. These data assist in targeting advertisements and presenting opportunities suited for the target group, creating a better and more special internet experience, ensuring customers enter into more interaction, and producing more data by use of artificial intelligence processes designed to project purchasing and other behaviour forms, creating a "cycle of benefits" (Internet Society, 2019).

* https://www.internetlivestats.com/, Access Date: 3rd of September 2020, 15:33

Virtual Reality and Augmented Reality

The major impacts of virtual reality and augmented reality technologies on the creative industries value chain are: facilitation of content creation and experiencing processes, and reducing costs. These technologies enable users/artists to inhabit these expanding virtual worlds in new and creative ways. Furthermore, the prototyping that became possible with these technologies shortens the amount of time from design to sales, reducing production costs and raising the quality of the final product. Another significant impact of these technologies is enabling small companies to produce higher quality content with lower costs, facilitating their entrance into the market. For example, shortened image processing times in filmmaking and cost reductions in photography due to smart phones (Hall and Takahashi, 2017 and WEF, 2018b).

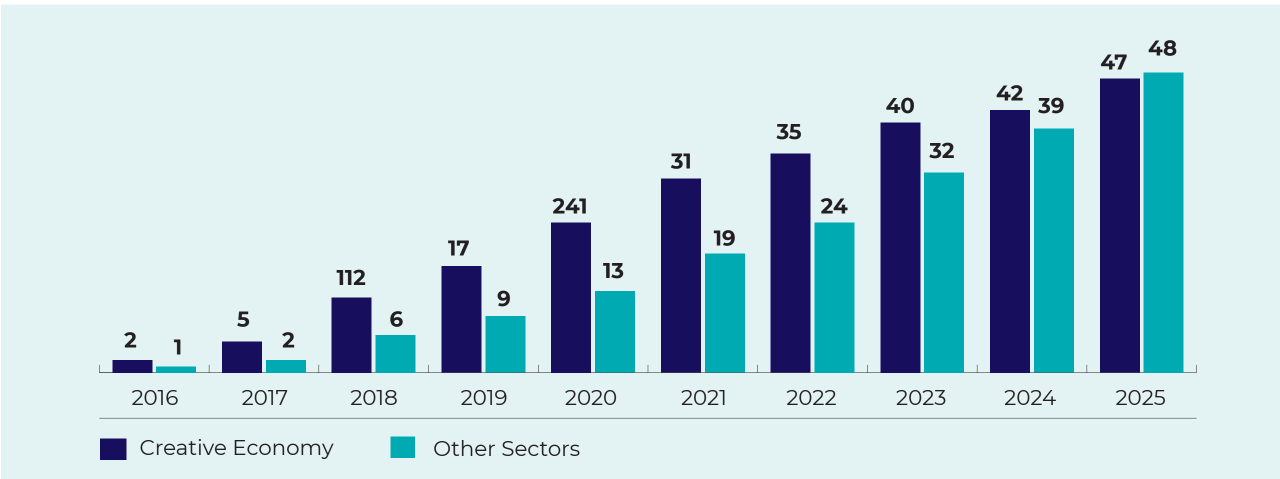
In addition to their economic impacts, virtual reality and augmented reality technologies enable content to be shared in a more impressive form through the environment they create, enriching user experiences and encouraging more informed societies with a higher sense of empathy (Hall and Takahashi, 2017 and WEF, 2018b).

INFO BOX 1.6: VIRTUAL REALITY AND AUGMENTED REALITY

Virtual reality is about artificially reconstructing an environment with computer support, while augmented reality is essentially synchronising the real world within the field of view of the user with computer graphics overlapping virtual objects onto real images (WEF, 2018b). These technologies place the users inside virtual environments, blurring the line between the physical and the digital world (Innovate UK, 2018).

It is projected that global expenditures on virtual and augmented reality applications will be $18.8 billion as of 2020, that income generated will reach $95 billion, and total market size will reach $692 billion in 2025 (Framingham, 2019; WEF, 2017 and Citi, 2016).

Graph 1.2. Projection of the Income to be Generated from Virtual Reality and Augmented Reality, 2016-2025 (billion dollars)



Source: WEF, 2018b: 13

As seen in Figure 1.3, it is projected that the income from the aforementioned technologies will reach $95 billion as of 2025 and almost half of this will come from the creative industries. It is estimated that approximately 33% of the income to be generated from these technologies will be generated from the video/computer games sector as of 2025 (Goldman Sachs, 2016).

Blockchain

Blockchain technology is extensively used in the management of intellectual property and content related to digital works (books, music, arts, games, photographs, texts etc.) in the creative industries. Examples include: metadata related to property and sub-licensing rights, payments and financial transactions; the creation and consumption of content; and identity confirmation systems related to information value and reliability (Nascimento et al., 2018: 27).

Blockchain applications enable a more flexible pricing mechanism in the creative industries. The existence of an unchangeable and traceable record of all sales, licensing, transactions and original work transmissions assist authors/artists in keeping track of who used their works, when their works are used and how to determine copyright fees. Consumers or buyers may access information about the real owner of content and the property rights related to the content, and may accept the conditions set by the rights holders. Blockchain eliminates the need for intermediaries, enabling artists to hold more rights on their own works (Nascimento et al., 2018: 27-28 and WEF, 2018b: 19).

Widespread use of blockchain systems in the creative industries assists in preventing breaches or unauthorised uses, and enables payments to be fairer and more efficient. This whole process is carried out via smart contracts. Through smart contracts, the parties to whom a work belongs (authors, publishers and artists) and the use of such work are registered, enabling fair division between copyrights holders of any income generated in the future, and payments can be made in an unproblematic manner (Nascimento et al., 2018: 27-28).

KUTU 1.7: BLOKZINCIR

As a database, blockchain is a technology that is not based on a central authority, and which enables the parties to share any and all digital data by peer-to-peer communication – with few intermediaries or with no intermediaries – in a permanent and transparent manner. This technology is a special form of distributed ledger technology. Distributed ledger technologies are special database types where the data is recorded, shared and synchronised over a distributed network comprising computers and participants. The difference lies in the form of distribution, confirmation and recording of the data by the participants on the network. In short, every blockchain is a distributed ledger technology but not every distributed ledger technology is a blockchain (Nascimento et al., 2018: 13).

In blockchain technology, the data represents any transaction or asset (money, insurance policies, contracts, deed registries, medical records, goods and services purchases/sales etc.) that may be converted into digital format. The fundamental basis of this exchange is that the parties on the blockchain have the access and tools to validate the entire database and that all transactions are recorded on the network in a visible manner (Nascimento et al., 2018: 13; Mainelli, 2017; Mulligan, 2017 and UNCTAD, 2018: 20).

1.2.2. Importance of Intellectual Property Rights

Creative industry products that have a lot of creative content are a component of the intellectual property field, particularly copyrights. Howkins (2001) indicates that all creative industries, other than visual arts and architecture where economic value is based on physical form, are industries based on copyrights. The easy reproduction and distribution of created products brings up the question of how the intellectual property rights of such products will be protected. Therefore, protection of intangible capital and intellectual properties plays a fundamental role in these industries (Santagata, 2009: 157 and UNCTAD, 2008: 68).

Technological developments and digitisation made it easy for copyrighted works to be reproduced and distributed. This may produce undesired results for owners of works or owners of copyrights, such as creatives not receiving recompense for the time and financial investment they made during the intellectual product development process, which may harm their motivation to develop future creative products. On the other hand, establishing new tools to protect the copyrights holders may cause restrictions for the consumers. At this point, we need a copyrights system based on establishing a balance between the consumers and owners of works/copyrights, which will increase social prosperity (DiCola, 2013 and Watt, 2013).

Table 1.1: Benefits and Costs of Copyright System

	Benefits	Costs
Short term	Greater revenues to rights holders	1. Access costs to users 2. Administration costs 3. Transaction costs in trading rights
Long term	Greater incentives to supply copyright works for rights holders	Obstruction of user innovation by the costs of compliance

Source: Handke, 2011

In the short term, copyrights provide higher market power to the rights holders and also the opportunity to obtain more revenue. However, higher prices restrict users' access to creative works/products. Furthermore, there are administration costs due to management of copyrights and transaction costs from trading these rights. In the long term, it is estimated that an effective copyright system would encourage rights holders to produce more new copyrighted works, enabling users to access more diverse creative works. Social prosperity would increase only in cases where the value created by each copyrighted work is higher than the various costs incurred due to copyrights (Handke, 2011).

Due to the cost structure of the creative industries, the greatest danger in the production of creative works is digital piracy. Investments for new creative content production usually include significant sunk costs. For instance, with writing a novel or producing a film, the marginal costs of reproducing and distributing an existing work is much lower than the costs of creating a new work. Increased digitisation reduced the costs of both creating new products and reproducing existing products. However, because the cost reduction that occurred in product creation is relatively low compared to the reduction in copying and distributing, there is a significant cost advantage to supplying unauthorised copies. Illegal copying and

distribution of creative works reduces the possibility of the owner making a profit, and thus may decrease the incentive for them to create new works. Therefore, protection of intellectual rights has become very important, especially regarding content production and distribution. An effective copyrights system would enable the rights holders to claim prices higher than marginal costs, thanks to special rights recognised for temporary periods regarding creative works, and thus contribute towards sunk costs. This would increase the motivation to invest in creative work/product production (Santagata, 2009: 157 and Handke, 2013).

Developments in the music industry in recent years are an interesting example regarding copyrights. As mentioned above, it was estimated that digital piracy in the music industry would reduce the supply of new creative works (albums). The internet becoming a mass media instrument and the emergence of file sharing programs such as Napster caused a decline in album sales, adversely affecting the revenues of producers. However, there has been a significant increase in the number of albums released – contrary to what was expected (Handke, 2011; Waldfogel, 2012 and Liebowitz, 2013).

Innovations such as encryption, which enabled intellectual property rights to be locked into physical or virtual content, led to the commercialisation of creative industries. Large companies including their intellectual property rights and trademark values in their balances, and presenting them as core components of their company valuations, may be interpreted as them understanding that intellectual property rights have a high value. Any study conducted on the creative economy should take into account the role of intellectual property rights, which are rapidly becoming an important part of the development of the creative industries. Intellectual property law as an important policy instrument is part of an appropriate regulatory environment for the establishment and expansion of creative businesses that constitute a source for prosperity for both developed and developing countries (UNCTAD, 2008: 141).

1.3. Regional Development Policies

This chapter explains how regional development policies changed over time under the influence of production technologies and industrialisation policies, and the increasing importance of the creative industries for these policies.

New technologies such as artificial intelligence, big data analytics, cloud informatics, the internet of things, advanced robotics and layered production radically altered the nature of production in industry, and led to the development of advanced digital production technologies[10] and reshaping of industrialisation policies. The focus of new industrialisation policies is on the modernisation of production, based on digital technologies and supporting the industries that may be pioneers in this structural transformation. Due to their impact on new business models, creativity and innovation, digitalisation and skills development, the creative industries are recognised as being one of the pioneering industries of the digital economy as a whole (UNIDO, 2019; KEA, 2019 and European Parliament, 2016).

1.3.1. Changing Paradigms

For the purpose of highlighting the impact of new industrialisation policies, regional policies were analysed for two separate periods: 1950 – 2009, and 2009 to date.

Regional Policies Between 1950 and 2009

In many OECD countries, regional policies began to be implemented in the 1950s and 1960s when economic growth and employment ratios were relatively high. Until the end of the 1980s, regional policies focused on the aim of more equality and balanced development. In this period when mass production had dominance, investment assistance and infrastructure support were provided to underdeveloped regions through top-down policies, and redistribution of wealth among regions was attempted. Inter-regional inequalities, thanks to rapid industrialisation and urbanisation, had been influential in determining priorities. Inequalities had initially been concentrated within income and infrastructure, but expanded to also include employment in the 1970s and the beginning of the 1980s (OECD, 2010: 11 and OECD, 2019b: 22).

In the 1980s, new technologies altered the forms of production in industry (lean production) and the organisation of production processes. A functional division of labour between regions emerged, and the concept of “regions” became key to creating economic growth and prosperity. These developments led to more comprehensive regional policies that bring to the fore the concept of competitiveness based on innovations as a condition for reducing inter-regional development differences and for a region to exist in national/global markets (Kitson et al., 2004 ve OECD, 2019b: 22).

The increase in direct foreign investments in this period became the most important source of regional growth, and especially of “knowledge based capital” and the formation of institutions, which develop policies to increase regional competitiveness as well as to attract investment to the region (e.g. development agencies). While regional policies focused on how quantity (growth) could be increased during 1980’s, they were expanded in the 1990s to also cover the issue of living quality (Pike et al., 2007).

10 Advanced digital production technologies are those that bring together hardware (advanced robots and 3D printers), software (big data analytics, cloud informatics and artificial intelligence) and connectivity (internet of things). Thanks to these technologies, a new production process called “smart production, smart factory or Industry 4.0” has emerged” (UNIDO, 2019).

Following the activation of the OECD Regional Development Policy Committee in 1999, studies conducted on new regional policies increased, and place-based policies gained importance. These policies, underlining that all developed or underdeveloped regions have growth potentials based on their own assets, are indispensable supplements to structural economic policies that do not adequately consider regional aspects (OECD, 2009; OECD, 2011b and Vanthillo and Verhetsel, 2012).

Regional Policies After 2009

Following the 2008-2009 Global Crisis and European Debt Crisis, the effectiveness of these industry policies was discussed, and new industry policy focusing on revitalising manufacturing (yet again) came up. In this period of low productivity, high unemployment and high public debts, studies conducted on new industrialisation policy and the regional policies in this context began to appear in international literature (OECD, 2013).

The OECD defines new regional policies as “modern policies based on local assets”. The objective of these is “to increase production efficiency and provide high quality living and prosperity levels together with all economic, social and environmental dimensions to everybody within the region”.

One of the trends that adversely impacted country/region economies following the global crisis was a slowdown in the increase of productivity levels. Within the seven-year period 2010 to 2016, although labour productivity throughout the OECD countries increased annually by 0.9%, this was only half the increase observed in the seven-year period prior before the crisis (1.8%). In a third of the OECD countries, the minor productivity increase was concentrated in a single region where the largest city is located, while productivity in the remaining regions either did not increased or declined. Consequently, regional inequalities were further aggravated, and the labour productivity difference between regions rose to 46%. In some OECD countries, this value is over 60%. Policies based on local assets give regions the opportunity to use their potential for higher productivity and competitiveness, reducing inter-regional development differences. Through these policies, it is also possible to transform threats from digitalisation, demographical changes and climate change into opportunities (OECD, 2019b).

The European Union›s 2021-2027 regional policies share similar objectives with the OECD. Eleven thematic objectives used in 2014-2020 were simplified to five policy objectives for the 2021-2027 period. These may be summarised as follows (EC, 2018):

- Smarter Europe (by promoting innovative economic transformation through smart specialisation strategies and policies encompassing smart investments)
- Greener, lower carbon Europe (by implementing the Europe Paris Convention’s agreements and investing in energy transformation, renewable energy, combatting climate change and working towards a circular economy)
- More connected Europe (by developing mobility and regional IT connection)
- More social Europe (by taking the European Pillar of Social Rights as a basis and supporting high-quality employment, education, skill development, social inclusion and access to healthcare services)
- A Europe closer to its citizens (by supporting local development strategies and sustainable urban development throughout EU)

Smart specialisation strategies have to be reviewed and made into one of the foundations of EU policies in the 2021-2027 period to improve the European Green Deal and Digital Strategy applications and contribute to economic and social development following the COVID19 pandemic (EC, 2020b).

INFO BOX 1.8: NEW INDUSTRIALISATION POLICIES

The concept of industrialisation policy possesses many meanings, including public policies that transform the structure of production so as to increase national prosperity. Such policies focus on production and also necessitate the use of subsidies or protection from competition. In a broader sense, it points out that horizontal (non-sector-specific) policies provide a more suitable environment for an industry or business community in general (Warwick, 2013).

Similar characteristics highlighted in UNIDO, OECD and EU publications related to new industrialisation policy may be summarised as below:

UNIDO; defines a long-term industrialisation process directing development as "inclusive and sustainable industrial development" and highlights its three dimensions (UNIDO, 2019):

- "Creating shared prosperity" through fair distribution of equal opportunities and benefits to all
- "Advancing economic competitiveness" through structural transformation of the industry based on advanced digital production technologies and encouraging innovation in all fields including services
- "Safeguarding the environment" by separating the prosperity created by industrial activities, and excessive use of natural resources and adverse environmental impacts

The OECD; indicated that countries had to embrace being structural to increase efficiency and modernise industry based on new/digital technologies; being social to eliminate a lack of employment and increasing inequalities; being green to encourage growth policy that considers the environmental conditions; and being institutional to close the credibility gap in institutions and markets (OECD, 2013). Highlighting the concept of "high quality growth", the OECD extended growth policy priorities, adding inclusivity in 2017 and environmental sustainability in 2019 (OECD, 2019c).

The EU, highlighted the objective of an industry that is "more green, more circular and more digital" in its new industrialisation policy, indicating that these three driving forces will transform industry, support SMEs, and enable Europe to remain sustainable and competitive. Furthermore, the EU underlines that ecological and digital transformation, which affects all segments of economy, society and industry, necessitate investment in digital technologies, bringing new skills to the labour force, and transitioning from linear production to a circular economy* (EC, 2020a).

** A circular economy is a new production model based on sustainability and innovation, where all waste is reutilised, minimising raw material costs and maximising resource efficiency and environmental benefits. Sustainable industry means the companies dealing with production activities make sustainability a strategy within all production and consumption processes (http://www.skdturkiye.org/surdurulebilir-sanayi-ve-dongusel-ekonomi).*

INFO BOX 1.9: SMART SPECIALISATION STRATEGY

Since 2009, the concept of 'smart specialisation', reflected in the OECD's new industry policy discussions, has been used when defining contemporary regional growth strategies. The concept has its roots in the Knowledge for Growth report published by the European Commission in 2009, containing the conclusions of the pioneering study by Foray et al. (2009). Smart specialisation strategy is based on the principle of governments shifting their investments in knowledge and innovation into fields where a country/region possesses comparative advantage (specialisation) and where entrepreneurs may develop new activities (diversification) from certain sectors (OECD, 2013). These strategies have been taken into consideration within the framework of European regional cohesion program since the year 2012. In this framework, European Union member states have developed more than 120 smart specialisation strategies, prioritised research and innovation investments, and used more than €65 billion between 2014 and 2020 (EC, 2017b). Although this approach was first embraced in Western European economies, it attracted interest in other countries such as Argentina, Australia, Brazil, Russian Federation, Serbia, Tunisia and Ukraine (UNCTAD, 2018). The fundamental principles of smart specialisation strategy may be summarised as follows:

A vertical policy that is not neutral: Smart specialisation, as a vertical policy approach, prioritises selected fields such as a certain technology at the core of a sector or at the intersection of different sectors (thus, not neutral), concentrating the resources in these fields (UNCTAD, 2018 and Foray, 2012).

Entrepreneurial discovery process: This process, which is based on a country or region discovering what it can do best in terms of R&D and innovation, has a central role within smart specialisation. According to this approach, entrepreneurs integrate and correlate knowledge in science, technology and engineering, and the experiences on market growth potential, competitors and all inputs required for starting up a new activity (Foray, 2012; Foray and Goenaga, 2013). Therefore, prioritisation goes beyond the role of central planners, and turns into an interactive process through which the private sector discovers and generates knowledge around new activities (Foray, 2012 and UNCTAD, 2018).

Concentration on knowledge sources: Smart specialisation correlates the region's industrial structure and knowledge sources with certain economic activities, and aims for the development of a highly competitive economy. Specialisation based on knowledge sources in the economy enables advantages of scale, context and spreading in the generation and utilisation of knowledge. In this manner, the region may generate unique assets and talents based on the industrial structure and knowledge base specific to itself, rather than imitating other regions and waiting to create miracle growth (EC, 2012b).

Regional specialisation and differentiation: Structural transformation, as an outcome of smart specialisation strategy, defines a **correlative differentiation** process. This differentiation is the process of developing new industries or technological areas via R&D and innovation activities based on the region's present skills and industrial knowledge (EC, 2012b; Foray and Goenaga, 2013). As the number of industries technologically correlated with each other inside a region increases, more opportunities will appear for differentiating new industries, and for using existing skills and resources in new activities (OECD, 2013; EC, 2012b and Boschma, 2016).

1.3.2. The Increasing Role of Creative Industries

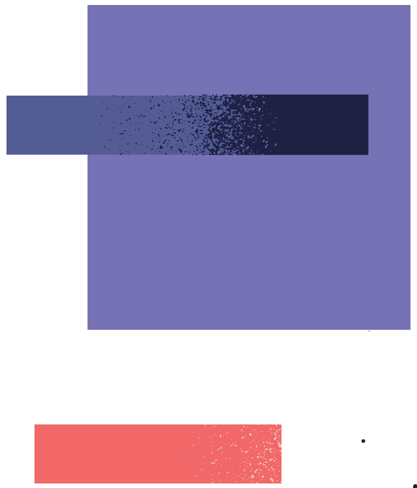
In general, creative industries "that have individual creativity, skill and talent at their core, with the potential to create wealth and employment by way of creating and using intellectual property" operate within constantly developing markets dominated by SMEs engaging in intense competition. They have to integrate the most novel digital technologies into their value chains and develop new business models in order to grow their market shares and increase their profitability. This is a process through which the creative industries also provide significant contributions to the development of innovations related to digital technologies and their spillover within the economy/society. The creative industries contribute to the country's and regions' innovation capacity directly, via the innovations they develop, and indirectly, via the role they play for the spillover of such innovations within the economy and society (European Parliament, 2016; Chapain et al., 2010 and Müller et al., 2008).

The innovations developed in creative industries may be categorised as: *technology, business models and creative/aesthetic innovation*. At the source of these innovations stand creative labour, integrating skills and knowledge in the fields of science, technology and arts. With its multi-disciplinary nature, creative labour causes the emergence of knowledge-based increasing returns. which differ from the quantitative level of production in industry, and thus enables companies/industry to obtain competitive advantage (KEA, 2019: 8-9 and Antonelli, 2003).

On the other hand, the innovation spillover process means the positive externalities and benefits that arise from the activities of creative industries (including creative occupations) impact other sectors of economy and the society. This creative spillover process, which contributes to spilling over of culture based creativity into other industries and thus to increasing innovations throughout the economy, encompasses knowledge, product and network spillovers (Tom Fleming Creative Consultancy, 2015).

The aforementioned digital technology-related innovation creation and spillover capacities of creative industries plays a significant role in the process of productivity increase, which is among the most important priorities of contemporary regional policies and the related structural transformation of traditional production based on digital technologies. This process is managed by way of smart specialisation strategies based on regional assets and knowledge accumulation (OECD, 2019d). The creative industries, which provide full-time employment for 12 million people throughout the EU[11], comprise 4.4% of the EU's GDP and provide a value added reaching €509 billion. Due to such significant contributions, they have been included in the context of smart specialisation strategies by 80% of public authorities (KEA, 2019).

In addition to innovation and competitiveness, the creative industries play significant roles in another regional policy priority: inclusiveness (reducing inter-regional and interpersonal inequality, spreading prosperity to all segments of society). Creativity feeds culture, encourages human-centred growth, and contributes to socialisation, cultural diversity and environmental sustainability (UNCTAD, 2010; UNESCO, 2013 and UNIDO, 2014).



11 In EU's definition, cultural and creative sectors/industries are addressed together.

In United Nations reports, the creative industries' impacts on sustainable development are highlighted as well as their impacts on the economic development of countries. Particularly for developing economies, the creative industries support inclusive and sustainable growth and development by way of their knowledge-intensive qualities, and thus comprise an important policy instrument (UNIDO, 2014 and Palanivel, 2019). In such countries, development of creative industries provided significant contributions to the realisation of Millennium Development Goals, particularly of eliminating extreme poverty, reducing inequality, promoting gender equality, sustainable development strategies and developing global partnerships for development (UNCTAD, 2008 ve 2010).

The United Nations carries out various projects, usually with the governments of the countries, promoting inclusive and sustainable growth through creative industries. The UN especially aims to strengthen the participation of women and young people in cultural, socio-economic and political life, improve their entrepreneurship capacities and employment, and thus promote inclusive regional/rural development through such projects (UNIDO, 2014).

CHAPTER 2

Structural Analysis Of Creative Industries

2.1. Classification Of Economic Activities And Data

There are various definitions and classifications with regards to the creative industries. Which economic activity is considered as a creative industry varies depending on these definitions. As mentioned before, the DCMS (2014) classification was used to define the creative industries in this report, as laid out in Table 2.1 below.

The analyses in this report used different economic activity classifications (SIC, NACE, ISIC). For the purpose of preventing confusion, some explanations were given in regards to the relations between these classifications, as follows.

2.1.1. Economic Activity Classifications

The DCMS (2014) takes into account the Standard Industrial Classification (SIC) for economic activities. In Turkey however, Statistical Classification of Economic Activities in the European Community (NACE) classification is used for economic activities in accord with the European Union. These two classifications are fully compliant with each other both in terms of the definition of main industry groups and the definition of sub-industries (at four-digit level). Therefore, the creative industries defined by DCMS (2014) in line with SIC classification were expressed as NACE classification for Turkey in this report. According to NACE classification, the industries constituting the creative economy comprises nine main industry groups and 31 sub-industries.

When a comparative analysis of creative industries at international level is required, the most up-to-date dataset at four-digit level on economic activities may be obtained from the OECD. However, the OECD classifies economic activities in accordance with International Standard Industrial Classification of All Economic Activities (ISIC) classification of the United Nations. It is possible to convert these two classification methods into each other. Nonetheless, while NACE and ISIC classifications have full compliance with each other in regards to main industry definitions, there are certain differences in regards to sub-industry definitions. When conversion between classifications is necessary, the 31 creative industries defined according to NACE correspond to 26 industries according to ISIC classification (see Table 2.1).

Figure 2.1: Economic Activity Classifications

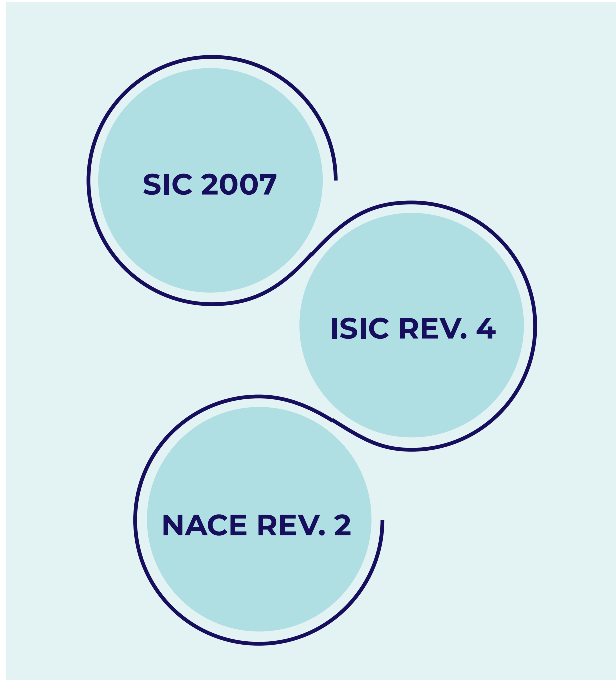


Table 2.1: Creative Industries

	NACE Rev.2	ISIC Rev. 4	
Advertising and Marketing			**Advertising and Marketing**
Public relations and communication activities	7021	7020	Management consultancy activities
Advertising agencies	7311	7310	Advertising
Media representation	7312		
Architecture			**Architecture**
Architectural activities	7111	7110	Architectural and engineering activities and related technical consultancy
Crafts			**Crafts**
Manufacture of jewellery and related articles	3212	3211	Manufacture of jewellery and related articles
Design: Product, Graphic and Fashion Design			**Design: Product, Graphic and Fashion Design**
Specialised design activities	7410	7410	Specialised design activities
Film, TV, Video, Radio and Photography (FTVRP)			**Film, TV, Video, Radio and Photography (FTVRP)**
Motion picture, video and television programme production activities	5911	5911	Motion picture, video and television programme production activities
Motion picture, video and television programme post-production activities	5912	5912	Motion picture, video and television programme post-production activities
Motion picture, video and television programme distribution activities	5913	5913	Motion picture, video and television programme distribution activities
Motion picture projection activities	5914	5914	Motion picture projection activities
Radio broadcasting	6010	6010	Radio broadcasting
Television programming and broadcasting activities	6020	6020	Television programming and broadcasting activities
Photographic activities	7420	7420	Photographic activities
Information Technologies, Software and Computer Services (ITSCS)			**Information Technologies, Software and Computer Services (ITSCS)**
Publishing computer games	5821	5820	Software publishing
Other software publishing	5829		
Computer programming activities	6201	6201	Computer programming activities
Computer consultancy activities	6202	6202	Computer consultancy and computer facilities management activities
Publishing			**Publishing**
Book publishing	5811	5811	Book publishing
Publishing of directories and mailing lists	5812	5812	Publishing of directories and mailing lists
Publishing of newspapers	5813	5813	Publishing of newspapers, journals and periodicals
Publishing of journals and periodicals	5814		
Other publishing activities	5819	5819	Other publishing activities
Translation and interpretation activities	7430	7490	Other professional, scientific and technical activities n.e.c
Museums, Galleries and Libraries (MGL)			**Museums, Galleries and Libraries (MGL)**
Library and archives activities	9101	9101	Library and archives activities
Museums activities	9102	9102	Museums activities and operation of historical sites and buildings
Music, Performing and Visual Arts (MPVA)			**Music, Performing and Visual Arts (MPVA)**
Sound recording and music publishing activities	5920	5920	Sound recording and music publishing activities
Cultural education	8552	8542	Cultural education
Performing arts	9001	9000	Creative, arts and entertainment activities
Support activities to performing arts	9002		
Artistic creation	9003		
Operation of arts facilities	9004		

Source: DCMS (2014)
Note: Conversion table was used for ISIC codes.

2.1.2. Datasets

The analyses in this report have been conducted by use of four different datasets in accordance with the analysis level (regional, national, international) and period (pre-2009, post-2009) (see Figure 2.2).

Figure 2.2: Data Sets

	1	2	3	4
Institution	Turkstat	Turkstat	Turkstat	OECD
Data Source	Administrative Registry	Survey	Survey	-
Classification	NACE Rev.2	NACE Rev.2	NACE Rev.1.1	ISIC Rev.4
Period Covered	2009-2017	2009-2015	2003-2008	2009-2017
Name of Data	Annual Industry and Service Statistics	Annual Industry and Service Statistics	Annual Industry and Service Statistics	Industry and Service Statistics
Level of Analysis	National	Regional (Pre-2009)	Regional (Pre-2009)	International

- **Analysis at national level:** Dataset no.1 from TURKSTAT covering the 2009-2017 period and compiled based on administrative registries enables access to data on industries at four-digit level according to NACE Rev.2 classification. Because the dataset could not provide data at regional level, it was only used for national level analyses in this report.
- **Analysis at regional level (Post-2009):** Micro data from dataset no.2 from TURKSTAT covering the 2009-2015 period and compiled based on survey results provides regional level data. However, TURKSTAT made an alteration in the data compilation method (compilation based on administrative registries instead of surveys), which caused certain differences to emerge between the values of datasets no.1 and 2. When comparing the regional and national level analysis resultas in the report, this should be noted.
- **Analysis at regional level (Pre-2009):** Dataset no.3 is appropriate for a regional analysis covering the period preceding the year 2009. However, the economic activities in this dataset were classified based on NACE Rev.1.1 and this makes it impossible for the data from the pre-2009 period and post-2009 period to be compared directly. It is possible to convert between NACE Rev.1.1 and NACE Rev.2 by use of a conversion table. However, the fact that not all activities under NACE Rev.1.1 have exact equivalents in NACE Rev.2 in the conversion tables causes certain data to be unobservable.
- **Analysis at International level:** The dataset that enables comparative analysis of the creative industries (at four-digit level) in Turkey and other countries is dataset no.4 from the OECD. However, as mentioned before, this dataset is compiled not according to the NACE Rev.2 classification used by TURKSTAT but according to ISIC Rev.4 classification. It is possible to convert these but certain differences emerge in the values obtained due to differences in the sub-industry definitions. This situation has to be taken into account when the values obtained for Turkey in this report are evaluated.

2.2. Creative Industries In Turkey

Creative Economy

In this chapter, the creative industries are analysed, first collectively and then separately. The concept of the creative economy is used to indicate the whole of the creative industries. In 2017, the creative economy in Turkey had a turnover of $28 billion and a value added of about $7 billion. As seen in Figure 2.3, there are more than 79,000 enterprises, employing approximately 344,000 people.

There was a significant increase in creative economic activities between 2010 and 2017. During this period, these industries' value added increased by 25%, their employment increased by 43% and the number of enterprises increased by 34%.

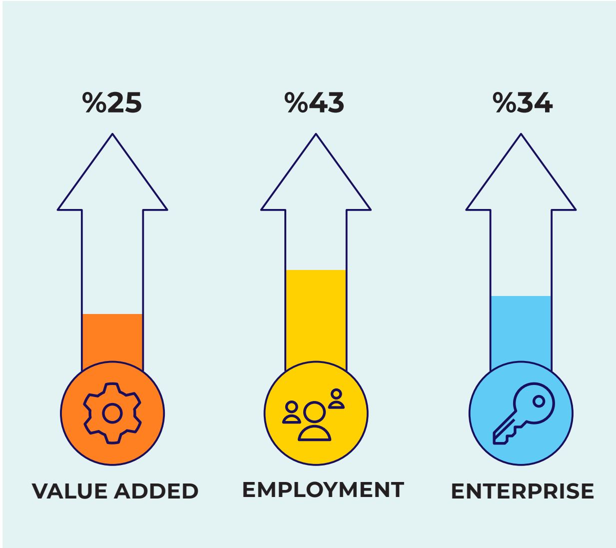
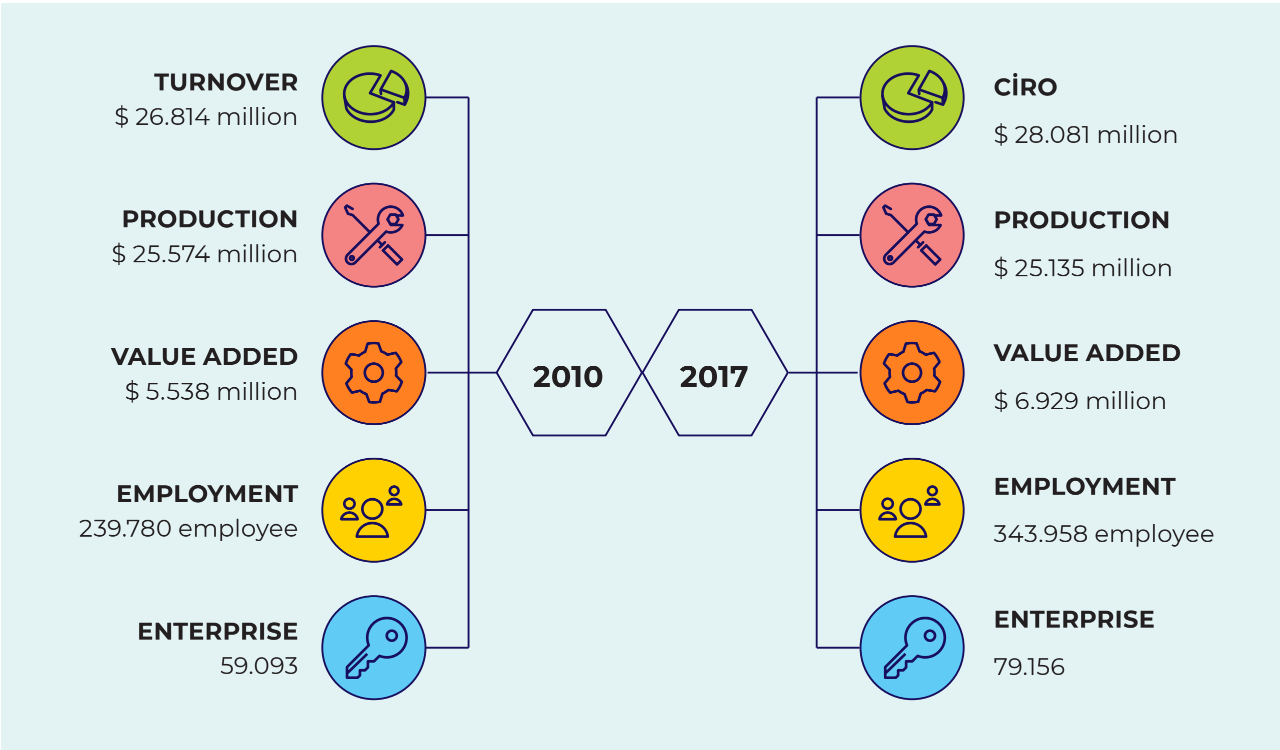


Figure 2.3: Overall Profile of Creative Economy in Turkey (NACE Rev.2), 2010 and 2017



Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2017 Micro Data Set".

Note: All values received from TURKSTAT in TL currency were converted to dollars over the $/TL exchange rate obtained from WDI database.

Various indicators on the creative economy in 2017 are presented in Table 2.2, in comparison with manufacturing, construction and information-communication industries (for 2010 values, see Appendix Table 2.1). According to the data in the table, the share of the creative economy within Turkey's overall turnover is 2%. Although this is close to the level of the information and communication industry, it is still considerably lower than the manufacturing (27%) and construction (8%) industries.

Table 2.2: Comparison of Creative Industries with Other Industries (NACE Rev.2), 2017

	Creative Industries (Total)	Manufacturing	Construction	Information and Communication	Turkey Average
Turnover					
Share within Turkey's Overall Turnover (%)[a]	2	27	8	2	-
Production					
Share within Turkey's Overall Production (%)[a]	3	42	14	3	-
Value Added					
Value Added Ratio (Value Added / Production) (%)[a]	28	22	15	33	26
Share within Turkey's Overall Value Added (%)[a,b]	3	35	8	4	-
Share within Turkey's Overall Value Added[a] / Share within Turkey's Overall Production (%)[a]	1,04	0,83	0,58	1,27	-
Employment					
Labour productivity (dollars)	20.145	23.436	11.406	42.864	16.625[a]
Share within Turkey's Overall Employment (%)	1	14	7	1	-
Share within Turkey's Overall Number of Enterprises (%)[a]	3	13	7	1	-

Source: Calculated by authors using TURKSTAT's Labour and Annual Industry and Service Statistics 2009-2017 datasets.

Note:
Value added share was obtained by comparing the industry's value added to its production.
Labour productivity was calculated by dividing value added by the number of employees. Calculated over TL by using TURKSTAT data, the labour productivity was converted to dollars over the $/TL exchange rate obtained from WDI database.
a While calculating the overall value for Turkey, only the industries included under TURKSTAT's annual industry and service statistics were taken into account, the industries not included in this dataset were not included in the overall value.
b Calculated by using factor cost and value added data.

As seen in Graph 2.1, the value added of the creative economy is around 3% of Turkey's overall value added[12]. This, compared to the construction industry's 8% and manufacturing industry's 35%, is considerably low level.

However, when the comparison between industries is conducted not over value added but value added ratio (the share of the industry within its own production value), the picture above is reversed. With a value added ratio of 28%, the creative economy has higher value added ratios (as of 2017) than manufacturing (22%) and construction (15%) (see Graph 2.2).

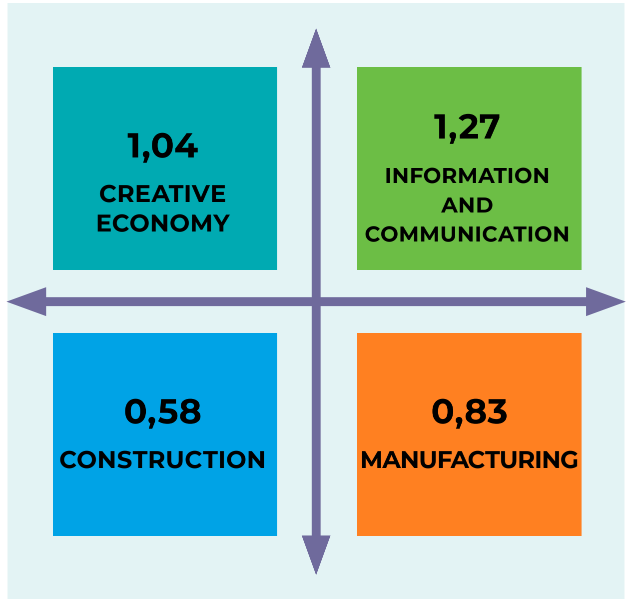
The creative economy's value added ratio increased by 6% between 2010 and 2017 (see Appendix Table 2.1).

When compared to other industries, manufacturing and construction have considerably higher shares within the Turkish economy. It results in misleading conclusions in the comparison of the industries over absolute values. However, when the industries are evaluated with relative values instead of absolute values, comparisons become more consistent. In line with this perspective, using the ratio as calculated below would be a more appropriate way to compare industries:

$$\frac{\textit{share of industry A within the overall value added in Turkey}}{\textit{share of industry A within the overall production in Turkey}}$$

f this ratio is equal to "1", the industry's share of the country's overall value added and the industry's share of the country's overall production are equal to one another. If it is higher than 1, the industry provides a higher contribution to Turkey's value added than its share of Turkey's production, and vice versa. Evaluated in this light, **the creative industries, with a value of 1.04, provide a higher contribution to the country's value added compared to their share within countrywide production.** This ratio was calculated as 0.83 and 0.58 respectively for manufacturing and construction industries (see Table 2.2). Therefore, these two industries provide a lower contribution to Turkey's value added compared to their shares of Turkey's overall production, in contrast to the creative industries. This ratio was lower than 1 for the creative industries, but rose above 1 by 2017 (for year 2010 value see Appendix Table 2.1).

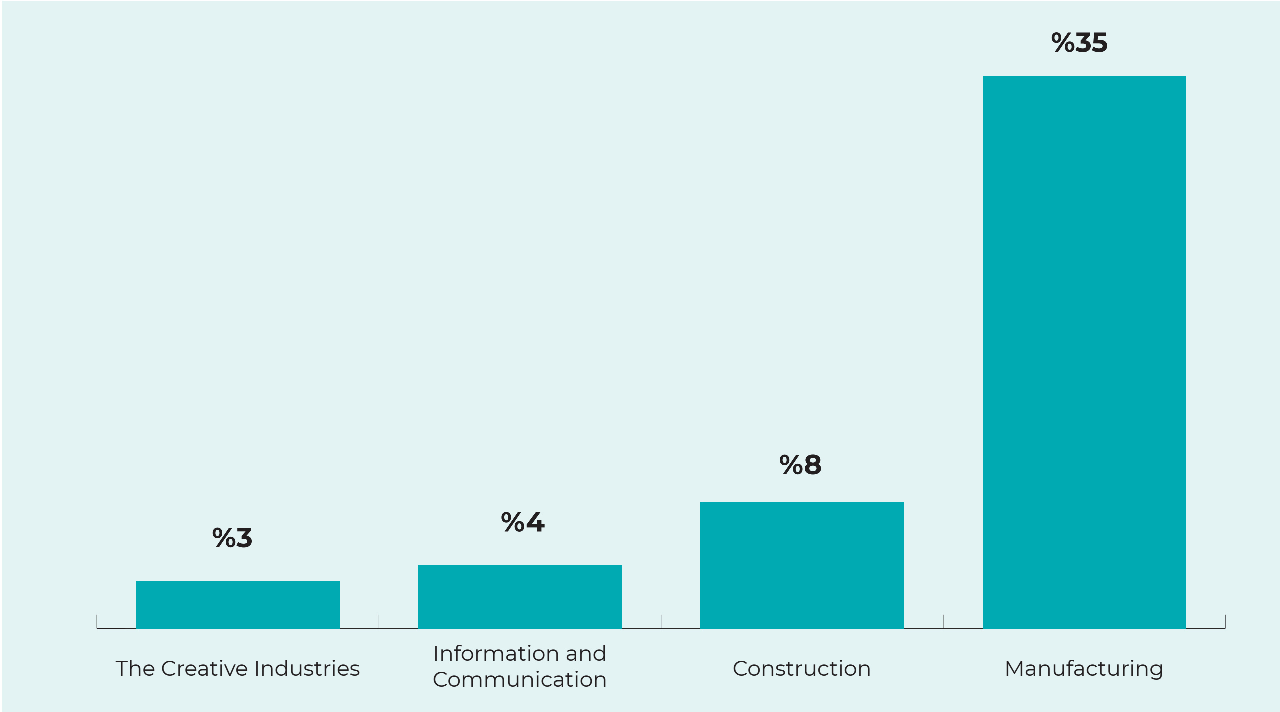
Figure 2.4: Value Added Ratio (%) / Production Ratio (%)



Source: Calculated by authors.

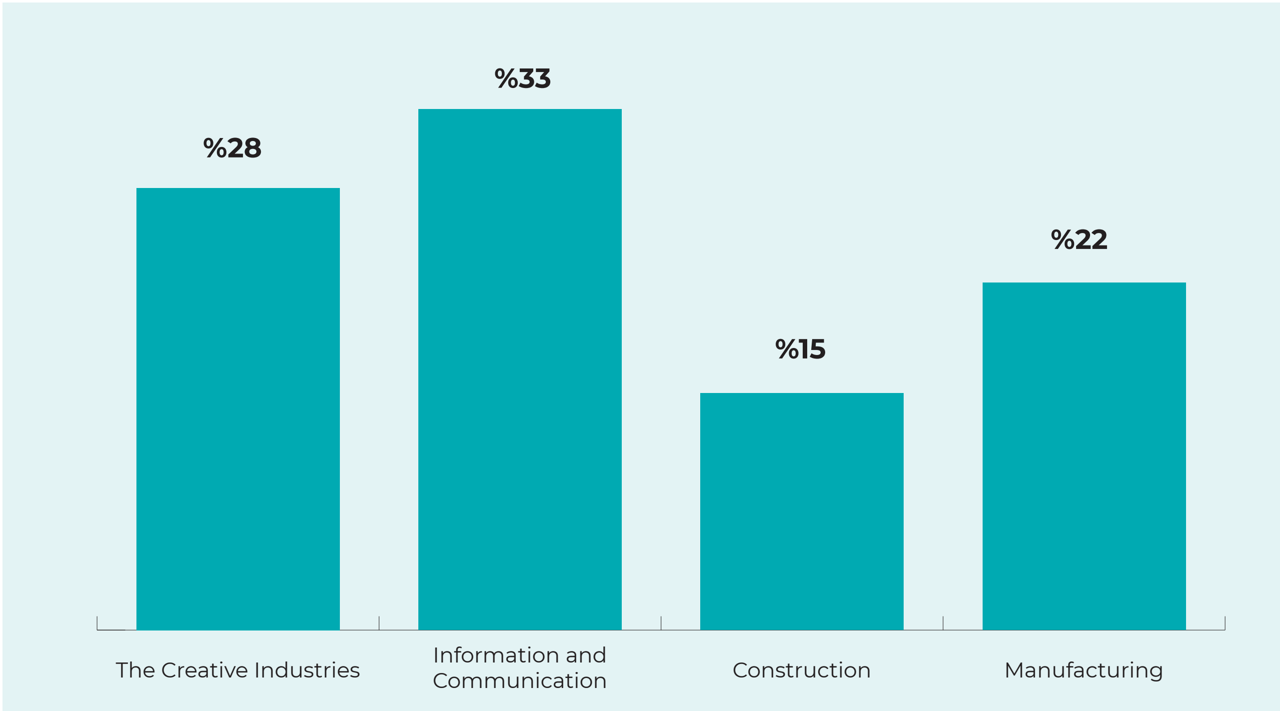
12 While calculating overall values for Turkey, only the industries included under TURKSTAT's annual industry and service statistics were taken into account; the industries not included in this dataset were not included in the overall value. When the value added data that is included in GDP calculations covering all economic activities is used, this ratio is around 1%. It should be noted that the total value added data for Turkey is obtained from basic prices while the value added data for creative industries is obtained from factor prices in this second calculation.

Graph 2.1: Sector Shares within Turkey's Overall Value Added (%), 2017



Source: Calculated by authors by using TURKSTAT's Annual Industry and Service Statistics 2009-2017 data.

Graph 2.2: Value Added Ratio (%), 2017



Source: Calculated by authors by using TURKSTAT's Annual Industry and Service Statistics 2009-2017 data.

Creative Industries

Detailed data for the industries comprising the creative economy are provided as below in Table 2.3. Evaluation of these industries based on various indicators are presented as follows.

Table 2.3: Detailed Profile of the Creative Economy in Turkey (NACE Rev.2), 2017

NACE Rev.2	Turnover (million dollars)	Value Added (million dollars)	Production Value (million dollars)	Value Added Ratio (%)	Number of Employees	Labour productivity (dollars)	Number of Enterprises
Advertising and Marketing							
7021	174	56	155	36	4.926	11.314	717
7311	4.954	921	4.620	20	71.062	12.964	13.727
7312	2.104	128	2.109	6	4.188	30.660	512
Architecture							
7111	2.487	508	2.231	23	49.223	10.322	13.075
Crafts							
3212	2.835[a]	253	2.592	10	25.213	10.038	5.310
Design: Product, Graphic and Fashion Design							
7410	555	96	504	19	12.833	7.512	4.778
Film, TV, Video, Radio and Photography (FTVRP)							
5911	1.309	302	1.293	23	12.147	24.882	2.444
5912	72	19	71	26	1.359	13.633	440
5913	161	30	111	27	545	55.376	109
5914	367	109	350	31	4.589	23.779	319
6010	92	18	94	20	1.732	10.642	739
6020	1.482	408	1.469	28	8.996	45.321	597
7420	224	48	209	23	16.757	2.881	9.421
Information Technologies, Software and Computer Services (ITSCS)							
5821	134[a]	9[b]	134[a]	7	503	17.983	92
5829	48	18	33	56	563	32.434	107
6201	4.372	2.072	3.969	52	55.536	37.307	9.501
6202	3.387	1.038	2.486	42	28.017	37.052	4.557
Publishing							
5811	745	153	624	24	6.684	22.836	1.295
5812	g	g	g	g	g	g	g
5813	666	208	653	32	13.872	14.988	1.263
5814	174[a]	50	167[a]	g	3.716	13.413	900
5819	g	g	g	g	g	g	g
7430	98	33	96	35	3.432	9.694	1.833
Museums, Galleries and Libraries (MGL)							
9101	16[b]	6[b]	22	27	713	8.228	20
9102	13	3[b]	13	23	278	10.883	42
Music, Performing and Visual Arts (MPVA)							
5920	89	18	83	21	1.343	13.136	622
8552	27	6	25	25	1.993	3.179	795
9001	300	161	296	54	6.650	24.136	3.667
9002	209	46	194	24	3.623	12.806	947
9003	34[a]	6	27	21	974	5.865	550
9004	129[b]	51	222	23	1.333	38.073	223

Source: Calculated by the authors using TURKSTAT's Annual Industry and Service Statistics 2009-2017 data.

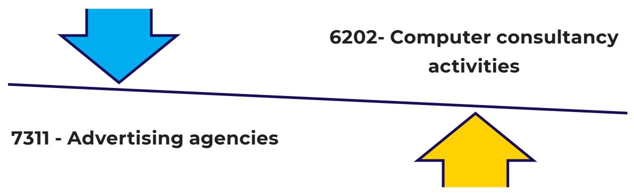
Note:
- The value added ratio was obtained by comparing the industry's value added to its production.
- Labour productivity was calculated by dividing value added by the number of employees. Calculated over TL by using TURKSTAT data, labour productivity was converted to dollars over the $/TL exchange rate obtained from WDI database.

g - means confidential data or undisclosed data.

a - the value is from 2016.

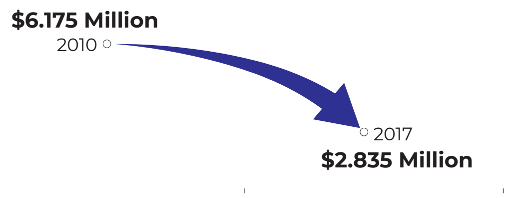
b - the value is from 2015.

Turnover and Value Added: The highest turnover within the creative industries comes from advertising agencies (7311) with a value of approximately $5 billion in 2017. This industry generates 18% of the overall turnover of creative economy (see Graph 2.4). However, when it is evaluated in terms of the value added it generated, it only ranks in third place among creative industries, with a value added of $921 million. First place in terms of value added goes to computer programming activities (6201) with a value of $2 billion, followed by computer consultancy services (6202) with a value of $1 billion. The value added generated by these two industries is 46% of the total value added generated by all creative industries. When advertising agencies is added, this rises to 60% (see Graph 2.3).



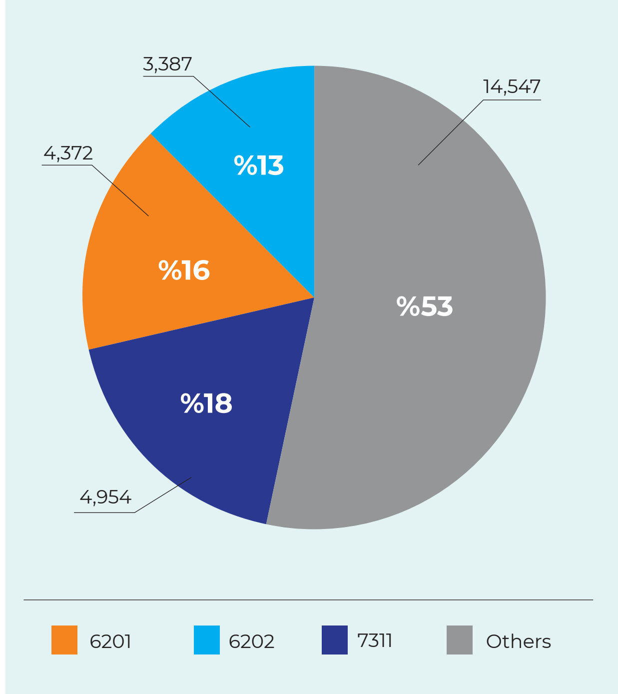
When the value added and turnover values of 2017 are compared with 2010, some industries declined and some rose. Computer consultancy activities (6202) closely followed advertising agencies (7311) in 2010; by 2017 these industries had swapped places.

Manufacture of jewellery and related articles (3212)



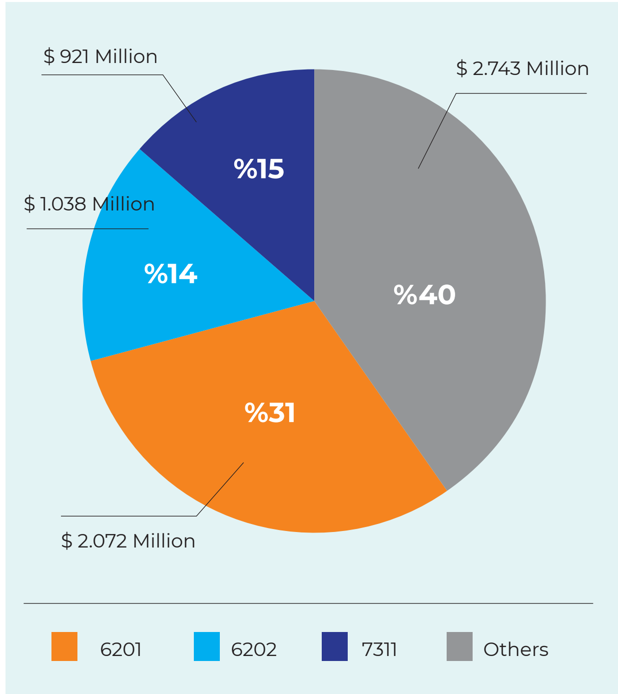
While manufacture of jewellery and related articles (3212) held first place in 2010 with a turnover of $6 billion, this declined to $2.8 billion as of 2017 (for 2010 indicators of creative industries, see Appendix Table 2.2).

Graph 2.4: Turnover in Creative Industries



Source: Calculated by authors using TURKSTAT's Annual Industry and Service Statistics 2009-2017 dataset.

Graph 2.3: Value Added in Creative Industries



Source: Calculated by authors using TURKSTAT's Annual Industry and Service Statistics 2009-2017 dataset.

Value added ratio (value added / production): The highest value added ratio among the creative industries is for other software publishing (5829) with a value of 56%. However, the value added generated by this industry ($18 million) is considerably lower than other industries. A similar situation exists for the performing arts (9001), which is in the second place for value added. Other industries with the highest value added are computer programming activities (52%) and computer consultancy activities (42%) (see Graphs 2.5 and 2.6).

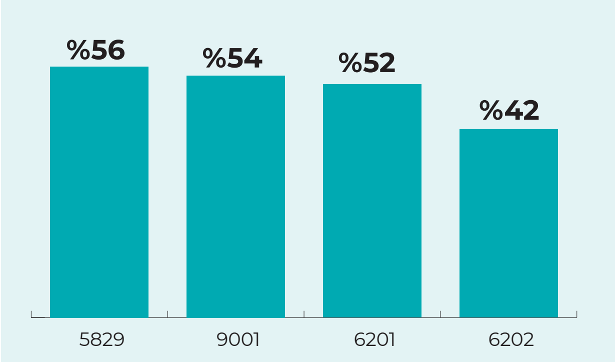
Although advertising agencies (7311) always ranks in the top three places in terms of turnover, production and value added, it is only 24th among all creative industries in regards to value added ratio, with a low score of 20%.

> **When turnover, value added, productivity and employment indicators are evaluated together, computer programming activities (6201) is observed to be the industry with the highest performance among the creative industries of Turkey. The closest runner-up to this industry is computer consultancy activities (6202).**

Employment: Advertising agencies (7311) created the highest employment in the creative industries, with 71,000 employees in 2017. This is followed by computer programming activities (6201) with 55,000 employees and then by architectural activities (7111) with 49,000 employees (see Graph 2.7)

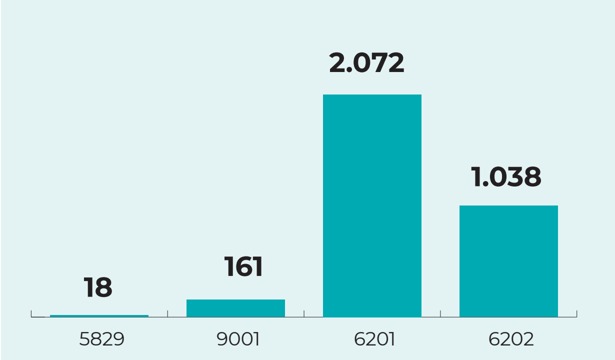
Labour productivity (value added per employee): The industry with the highest productivity is motion picture, video and television programme distribution activities (5913) with a value of $55,000 . Second place is occupied by television programming and broadcasting activities (6020) with $45,000, and operation of arts facilities is in third place (9004) with $38,000.

Graph 2.6: Value Added Ratio in Creative Industries (%)



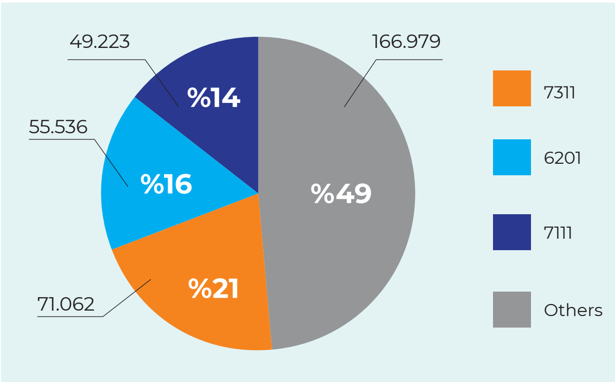
Source: Calculated by authors by using TURKSTAT's Annual Industry and Service Statistics 2009-2017 data.

Graph 2.5: Value Added in Creative Industries (million $)



Source: Calculated by authors by using TURKSTAT's Annual Industry and Service Statistics 2009-2017 data.

Graph 2.7: Employment in Creative Industries, 2017



Source: Calculated by authors using TURKSTAT's Annual Industry and Service Statistics 2009-2017 data.

2.3. Creative Industries in OECD Countries: Comparison with Turkey

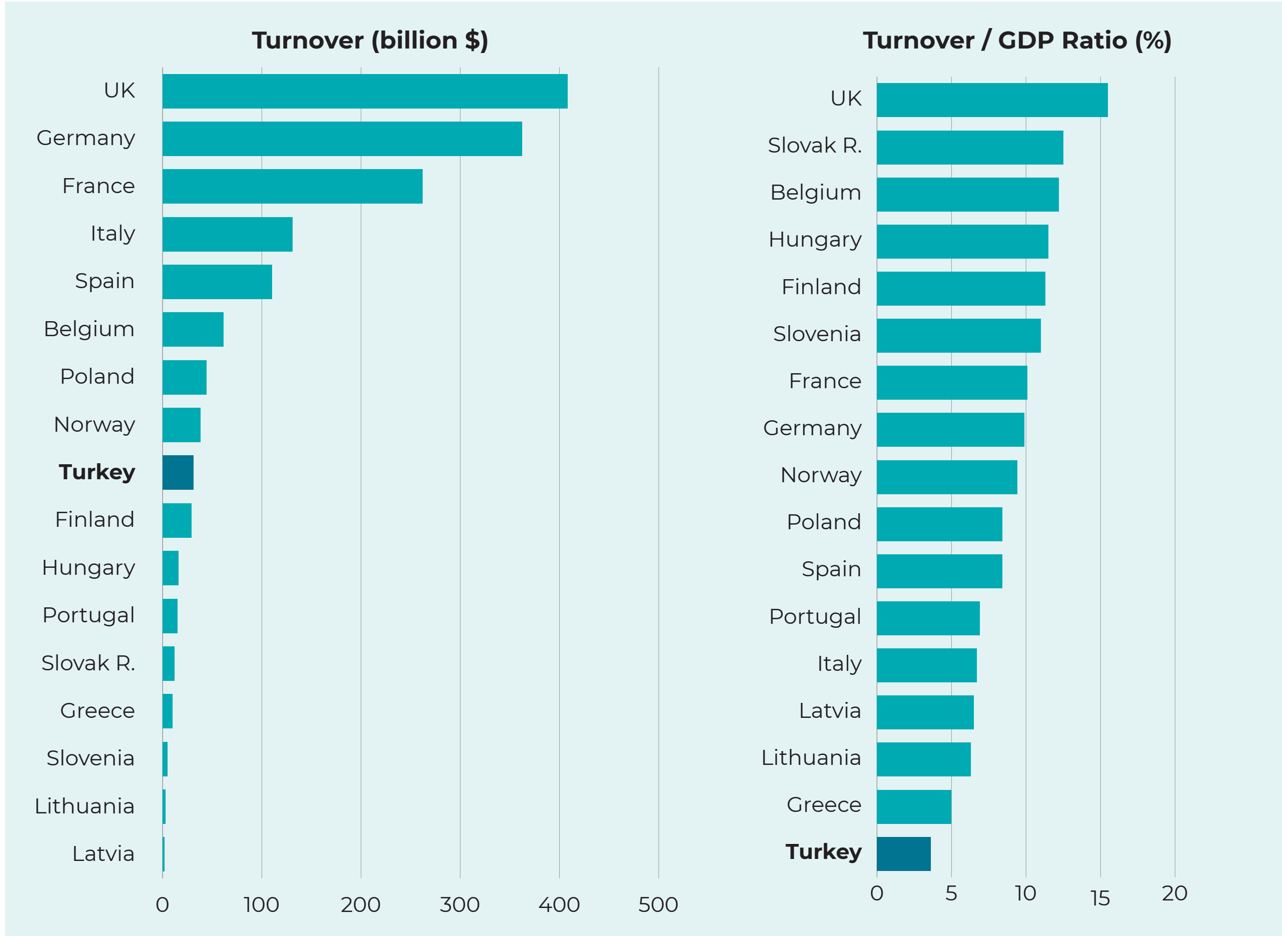
In this chapter, the creative economies and creative industries of Turkey and OECD countries are compared. The following evaluations cover OECD countries for which data is available within the OECD database.

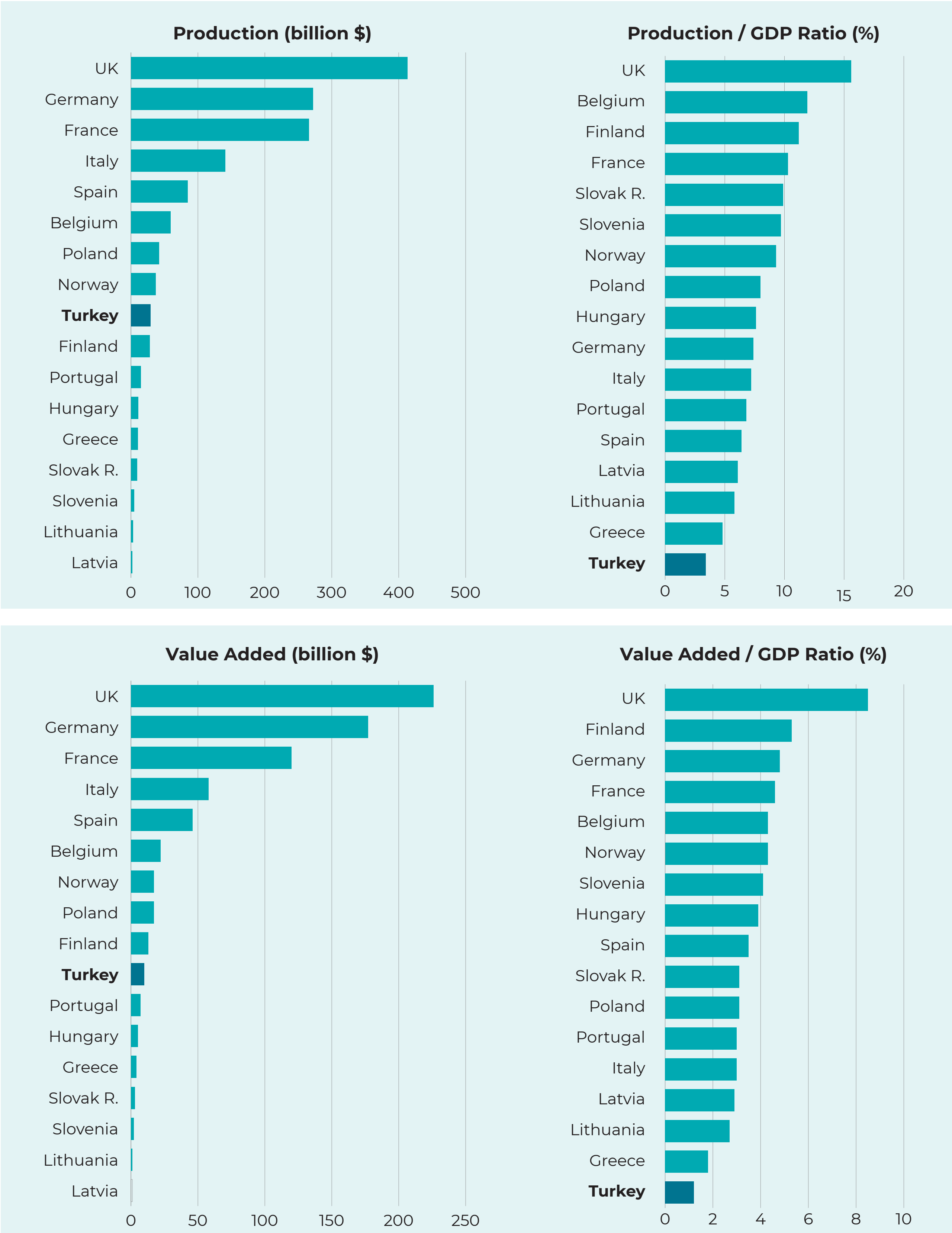
Comparing Creative Economies

Turnover, production and value added indicators of the creative economy in OCED countries are given in Graph 2.8. Among these countries, the United Kingdom, Germany, France and Italy have the highest values in regards to almost all indicators on the creative economy.

Turkey is in the middle for almost all indicators. However, when the evaluation is conducted not over absolute values (left column) but over relative values (right column), Turkey is in last place for all indicators.

Graph 2.8: Indicators of Creative Economy in OECD Countries (ISIC.Rev.4), 2017



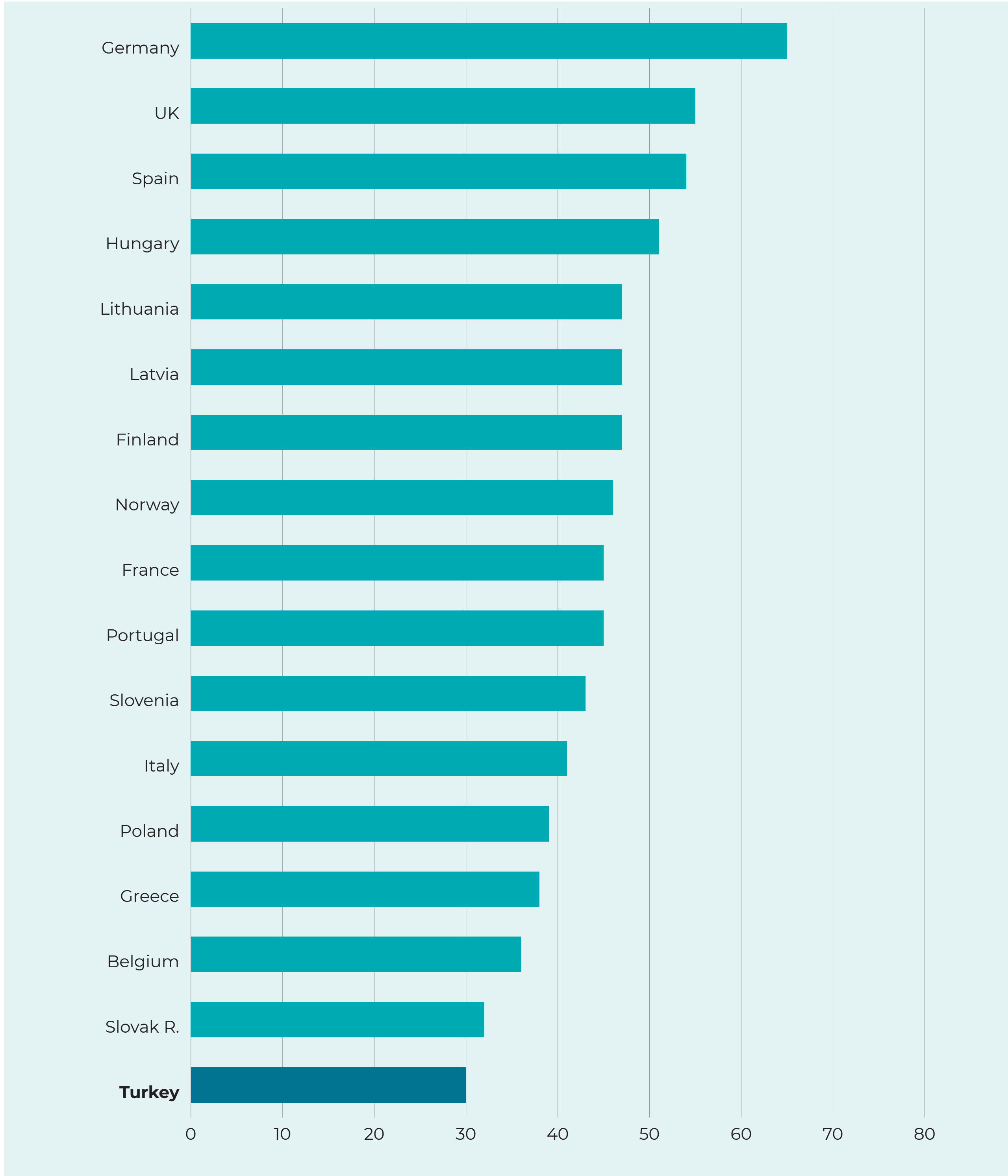


Source: Calculated by authors using OECD and IMF World Economic Outlook dataset.

Note: All values presented over national currencies in the OECD database were converted into dollars with the exchange rates received from WDI database. Turnover, production and value added data only indicates the total of industries with accessible data.

When the creative industries of OECD countries are compared in regards to value added ratio, the countries with the highest values are Germany, the United Kingdom and Spain (see Graph 2.9). Turkey ranks in last place.

Graph 2.9: Value Added Ratio of Creative Economy (%), (ISIC Rev.4), 2017



Source: Calculated by authors by using OECD data.

Note: Value added ratio was obtained by proportioning the value added of an industry ot the production of that industry. When calculating value added ratio, only the industries of which both production and value added data are available were taken into account.

Table 2.4 details the value added ratios of OECD countries. The creative industries have approximately one-and-a half to two times more value added ratio compared to the manufacturing and construction industries in all countries.

Table 2.4: Comparison of OECD Countries by Sectoral Value Added Ratio (%) (ISIC. Rev.4), 2017

Country	Creative Economy (Industries Total)	Manufacturing	Construction	Information-Communication
Turkey	30	22	15	33
The United Kingdom	55	31	38	52
Germany	65	31	40	59
France	45	27	31	45
Italy	41	26	30	45
Spain	54	23	31	54
Norway	46	28	32	46
Finland	47	28	31	47
Belgium	36	22	26	43
Greece	38	24	26	35
Portugal	45	25	32	46
Poland	39	24	23	45
Hungary	51	24	34	52
Latvia	47	29	23	54
Lithuania	47	23	29	51
Slovenia	43	31	31	44
Slovak R.	32	19	23	47

Source: Calculated by authors by using OECD data.

Note: Certain differences occur between the calculations about the creative industries for Turkey in the previous chapter and the calculations in this chapter due to the differences between NACE.Rev.2 and ISIC.Rev.4 classifications at 4 digit level. The value added ratio was obtained by proportioning the value added of an industry to the production of that industry. When calculating value added ratio, only the industries of which both production and value added data are available were taken into account.

Comparing Creative Industries

The creative industries of OECD countries have been compared, as shown in table 2.5, in terms of value added ratios, labour productivity and salary indicators for the year 2017 (for detailed production, value added, turnover and employment values, see Appendix Tables 2.3 to 2.6).

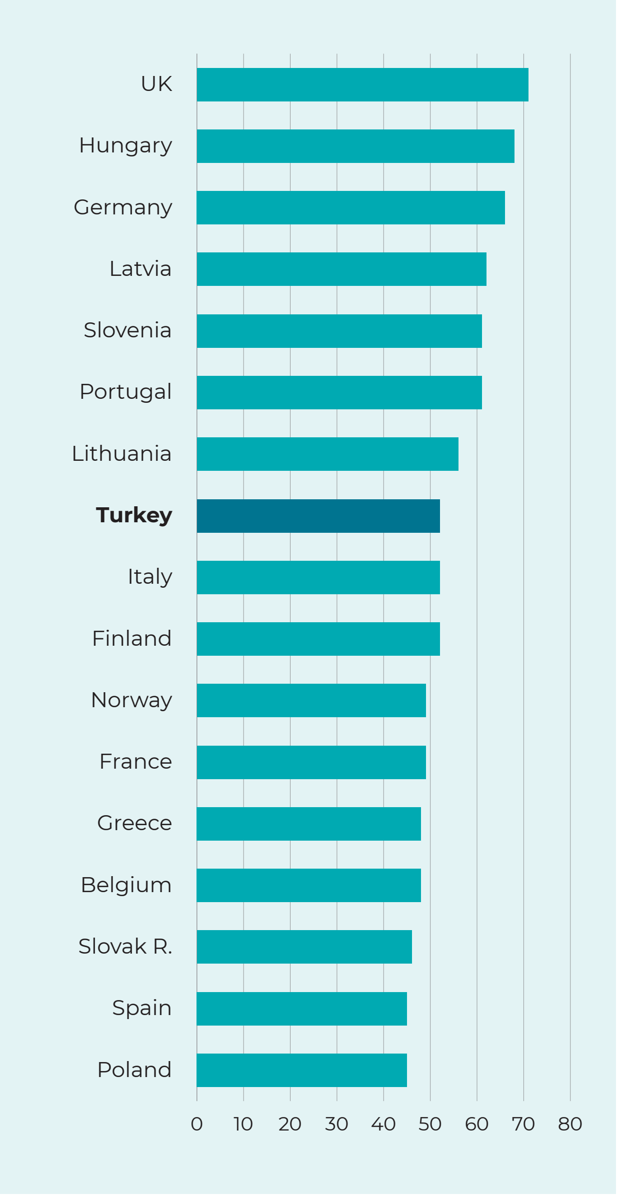
Value Added Ratio (%): The OECD country with the highest value added ratio is Germany (65%). When analysed in detail, the value added ratios of all industries except two industries (industry code: 3211 and 5812) are over 40%. The country with the second highest value added ratio is the United Kingdom. In the UK, the value added ratios of all industries except three (5914, 5911 and 6020) are over 40% (see Table 2.5).

There are only two creative activities in Turkey that exceed the 40% ratio. These are computer programming activities with code 6201 (52%) and other professional, scientific and technical activities n.e.c with code 7490 (41%). The value added ratio of the activity 6201 is behind the United Kingdom and Germany, at the same level as Italy and Finland, and ahead of countries such as France, Norway and Spain (see Graph 2.10).

With regards to the value added ratio of the activity with code 7490, Turkey is in front of France, Belgium, Greece, Poland and Slovak Republic, and behind the remaining countries (see Table 2.5).

In regards to activities with code 5811, 5920, 7110 and 7310, Turkey is the country with the lowest value added ratio among OECD countries (see Table 2.5).

Graph 2.10: Value Added Ratio of Computer Programming Activities in OECD Countries (%), ISIC. Rev.4, 2017



Source: Calculated by authors by using OECD data.

Table 2.5: Value Added Ratio in Creative Industries in OECD Countries (%), ISIC Rev.4, 2017

ISIC Rev.4	Turkey	UK	Germany	France	Italy	Spain	Norway	Finland
3211	g	g	38	g	19	g	g	26
5811	24	53	46	28	28	48	35	40
5812	g	58	34	g	g	63	41	51
5813	g	58	45	39	36	46	41	38
5819	g	62	57	g	g	38	30	51
5820	g	57	43	48	50	70	53	47
5911	23	24	52	50	40	72	40	55
5912	26	54	62	52	38	69	61	54
5913	27	45	65	20	48	29	11	16
5914	31	38	43	32	26	43	35	41
5920	21	48	70	28	34	34	25	45
6010	20	58	96	43	34	51	38	47
6020	28	9	-	33	23	46	40	19
6201	52	71	66	49	52	45	49	52
6202	g	65	67	51	47	62	52	45
7020	38	61	72	51	45	60	56	46
7110	29	58	68	44	47	48	47	52
7310	16	45	59	38	20	55	25	45
7410	19	64	60	39	47	76	48	43
7420	23	62	57	38	46	51	50	47
7490	41	60	66	40	49	72	44	43
8542	25	g	g	g	g	g	g	g
9000	36	g	g	g	g	g	g	g
9101	g	g	g	g	g	g	g	g
9102	g	g	g	g	g	g	g	g
Creative Economy	**30**	**55**	**65**	**45**	**41**	**54**	**46**	**47**

ISIC Rev.4	Belgium	Greece	Portugal	Poland	Hungary	Latvia	Lithuania	Slovenia	Slovak R.
3211	g	g	33	g	35	44	g	46	g
5811	33	34	35	45	36	42	33	40	28
5812	34	43	39	20	50	g	33	g	g
5813	40	16	38	40	42	36	44	39	41
5819	15	33	37	33	56	g	41	g	30
5820	53	68	48	54	66	35	64	66	g
5911	26	35	28	21	8	31	26	30	48
5912	32	37	46	35	53	18	25	60	19
5913	11	20	47	26	24	10	30	11	-10
5914	28	39	27	35	32	30	39	23	34
5920	33	41	51	41	33	45	36	28	35
6010	43	36	55	59	27	33	49	31	20
6020	24	44	43	37	39	36	36	0	38
6201	48	48	61	45	68	62	56	61	46
6202	43	47	56	51	58	48	57	50	59
7020	39	45	48	50	57	54	47	53	34
7110	32	33	44	42	51	45	51	36	34
7310	17	26	23	24	42	28	39	21	24
7410	30	37	46	39	48	33	41	54	18
7420	41	27	54	87	47	40	48	59	33
7490	34	38	47	38	58	48	46	52	12
8542	g	g	g	g	g	g	g	g	g
9000	g	g	g	g	g	g	g	g	g
9101	g	g	g	g	g	g	g	g	g
9102	g	g	g	g	g	g	g	g	g
Creative Economy	**36**	**38**	**45**	**39**	**51**	**47**	**48**	**43**	**32**

Source: Calculated by authors using OECD data.

Note:

- Certain differences occur between the calculations conducted for the creative industries in Turkey in the previous chapter and the calculations in this chapter, due to the differences between NACE.Rev.2 and ISIC.Rev.4 classifications at 4 digit level.
- The value added ratio was obtained by proportioning the value added of an industry to the production of that industry.
- When calculating value added ratio, only the industries of which both production and value added data are available were taken into account .
- g, means confidential data or undisclosed data.

Table 2.6: Labour productivity in Creative Industries in OECD Countries (thousand dollars), ISIC Rev.4, 2017

ISIC Rev.4	Turkey	UK	Germany	France	Italy	Spain	Norway	Finland
3211	g	g	68	g	63	g	g	66
5811	26	g	91	83	102	76	98	89
5812	g	g	88	g	g	81	113	114
5813	16	g	73	80	104	58	101	78
5819	g	g	68	g	g	47	78	90
5820	g	g	132	110	89	97	133	171
5911	28	g	80	99	98	79	87	76
5912	18	g	91	81	86	99	87	59
5913	61	g	392	142	483	170	167	120
5914	25	g	25	76	43	40	46	88
5920	20	g	287	102	236	103	103	85
6010	13	126	91	90	75	56	96	73
6020	46	43	193	159	152	92	103	230
6201	41	114	106	97	99	76	104	109
6202	40	98	107	103	82	63	137	95
7020	18	111	132	100	112	70	124	92
7110	15	102	92	86	222	72	126	78
7310	16	148	59	74	68	61	90	67
7410	11	80	97	105	120	176	91	80
7420	6	76	90	93	121	41	110	75
7490	13	85	97	93	133	70	78	69
8542	5	g	g	g	g	g	g	g
9000	34	g	g	g	g	g	g	g
9101	g	g	g	g	g	g	g	g
9102	g	g	g	g	g	g	g	g
Creative Economy	**21**	**122**	**97**	**97**	**110**	**70**	**117**	**90**

ISIC Rev.4	Belgium	Greece	Portugal	Poland	Hungary	Latvia	Lithuania	Slovenia	Slovak R.
3211	g	g	21	g	15	g	g	g	g
5811	107	37	46	48	26	15	20	39	27
5812	75	21	55	16	38	0	10	g	g
5813	155	12	35	40	36	14	15	46	36
5819	86	30	34	28	35	g	16	g	30
5820	183	68	63	42	63	21	48	67	g
5911	159	18	45	89	15	16	32	89	91
5912	184	29	46	78	57	12	43	89	59
5913	112	39	286	167	126	40	39	32	-17
5914	103	32	31	76	66	25	32	49	163
5920	286	20	43	55	30	14	23	66	45
6010	195	16	38	37	14	15	36	34	53
6020	137	61	139	103	64	38	76	1	97
6201	150	47	48	47	44	35	35	66	48
6202	140	79	44	45	44	23	31	72	44
7020	220	46	42	47	38	21	28	72	37
7110	135	51	41	37	34	16	17	52	45
7310	93	34	38	52	32	18	28	61	34
7410	127	32	34	34	25	13	20	80	14
7420	171	9	23	18	21	8	28	62	22
7490	154	27	38	42	27	19	23	61	32
8542	g	g	g	g	g	g	g	g	g
9000	g	g	g	g	g	g	g	g	g
9101	g	g	g	g	g	g	g	g	g
9102	g	g	g	g	g	g	g	g	g
Creative Economy	**156**	**42**	**44**	**48**	**38**	**23**	**27**	**62**	**40**

Source: Calculated by authors using OECD data.

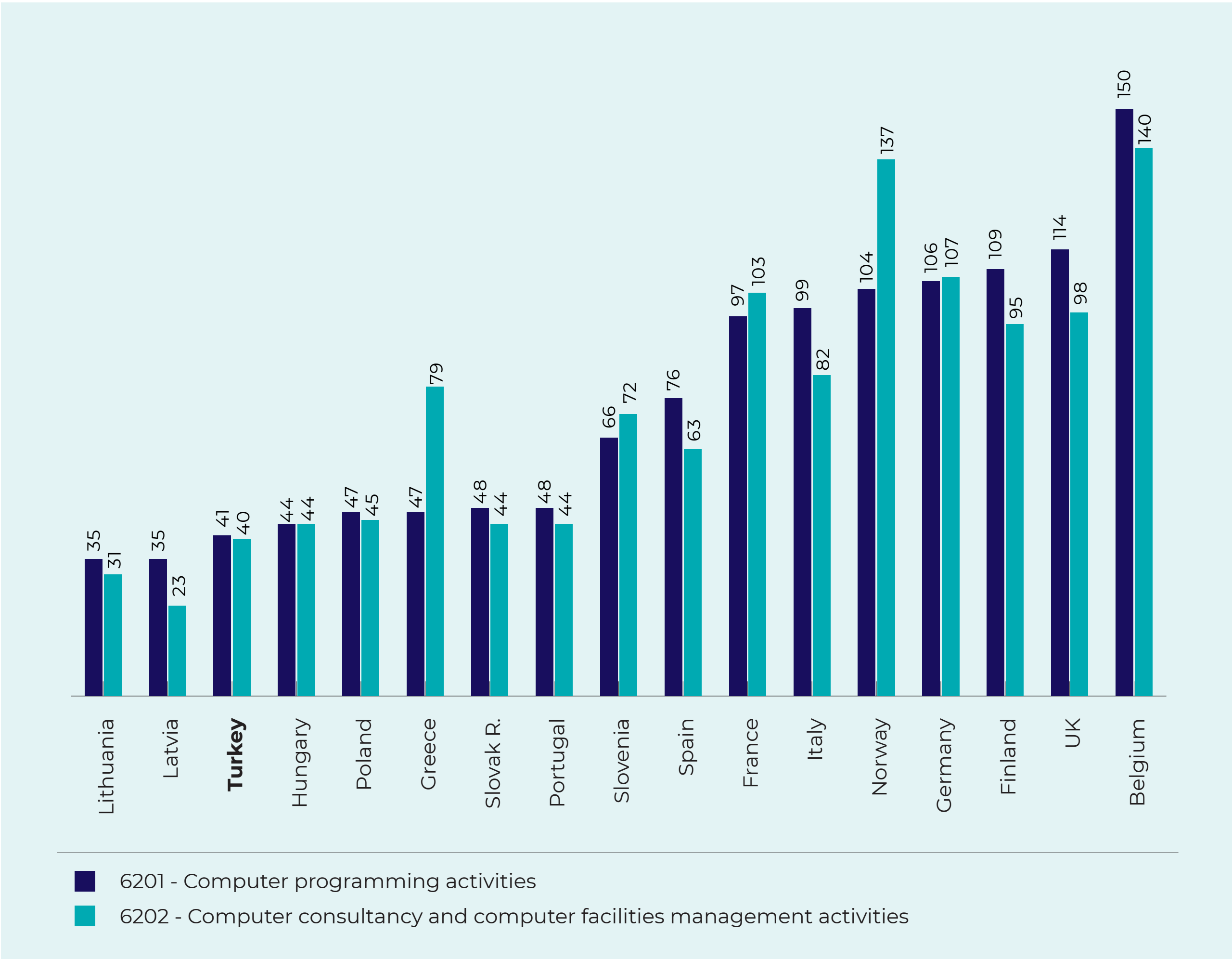
Note:

- Certain differences occur between the calculations conducted in regards to creative industries for Turkey in the previous chapter and the calculations in this chapter due to the differences between NACE.Rev.2 and ISIC.Rev.4 classifications at 4 digit level.
- Value added ratio was obtained by proportioning the value added of an industry to the production of that industry.
- When calculating value added ratio, only the industries of which both production and value added data are accessible were taken into account .
- g, means confidential data or undisclosed data

Labour productivity (value added per employee): Creative industries' labour productivity values are provided in Table 2.6. Although labour productivity varies in different industries, productivity is generally high in Belgium, Norway, Germany and Italy. The highest productivity is in 5913 (motion picture, video and television programme distribution activities) in Italy, with a value of $483,000. The labour productivity for the same activity is $392,000 in Germany and $61,000 in Turkey. The industry in question also had the highest labour productivity among creative industries in Turkey.

In the analyses conducted in the previous chapter, computer programming (6201) and computer consultancy activities (6202) were at the top in terms of labour productivity among the creative industries in Turkey. However, when the productivity of these industries is compared with OECD countries, Turkey has the third lowest productivity following Latvia and Lithuania. The highest productivity values for 6201 and 6202 are in Belgium with $150,000 and $140,000, respectively (see Graph 2.11).

Graph 2.11: Labour Productivity in Computer Programming and Computer Consultancy Activities (thousand $), ISIC Rev.4, 2017



Source: Calculated by authors by using OECD data.

Note: All values presented over national currencies in OECD database were converted into dollars with the exchange rates from WDI database.

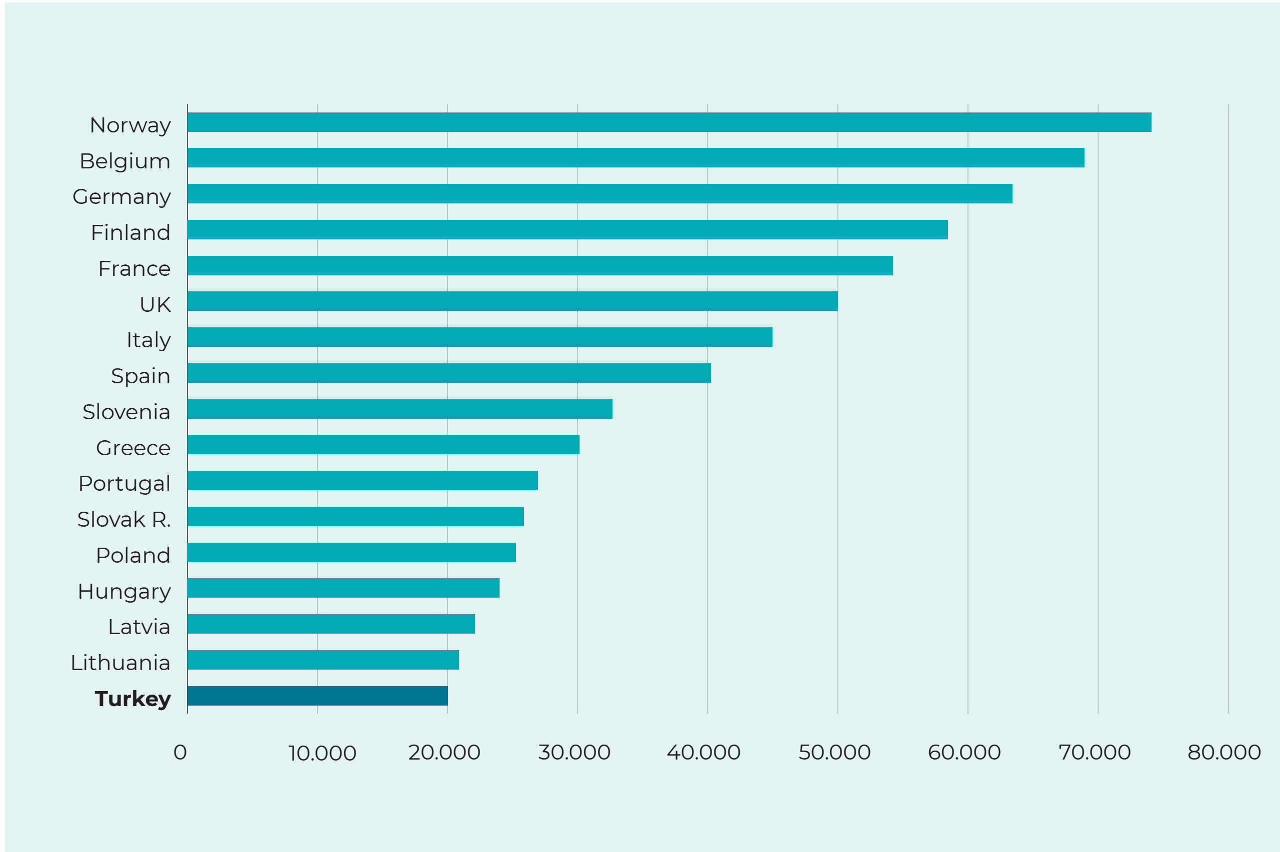
In Turkey, photographic activities (7420) have the lowest productivity after cultural education activities (8542). The annual value added per employee is $6,000 in photographic activities, the lowest value among OECD countries. Turkey is superseded by Latvia with $8,000 and Greece with $9,000. In this activity field, the highest productivity is in Belgium with $171,000 , followed by Italy with $121,000 , Norway with $110,000 and France with $93,000 (see Table 2.6).

Earnings: The annual average wage in the creative industries is presented in Table 2.7. In Turkey, the highest average wage in the creative industries is in computer programming (6201), at approximately $20,000. However, this constitutes the lowest wage level among OECD countries (see Graph 2.12).

The highest average wage for this industry is found in Norway, at $74,000, followed by Belgium at $68,000 and Germany at $63,000. The average wage in the same industry varies between $20,000 and $30,000 in Greece, Poland, Portugal, Latvia, Lithuania and the Slovak Republic (see Graph 2.12).

The lowest average wage paid in Turkey is for cultural education activities (8542) and the second lowest is photographic activities (7420) at approximately $4,000 . This puts Turkey in last place among OECD countries, and the average wage is 10 times higher in developed OECD countries such as France and Norway, and is around $5,000 – $6,000 in countries such as Greece, Latvia and Lithuania (see Table 2.7).

Graph 2.12 Annual Average Earnings Computer Programming Activiteis (dollars), ISIC.Rev4. 2017



Source: Calculated by authors using OECD data.

Note: All salary and wage values presented over national currencies in OECD database were converted into dollars using the exchange rates from the WDI database.

Data on Turkey and the United Kingdom comes from 2015 and 2016, respectively.

Table 2.7: Annual Average Earnings in the Creative Industries in OECD Countries (dollars), ISIC Rev.4, 2017

ISIC Rev.4	Turkey	UK	Germany	France	Italy	Spain	Norway	Finland
3211	g	g	27.595	g	26.726	g	g	38.512
5811	7.972	g	48.142	52.387	42.224	38.345	62.725	45.901
5812	g	g	47.342	g	g	46.847	47.350	45.283
5813	13.358	g	37.378	45.311	51.870	39.098	61.363	47.718
5819	g	g	31.797	g	g	31.649	50.942	41.564
5820	g	g	83.057	60.585	43.030	50.511	80.599	77.828
5911	10.640	31.151	46.830	37.790	35.715	37.181	56.455	38.296
5912	9.287	42.335	45.143	49.096	33.008	35.832	58.830	33.995
5913	15.456	78.760	54.733	48.623	57.855	50.233	82.254	58.743
5914	7.041	17.023	10.952	32.733	20.905	17.830	24.981	30.385
5920	7.576	40.617	51.272	47.380	40.277	50.267	53.779	41.667
6010	g	37.497	55.218	55.720	27.942	35.775	58.362	46.964
6020	g	122.465	71.054	61.635	53.022	50.286	64.113	63.194
6201	19.997	49.981	63.397	54.225	44.954	40.222	74.093	58.464
6202	17.017	46.710	64.167	56.731	41.971	40.131	89.307	63.559
7020	11.356	40.923	65.146	56.366	44.331	43.800	72.474	53.379
7110	8.227	39.679	48.027	51.038	41.451	37.152	82.719	49.904
7310	8.870	51.971	30.760	45.603	28.091	29.803	57.534	41.741
7410	4.182	26.887	36.197	55.318	34.854	37.441	53.489	36.942
7420	3.833	g	25.043	43.996	19.967	16.940	40.160	32.296
7490	5.713	g	47.730	52.474	32.680	30.455	46.219	40.162
8542	3.006	g	g	g	g	g	g	g
9000	12.311	g	g	g	g	g	g	g
9101	8.609	g	g	g	g	g	g	g
9102	15.157	g	g	g	g	g	g	g

ISIC Rev.4	Belgium	Greece	Portugal	Poland	Hungary	Latvia	Lithuania	Slovenia	Slovak R.
3211	g	g	12.932	g	9.372	5.077	g	g	g
5811	61.373	19.588	21.372	20.103	11.518	9.622	10.348	25.847	14.021
5812	41.242	21.851	29.841	8.212	-	g	10.270	g	g
5813	60.415	20.615	25.762	20.942	18.899	10.514	9.511	33.142	19.129
5819	47.723	17.855	18.290	12.927	15.419	g	8.492	g	10.573
5820	80.371	40.503	35.481	20.114	23.557	12.050	25.980	29.019	g
5911	47.514	8.885	19.073	18.585	11.658	7.872	11.373	21.217	20.501
5912	49.753	13.035	19.518	31.606	10.502	9.931	8.690	21.017	16.658
5913	77.202	22.407	28.997	41.461	21.172	11.297	11.297	21.017	9.336
5914	30.863	12.004	13.096	19.704	12.554	9.803	8.482	20.397	21.017
5920	36.690	12.235	18.909	14.147	9.766	8.690	3.684	21.518	9.414
6010	49.218	16.206	21.479	20.221	12.072	9.129	11.488	21.536	20.540
6020	70.702	27.539	33.992	28.299	26.546	16.641	20.451	24.729	28.297
6201	68.941	30.123	26.914	25.261	23.985	22.098	20.843	32.652	25.864
6202	67.552	33.053	26.904	23.791	21.304	13.054	18.487	40.435	25.259
7020	54.597	27.336	22.570	20.692	17.124	11.320	11.230	20.144	15.382
7110	57.557	12.436	21.047	13.971	13.671	9.343	9.514	27.056	16.625
7310	46.750	18.830	19.106	18.543	12.994	11.035	11.236	23.953	13.952
7410	34.780	13.334	15.410	12.201	9.236	8.009	9.953	16.727	3.941
7420	28.625	5.339	9.841	8.013	7.838	5.696	4.583	15.598	6.141
7490	50.952	18.252	19.180	14.500	12.431	8.899	10.848	23.206	10.174
8542	g	g	g	g	g	g	g	g	g
9000	g	g	g	g	g	g	g	g	g
9101	g	g	g	g	g	g	g	g	g
9102	g	g	g	g	g	g	g	g	g

Source: Calculated by authors using OECD data.

Note:

- *Data on Turkey and the United Kingdom comes from 2015 and 2016, respectively.*
- *All salary and wage values presented over national currencies in OECD database were converted into dollars with exchange rates from WDI database.*
- *Certain differences occur between the calculations conducted in regards to creative industries for Turkey in the previous chapter and the calculations in this chapter due to the differences between NACE.Rev.2 and ISIC.Rev.4 classifications at 4 digit level.*
- *g, means confidential data or undisclosed data.*

2.4. Creative Industries in NUTS-2 Regions

In this chapter, the creative industries are analysed at NUTS-2 regions level. General information at NUTS-2 level is provided in all analyses, particularly highlighting the TR31-İzmir region in line with the purposes of this report.

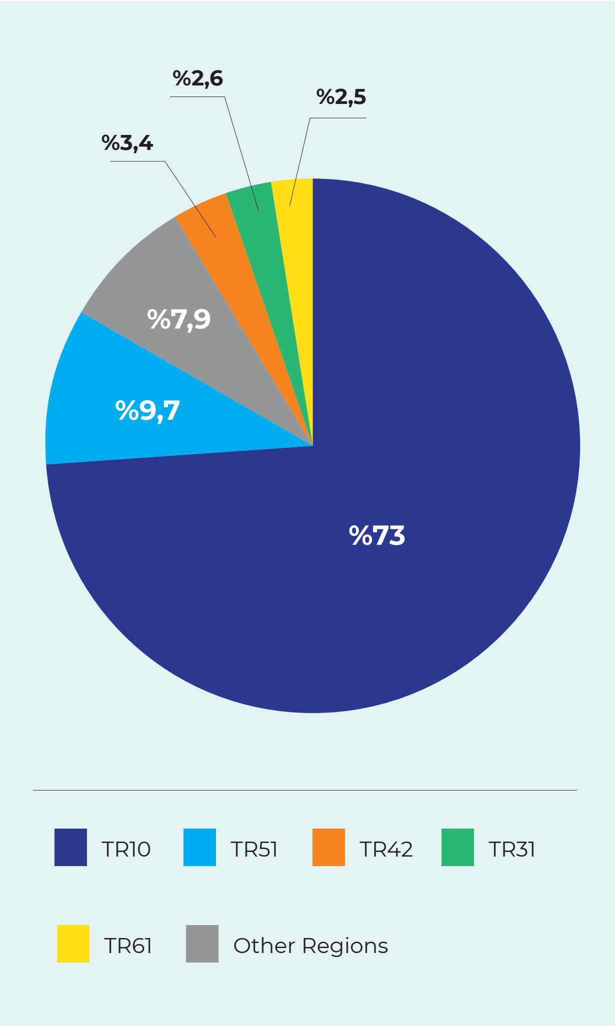
2.4.1. An Overview of Creative Industries at Regional Level

Data on creative economies at regional level are presented in Table 2.8.

Turnover: The five regions with the highest turnover in creative economy in 2015 are: TR10 (İstanbul), TR51 (Ankara), TR42 (Kocaeli, Sakarya, Düzce, Bolu, Yalova), TR31 (İzmir) and TR61 (Antalya, Isparta, Burdur), in that order. The regional share within the overall creative economy turnover of Turkey is as follows: TR10: 73.9%; TR51: 9.7%; TR42: 3.4%; TR31: 2.6% and TR61: 2.5%. These five regions alone generate more than 90% of the overall turnover of creative economy in Turkey (see Graph 2.13)

In 2010, the TR10 region had an 80% share of overall turnover so there has been a 6% decline. Nonetheless, this region still generates almost three quarters of Turkey's creative economy turnover by itself. While there was a decline in the TR10 region's share, other regions' shares increased. For instance, the TR31 region increased its share from 1.6% to 2.6% between 2010 and 2015, and the TR42 region increased its share from 1.6% to 3.4%.

Graph 2.13: Shares of Regions within the Overall Turnover of Creative Economy (%), 2015.



Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015 Micro Dataset".

Employment: When the numbers of employees in the creative industries of regions are examined, the order mentioned above changes. The regions providing the highest employment in creative industries, as of 2015, were, in order: TR10 (167,000 employees), TR51 (35,000 employees), TR31 (13,000 employees), TR61 (12,000 employees) and TR41 (9,000 employees) (see Table 2.8). İstanbul and Ankara occupy the top places as they did in the turnover ranking. While İzmir was in fourth place in the turnover rankings, it moves up to third place in employment rankings. The shares of these regions within the overall employment in the creative industries of Turkey are, respectively, 58.5%; 12.3% and 4.6%. Compared to 2010, İstanbul increased its share of employment, while Ankara and İzmir slightly declined .

Salaries and Wages: Another indicator included in Table 2.8 regarding the creative economy is annual average salaries and wages. In both 2010 and 2015, the TR42 region had the highest annual average salaries and wages in the creative industries. This was followed by, in order, TR10, TR51 and TR31 regions. The average wages and salaries declined in II of these regions except TR31. The average wage of approximately $15,000 in 2010 declined to around $12,000 as of 2015. In TR31, the average wage rose from $7,022 to $7,550 during the same period.

Labour productivity (Turnover / Number of Employees) [13]**:** In 2015, the regions with the highest labour productivity (in other words, turnover per employee) were: TR42 ($100,000), TR10 ($92,000), TR51 ($57,000), TR52 ($54,000) and TRC1 ($50,000). TR31-İzmir ranked in ninth place with a value of approximately $42,000. Nominal values from TURKSTAT were transformed into real values by use of PPI index (2003=100) and the real productivity increases in regional creative economies were calculated for the 2010-2015 period (see Table 2.8). With a productivity increase of 138%, the TR42 region is again in first place, while TR10-İstanbul faced a productivity loss of 20%. TR51-Ankara had an increase of 26% in terms of labour productivity, while the TR31-İzmir region displayed a real productivity increase of 61%.

13 In previous chapters, labour productivity was obtained by dividing value value by the number of employees, however, due to not being able to find data on value added on creative industries at regional level, labour productivity in this chapter has been calculated instead by dividing the turnover by the number of employees.

Table 2.8: Creative Economy Profile of NUTS-2 Regions, 2010-2015

NUTS-2	Earnings (million dollars)		Turnover (million dollars)		Investment in Tangible Goods (million dollars)		Number of Employees		Annual Earnings (dollars)		Labour productivity (Turnover / Number of Employees)		Rate of Increase in Real Labour productivity , (%) (at 2003 Prices)
Region	**2010**	**2015**	**2010**	**2015**	**2010**	**2015**	**2010**	**2015**	**2010**	**2015**	**2010**	**2015**	**2010-2015 Period**
TR10	1.495	2.042	15.550	15.340	676	624	103.530	166.626	14.439	12.258	150.197	92.063	-20
TR21	4	7	24	47	3	3	1.105	1.847	3.456	4.021	21.598	25.674	54
TR22	3	6	24	41	1	6	969	1.952	2.903	3.151	24.658	21.032	10
TR31	64	98	305	544	4	21	9.135	12.971	7.022	7.550	33.380	41.964	61
TR32	9	14	88	121	1	2	3.392	3.904	2.687	3.484	26.057	30.876	51
TR33	5	11	45	43	4	3	1.450	2.683	3.306	4.224	30.803	16.028	-34
TR41	44	50	231	277	9	18	6.981	9.349	6.257	5.304	33.040	29.655	14
TR42	90	86	308	701	12	13	5.756	6.960	15.603	12.319	53.527	100.670	138
TR51	365	412	1.442	2.006	70	135	25.356	35.148	14.393	11.725	56.879	57.064	26
TR52	11	11	111	116	5	8	2.283	2.152	4.791	4.895	48.725	54.016	39
TR61	42	54	574	516	34	38	8.410	12.418	5.024	4.356	68.251	41.524	-24
TR62	31	41	179	329	4	12	5.769	7.295	5.374	5.593	30.958	45.106	81
TR63	3	5	16	28	1	3	1.203	1.790	2.821	2.951	13.395	15.388	42
TR71	2	5	12	31	1	2	620	1.260	2.468	3.967	19.568	24.776	56
TR72	7	10	64	114	1	1	1.545	2.462	4.453	4.155	41.103	46.455	39
TR81	3	2	9	14	0.2	1	745	966	3.861	2.230	11.865	14.880	54
TR82	1	1	47	7	0.01	1	344	447	2.756	3.048	137.745	15.593	-86
TR83	6	9	143	58	2	10	1.896	2.621	3.291	3.381	75.501	22.157	-64
TR90	12	12	68	70	2	3	2.967	2.553	4.059	4.754	23.075	27.332	43
TRA1	4	3	16	18	1	1	1.131	598	3.158	4.361	14.413	30.716	157
TRA2	0.2	1	3	10	0.3	0.4	166	372	1.372	2.050	15.859	27.495	108
TRB1	4	6	18	32	2	1	880	1.787	4.300	3.604	20.413	17.718	4
TRB2	2	3	7	31	0.4	0.5	536	873	3.029	3.247	13.885	35.291	203
TRC1	4	11	36	134	1	2	1.423	2.682	2.994	4.212	25.495	50.003	133
TRC2	5	10	27	73	1	1	1.207	2.247	4.363	4.328	22.165	32.289	73
TRC3	2	6	44	48	0.2	2	546	967	2.893	6.496	80.407	49.961	-27

Source: Calculated by authors by using TURKSTAT's Annual Industry and Service Statistics 2009-2015 Micro Dataset.

Note: Labour productivity was calculated by dividing value added by the number of employees.
All values received from TURKSTAT were converted to dollars with the $/TL exchange rate obtained from the WDI database

2.4.2. Specialisation in Creative Industries

A region's degree of specialisation in a certain industry can be measured by the Location Quotient (LQ). If an industry in a region is above the countrywide average, then the region has relative specialisation in regards to the industry in question. This is calculated by use of the following formula:

$$LQ_{ir} = \frac{X_{ir}}{X_r} \Big/ \frac{X_{in}}{X_n}$$

If the LQ is greater than 1, the industry in the relevant region is above Turkey's average. As the LQ value increases, the degree of specialisation also increases.

Where
X_{ir} = employment of sector i in region r
X_r = total employment in region r
X_{in} = employment of sector i in Turkey
X_n = total employment in Turkey

.

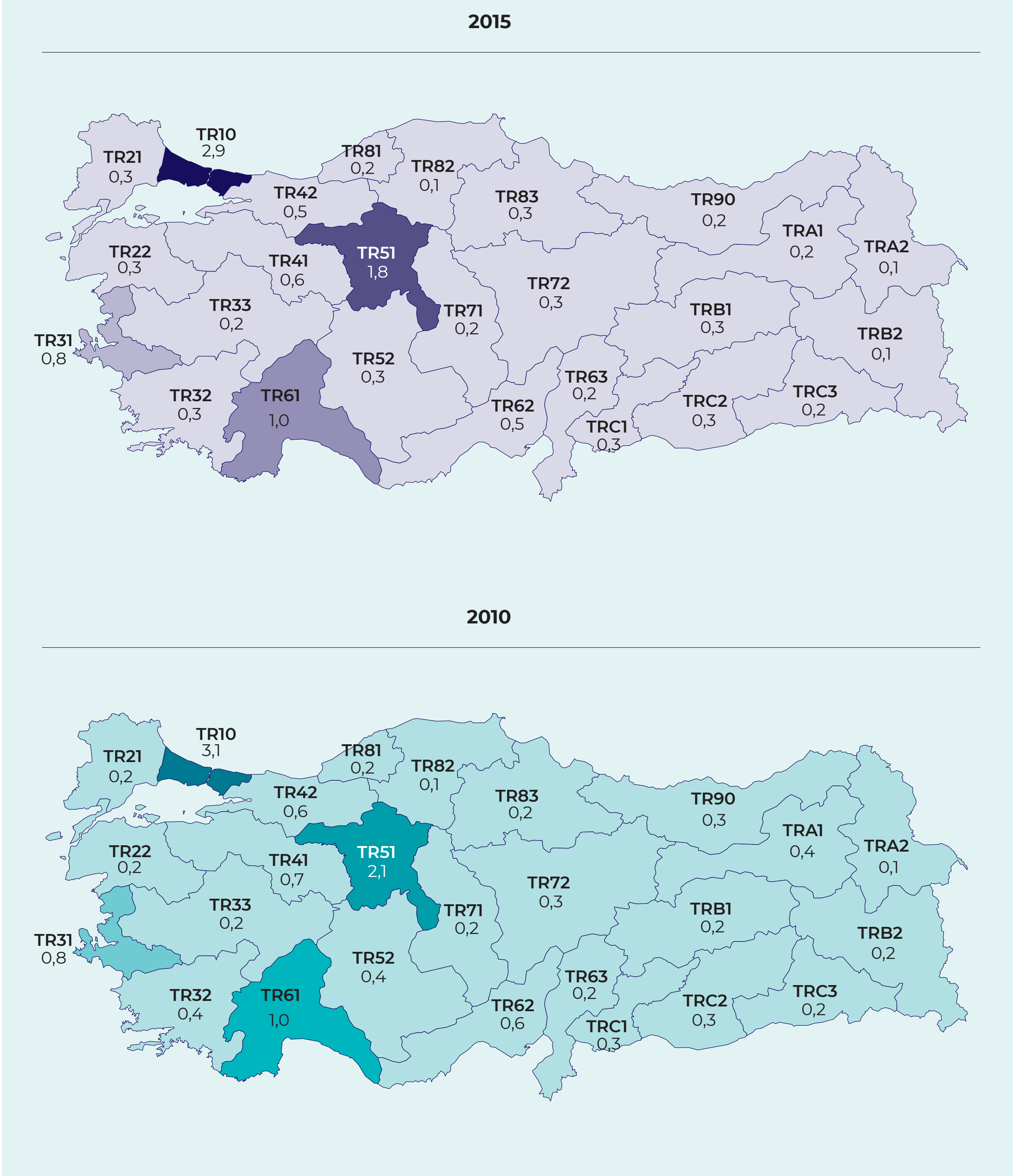
Specialisation in Creative Economy

The NUTS-2 regions displaying specialisation in the creative economy are shown in Figure 2.5. **The LQs in the figure point to three regions that specialised in the creative economy in both 2010 and 2015. These are TR10 (İstanbul), TR51 (Ankara) and TR61 (Antalya, Isparta, Burdur) regions.**

While the TR10 and TR51 regions displayed slight declines in specialisation between 2010 and 2015, there is no change in the TR61 region. When the TURKSTAT data on the regions' creative industries are examined in detail, it is noted that he decline in the TR10 region is down to employment decline in the industries with codes 5812, 8552 and 9002. The decline in TR51 region may be explained by employment decline in the industries with codes 5811, 5914, 6202, 7311, 7430 and 9004. High employment in manufacture of jewellery and related articles (3212) and performing arts (9001) played an important role in TR61's creative economy displaying specialisation in 2010. In the same region, the industry with code 3212 had a significant employment decline in 2015. The decline in this industry was more than compensated for by the employment rise in architectural activities (7111), thus continuing the specialisation potential in 2017. .

Although no specialisation is observed in other regions, the TR31 (İzmir) region comes closest to the critical LQ value of 1. According to TURKSTAT data, the number of employees in the creative industries coded as 3212, 5914, 7311, 7420, 8552 and 9004 declines in İzmir between 2010 and 2015. However, employment increases in other industries were high enough to compensate, so no significant decline is recorded in the LQ value of İzmir between 2010 and 2015. Employment in 6201 increased more than four times, which is more than three times the overall loss of the industries that suffered employment loss.

Figure 2.5: Specialisation in Creative Economy

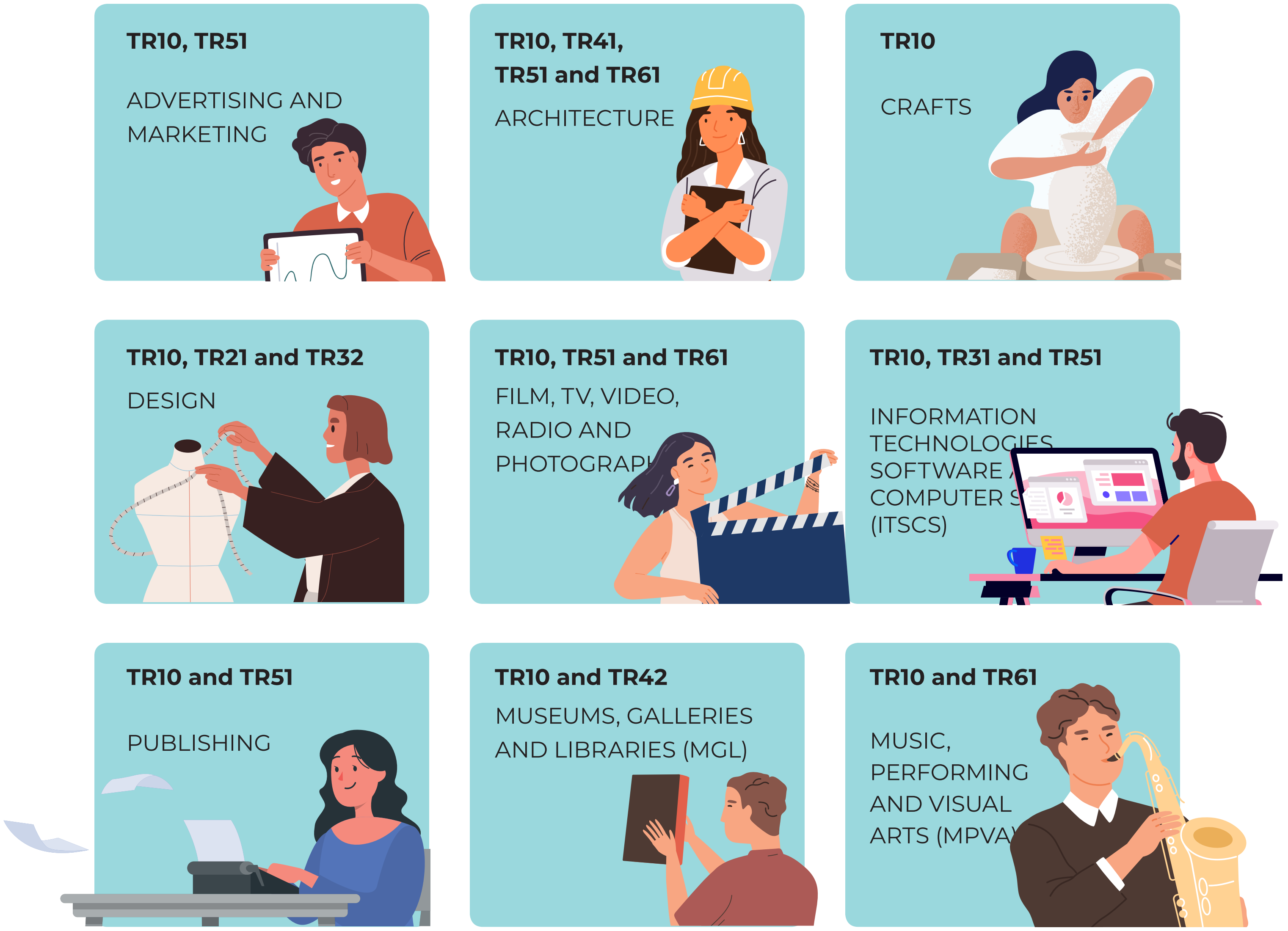


Source: Calculated by authors using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.

Specialisation in Main Creative Industries

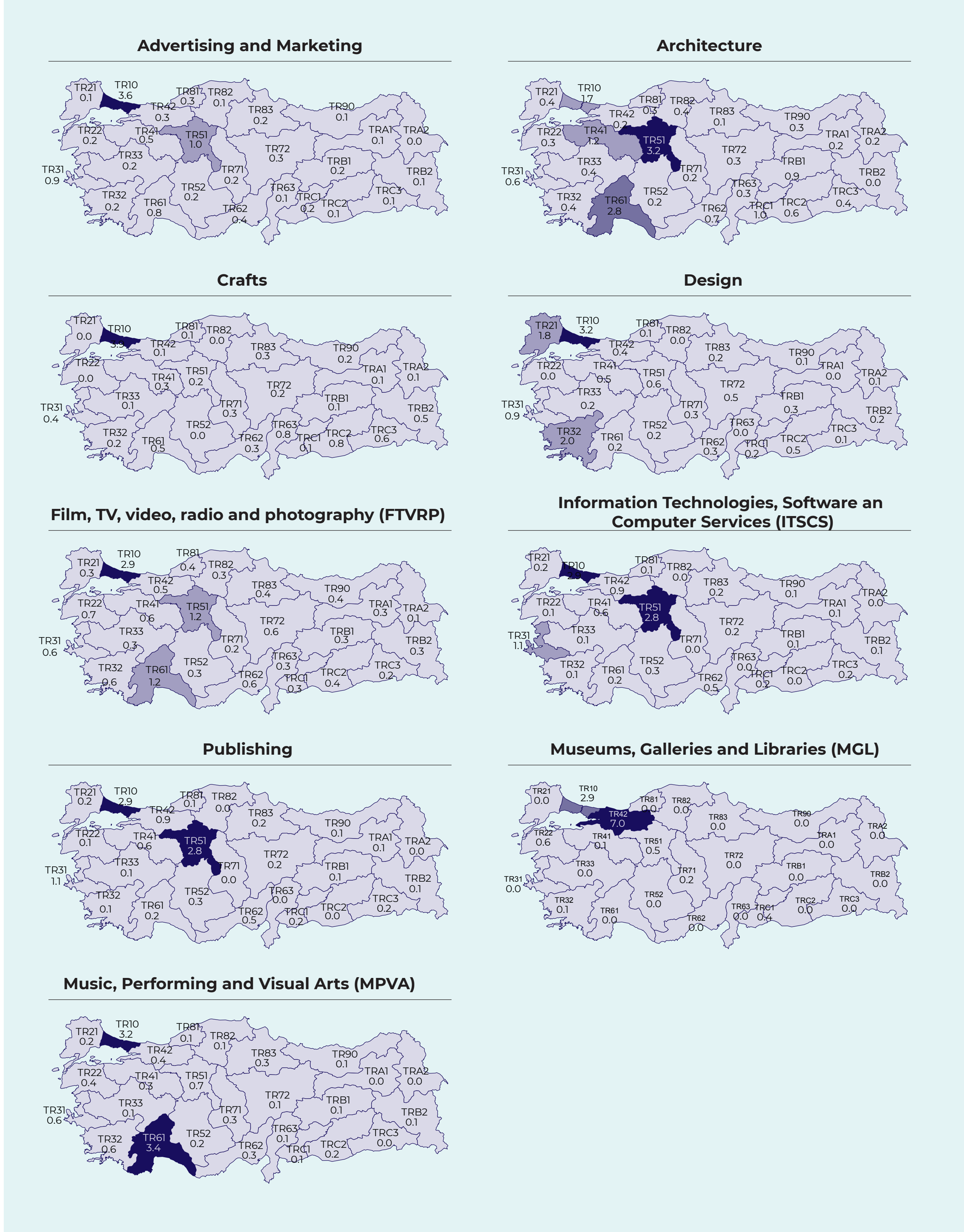
The LQ values of nine main creative industries are presented in Figure 2.6. On the maps in the figure, the dark colours indicate in which regions the industry in question displayed specialisation. Darker colours indicate that LQ increased. The TR10 (İstanbul) region exceeded the critical value in all main groups of creative industries and thus displayed specialisation in all of them. The TR51 (Ankara) region displayed localisation in five out of nine industries (Advertising and Marketing, Architecture, FTVRP, ITSCS and Publishing). The TR31 (İzmir) region displayed specialisation in only one industry (ITSCS). However, the specialisation degree in this industry displayed by Ankara and İstanbul regions was almost three times that of İzmir. The TR61 (Antalya, Isparta, Burdur) region displayed specialisation in two main creative industry groups (Architecture and FTVRP). .

Figure 2.7: NUTS-2 Regions Displaying Specialisation in Main Creative Industries, 2015



Source: Calculated by authors using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.

Figure 2.6: Specialisation in Main Creative Industries, 2015



Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.

Comparison of the Years 2010 and 2015

Between 2010 and 2015, the specialisation degrzee of İstanbul in the design, ITSCS, publishing, MGL and MPVA activities declined. There is no change during the same period in the creative industries with specialisation in Ankara, but the specialisation degree of all industries decline. While crafts had been one of the industries that TR61 region displayed specialisation in in 2010, no specialisation could be defined in this industry as of 2015. In place of that, the formerly non-specialised FTVRP industry become a specialisation (see Table 2.7).

While İzmir displayed specialisation only in "Advertising and Marketing" in 2010, the specialisation in this industry disappeared in 2015. However, it gained specialisation in the "Information Technologies, Software and Computer Services" by 2015. During these five years, a sector-based change occurred in regards to the specialisation of İzmir.

Table 2.9: The Location Quotieznts of Sub-Creative Industries, 2015

	3212	5811	5812	5813	5814	5819	5821	5829	5911	5912	5913	5914	5920	6201	6202
TR10	3,93	3,10	3,23	1,67	3,24	1,98	4,50	3,59	4,39	3,94	4,53	1,78	4,11	2,52	3,61
TR21	0,00	0,04	0,00	0,46	0,44	0,30	0,00	0,00	0,04	0,13	0,00	0,56	0,08	0,14	0,21
TR22	0,00	0,25	0,00	1,20	0,19	0,39	0,17	0,00	0,00	0,00	0,00	0,58	0,12	0,10	0,20
TR31	0,39	0,68	0,43	1,04	0,44	1,83	0,14	0,27	0,16	0,17	0,00	1,46	0,64	1,37	0,55
TR32	0,21	0,02	0,00	0,53	0,27	0,21	0,18	0,04	0,04	0,04	1,48	1,03	0,51	0,08	0,11
TR33	0,11	0,00	0,00	0,90	0,05	0,38	0,00	0,02	0,10	0,00	0,00	0,44	0,03	0,07	0,00
TR41	0,33	0,30	2,33	1,06	0,31	0,20	0,00	0,02	0,03	0,03	0,26	0,86	0,06	0,64	0,71
TR42	0,10	0,02	0,00	0,58	0,26	0,73	0,15	0,96	0,06	0,02	0,00	0,87	0,08	1,10	0,58
TR51	0,23	4,24	0,00	1,07	2,69	4,30	0,28	2,72	1,24	1,96	0,05	1,31	0,78	3,41	1,68
TR52	0,04	0,03	0,00	0,72	0,06	0,15	0,13	0,00	0,10	0,03	0,00	0,49	0,06	0,39	0,14
TR61	0,54	0,04	0,00	0,75	0,17	0,51	0,09	0,06	0,09	0,96	0,36	1,30	0,11	0,22	0,16
TR62	0,25	0,18	0,00	1,24	0,12	0,30	0,08	0,05	0,05	0,05	0,04	0,66	0,04	0,73	0,04
TR63	0,79	0,05	0,00	0,81	0,01	0,31	0,00	0,00	0,00	0,35	0,00	0,84	0,05	0,05	0,02
TR71	0,33	0,01	0,00	1,29	0,06	0,06	0,79	0,00	0,01	0,00	0,00	0,51	0,10	0,03	0,01
TR72	0,21	0,07	0,00	0,48	0,07	0,11	0,00	0,14	0,01	0,00	0,00	0,95	0,18	0,12	0,23
TR81	0,12	0,00	0,00	0,83	0,44	0,08	0,00	0,00	0,00	0,06	0,00	0,64	0,00	0,07	0,09
TR82	0,00	0,02	0,00	0,65	0,18	0,00	0,00	0,00	0,01	0,00	0,00	0,05	0,00	0,02	0,01
TR83	0,27	0,03	0,00	0,89	0,12	0,21	0,00	0,02	0,00	0,00	0,00	0,67	0,11	0,28	0,11
TR90	0,23	0,01	0,00	1,05	0,45	0,64	0,00	0,53	0,06	0,00	0,00	0,50	0,00	0,11	0,04
TRA1	0,12	0,01	0,00	0,55	0,21	0,16	0,00	0,00	0,00	0,00	0,00	1,58	0,05	0,09	0,05
TRA2	0,09	0,03	0,00	0,42	0,03	0,08	0,00	0,00	0,00	0,00	0,00	0,16	0,00	0,02	0,03
TRB1	0,05	0,29	0,00	0,59	0,51	0,00	0,00	0,00	0,07	0,08	0,00	0,44	0,06	0,07	0,16
TRB2	0,49	0,08	0,00	0,49	0,01	0,00	0,18	0,00	0,01	0,00	0,00	0,55	0,03	0,05	0,09
TRC1	0,12	0,01	0,00	0,86	0,33	0,29	0,58	0,00	0,09	0,00	0,00	0,40	0,02	0,11	0,41
TRC2	0,84	0,12	7,28	0,55	0,24	0,56	0,39	0,00	0,11	0,06	0,00	0,63	1,06	0,03	0,03
TRC3	0,58	0,01	0,00	0,63	0,50	0,31	0,00	0,00	0,01	0,41	0,00	0,28	0,09	0,01	0,54

Source: Calculated by the authors using TURKSTAT's Annual Industry and Service Statistics 2009-2015 Micro Dataset and Labour Statistics.

Note: Values marked with colour are values that exceed the critical value.

Table 2.9: Location Quotients of Sub-Creative Industries , 2015 (continued)

	7021	7111	7311	7312	7410	7420	7430	8552	9001	9002	9003	9004	9101	9102
TR10	4,30	1,71	3,50	4,10	3,18	1,62	3,18	1,90	2,90	3,79	1,88	4,49	2,34	4,04
TR21	0,02	0,44	0,10	0,54	1,77	0,55	0,02	0,05	0,17	0,03	1,59	0,02	0,00	0,00
TR22	0,01	0,34	0,20	0,84	0,01	1,39	0,08	1,81	0,29	0,06	0,20	0,09	0,00	2,04
TR31	0,79	0,61	0,96	0,00	0,90	0,83	0,57	1,13	0,69	0,16	0,93	0,24	0,00	0,13
TR32	0,06	0,43	0,17	0,05	1,95	0,89	0,40	0,29	1,00	0,10	0,44	0,00	0,00	0,16
TR33	0,00	0,43	0,18	0,43	0,18	0,42	0,00	0,00	0,13	0,07	0,20	0,00	0,00	0,00
TR41	0,15	1,22	0,51	0,00	0,48	1,03	0,87	0,27	0,15	0,41	1,53	0,04	0,06	0,07
TR42	0,00	0,21	0,32	0,09	0,40	0,79	1,11	2,97	0,01	0,04	0,53	0,17	10,19	0,00
TR51	0,34	3,17	1,08	0,90	0,57	1,10	1,93	1,67	0,68	0,40	1,43	0,19	0,16	1,33
TR52	0,00	0,23	0,20	0,23	0,16	0,55	0,29	0,00	0,10	0,00	2,23	0,02	0,00	0,00
TR61	0,64	2,78	0,77	0,00	0,18	2,31	0,57	1,20	5,60	3,84	2,37	0,31	0,04	0,00
TR62	0,39	0,74	0,46	0,00	0,33	1,21	0,00	0,70	0,02	0,21	0,45	0,99	0,00	0,00
TR63	0,04	0,34	0,06	0,29	0,00	0,37	0,27	0,21	0,04	0,00	0,71	0,04	0,00	0,00
TR71	0,73	0,18	0,16	0,06	0,28	0,34	0,33	0,83	0,41	0,04	0,15	0,03	0,08	0,36
TR72	0,01	0,30	0,36	0,00	0,49	1,10	0,23	0,25	0,08	0,01	0,76	0,00	0,00	0,00
TR81	0,04	0,33	0,26	0,08	0,13	0,68	0,12	0,00	0,08	0,05	0,10	0,00	0,00	0,00
TR82	0,00	0,37	0,05	0,76	0,01	0,60	0,00	0,00	0,10	0,00	0,14	0,00	0,00	0,00
TR83	0,00	0,07	0,21	0,06	0,18	0,76	0,00	2,27	0,12	0,09	0,40	0,00	0,00	0,00
TR90	0,04	0,30	0,15	0,12	0,13	0,64	0,21	0,42	0,06	0,00	0,15	0,04	0,04	0,00
TRA1	0,00	0,24	0,08	1,04	0,03	0,30	0,00	0,14	0,00	0,00	0,33	0,00	0,00	0,00
TRA2	0,00	0,20	0,03	0,00	0,08	0,18	0,03	0,00	0,04	0,00	0,00	0,00	0,00	0,00
TRB1	0,00	0,93	0,20	0,11	0,28	0,57	0,06	0,33	0,00	0,00	0,28	0,00	0,00	0,00
TRB2	0,00	0,04	0,07	0,22	0,19	0,52	0,00	0,12	0,01	0,00	0,82	0,00	0,00	0,00
TRC1	0,00	0,97	0,21	0,22	0,20	0,61	0,50	0,00	0,23	0,01	0,28	0,04	0,00	1,20
TRC2	0,01	0,55	0,08	0,00	0,46	0,61	0,00	0,00	0,13	0,00	0,05	0,00	0,05	0,00
TRC3	0,02	0,36	0,11	0,17	0,10	0,39	0,33	0,13	0,02	0,00	0,10	0,04	0,00	0,00

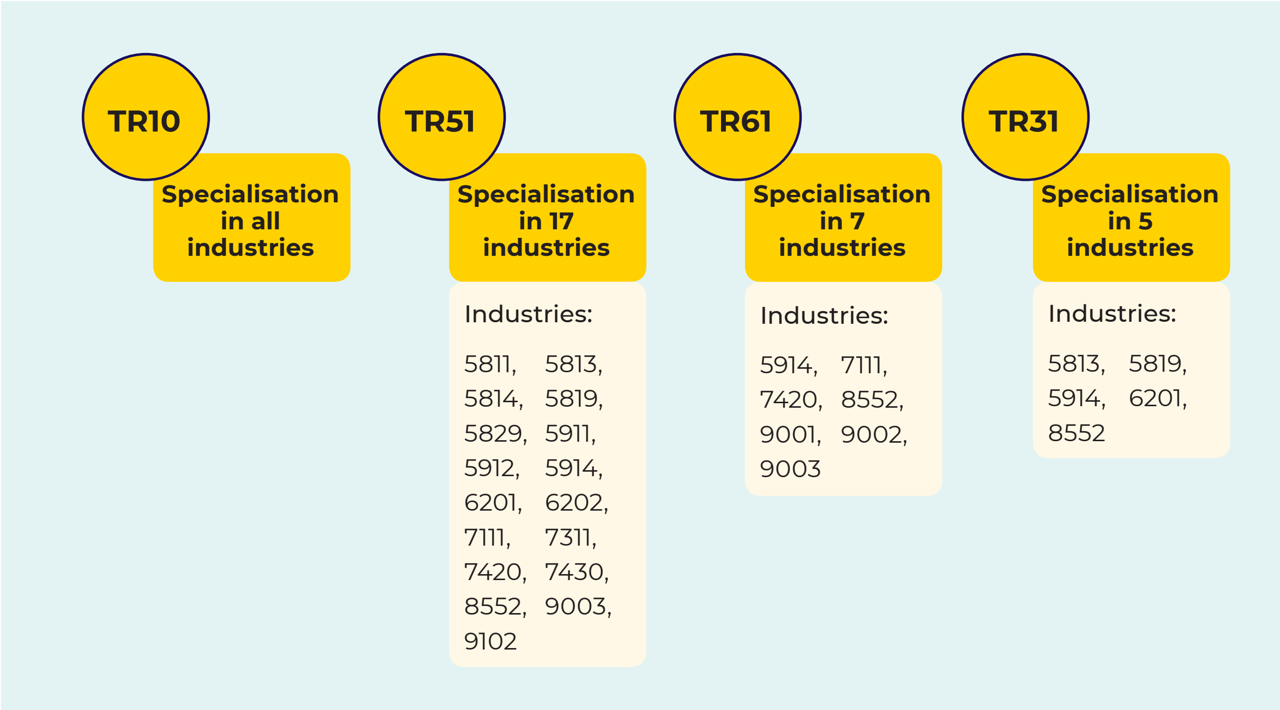
Source: Calculated by the authors using TURKSTAT's Annual Industry and Service Statistics 2009-2015 Micro Dataset and Labour Statistics.

Note: Values marked with colour are values that exceed the critical value.

Specialisation in Sub-Creative Industries

Table 2.9 shows the LQs of all creative industries in NUTS-2 regions in 2015 (for 2010, see Appendix Tables 2.8 and 2.9). TR10 (İstanbul) displayed specialisation in all creative industries, TR51 (Ankara) displayed specialisation in 17 creative industries, TR61 (Antalya, Isparta, Burdur) in seven creative industries, and TR31 (İzmir) displayed specialisation in five creative industries.

Figure 2.8: Industries Displaying Specialisation in TR10, TR51, TR61 and TR31 Regions



Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.

TR52, TR71, TR72, TR83, TR90 and TRC1 regions each displayed specialisation in only one industry. TR33, TR63, TR81, TR82, TRA2, TRB1, TRB2 and TRC3 regions had no specialisation in any creative industries.

he creative industries with the highest specialisation are: publishing of newspapers (eight regions), cultural education (seven regions) and photographical activities (seven regions). In regards to manufacture of jewellery and related articles (3212), publishing computer games (5821), public relations and communication activities (7021) and operation of arts facilities (9004), no region other than İstanbul has specialisation.

5813	· Specialisation in 8 regions
8552	· Specialisation in 7 regions
7420	· Specialisation in 7 regions
3212	· Specialisation only in TR10 region
5821	· Specialisation only in TR10 region
7021	· Specialisation only in TR10 region
9004	· Specialisation only in TR10 region

2.4.3. Creative Spillovers and Co-Locationn)

The creative industries have high potential for innovation and spillover. While these industries provide a direct contribution to the creativity capacity of the region in which they operate, they also provide indirect contributions to the economy by way of spillover effects. Therefore, a creative spillover exists in regions with creative industries. This spillover may be in the form of knowledge, products or networks. Knowledge and network spillovers are more likely between companies located close to each other. The reason behind this is that specialist knowledge conducive to innovation is often hard to 'codify' into easily understandable instructions and information. Effective communication and trust is needed for this to spread between companies. This trust emerges through face-to-face interactions. This makes it hard for knowledge to be transmitted to remote places, making knowledge 'geographically sticky'. Thus, companies for which knowledge spillover is likely are inclined to locate themselves in the same places (Chapain et al., 2010).

To find evidence of creative spillover at regional level (whether or not there is co-location among creative industries) and between creative industries and other innovative industries (high technology industries and knowledge intensive business services (KIBS) they must be analysed statistically. To that end, the correlation of the LQs can be analysed using the Spearman correlation. These findings are not proof of creative spillover but rather an indicator that it might occur. Similar analyses were conducted for various countries by De Propris et al. (2009), Chapain (2010) and Serra (2015).

A positive and statistically significant coefficient would indicate that A and B industries tend to co-locate in the same region. In other words, this coefficient points out that in a region where industry A has a strong presence, industry B would also have a strong presence. The value of the correlation coefficient would indicate the degree of co-location. A negative and statistically significant correlation coefficient would indicate that those locations where one industry tends to agglomerate strongly, shows weak agglomeration of the other.

Co-location Among Creative Industries

In the previous chapters, preliminary findings indicated that various creative industries displayed co-specialisation in certain regions. Correlation analysis presented statistical evidence in support of these preliminary findings.

In Table 2.10, correlation analysis of the LQ values on the main creative industry groups is provided. The coefficients inside the coloured cells are statistically significant. Blue, red and yellow point to high-, medium- and low-level correlation between industries. The advertising and marketing industry displays co-location with all creative industries except crafts. However, there are differences between the degrees of these co-locations. The industries with high levels of correlation with advertising and marketing are: FTVRP, ITSCS, publishing and MPVA. The industries with medium levels of correlation are: Design and MGL. In regions where advertising and marketing display specialisation, architectural activities also display specialisation. However, the correlation between these two is at a lower level compared to other industries.

Table 2.10: Correlation of Main Creative Industry Groups at NUTS-2 Regions Level (Co-Location), 2015

	Advertising and Marketing	Architecture	Crafts	Design: Product, Graphic and Fashion Design	Film, TV, Video, Radio and Photography (FTVRP)	Information Technologies, Software and Computer Services (ITSCS)	Publishing	Museums, Galleries and Libraries (MGL)	Music, Performing and Visual arts (MPVA)
Advertising and Marketing	1,00								
Architecture	0,47	1,00							
Crafts	0,22	0,20	1,00						
Design: Product, Graphic and Fashion Design	0,53	0,45	0,24	1,00					
Film, TV, Video, Radio and Photography	0,79	0,54	0,22	0,52	1,00				
Information Technologies, Software and Computer Services	0,78	0,45	0,16	0,52	0,71	1,00			
Publishing	0,72	0,45	0,29	0,20	0,52	0,53	1,00		
Museums, Galleries and Libraries	0,53	0,35	0,19	0,44	0,54	0,43	0,60	1,00	
Music, Performing and Visual arts	0,71	0,42	0,30	0,62	0,77	0,62	0,57	0,71	1,00

Source: Calculated by the authors using TURKSTAT's Annual Industry and Service Statistics 2009-2015 Micro Dataset and Labour Statistics.

Note: The coefficients inside the coloured cells in the table are statistically significant at 5% level. High correlation represents a coefficient between 0.89 and 0.70, medium correlation represents a coefficient between 0.69 and 0.50 and low correlation represents a coefficient between 0.49 and 0.30.

Usually, there is low correlation between **architecture** and the other creative industries. The only medium level correlation is with film, TV, video, radio and photography.

Crafts co-locates with none of the other creative industries.

In regions where **design** displays specialisation FTVRP, ITSCS and MPVA activities tend to also display specialisation. The co-location correlation between the design industry and these industries is at medium level. The design industry co-locates with industry group of MGL activities at low levels.

A high level of correlation was found between **film, TV, video, radio and photography** and ITSCS and MPVA activities.

In regions where **museums, galleries and libraries** displayed specialisation, MPVA activities also displayed high levels of specialisation.

Table 2.11 presents detailed correlation analysis for the creative industries, which indicate that correlation among creative industries usually remains at a medium level. High levels of correlation were found between a few industries.

There was no statistically significant correlation between crafts and any other main creative industry group. However, the detailed analysis results in Table 2.11 indicate medium levels of co-location between crafts (3212) and publishing of directories and mailing lists (5812) and public relations and communication activities (7021). Furthermore, low levels of correlation were found to exist between crafts and the industries coded 5912, 5914 and 5920.

There are also negative correlation coefficients, as shown in Table 2.11. However, all of the negative coefficients were found to be statistically insignificant. Thus, there is no statistical evidence that one creative industry displayed weak specialisation in a region where another creative industry displayed strong specialisation.

Table 2.11: Correlation of Creative Industries at NUTS-2 Regions Level (Co-Location), 2015

NACE	3212	5811	5812	5813	5814	5819	5821	5829	5911	5912	5913	5914	5920	6201	6202	7021	7111	7311	7312	7410	7420	7430	8552	9001	9002	9003	9004	9101	9102
3212	1,00																												
5811	0,27	1,00																											
5812	**0,52**	**0,52**	1,00																										
5813	0,27	0,20	0,24	1,00																									
5814	0,04	0,19	0,32	0,22	1,00																								
5819	0,35	0,28	0,37	**0,39**	**0,41**	1,00																							
5821	0,30	0,28	0,31	0,31	0,11	0,33	1,00																						
5829	0,29	0,32	0,25	0,36	0,32	**0,63**	0,20	1,00																					
5911	0,19	0,34	**0,45**	0,26	**0,42**	**0,56**	**0,50**	**0,51**	1,00																				
5912	**0,44**	**0,46**	0,35	0,14	**0,52**	**0,49**	0,15	0,27	**0,45**	1,00																			
5913	0,37	**0,43**	0,31	0,34	0,28	0,32	0,33	**0,57**	0,38	**0,50**	1,00																		
5914	**0,42**	**0,44**	0,37	0,18	0,21	**0,47**	0,26	**0,62**	0,19	**0,41**	**0,55**	1,00																	
5920	**0,40**	**0,55**	**0,47**	0,15	0,29	**0,50**	**0,51**	**0,42**	**0,39**	**0,48**	**0,40**	**0,61**	1,00																
6201	0,05	**0,48**	0,26	**0,41**	0,34	**0,53**	0,25	**0,74**	**0,51**	0,31	**0,49**	**0,65**	**0,41**	1,00															
6202	0,10	**0,48**	0,31	0,13	**0,63**	**0,41**	0,26	**0,46**	0,37	**0,46**	0,38	**0,45**	**0,52**	**0,67**	1,00														
7021	**0,57**	0,36	**0,40**	**0,55**	0,34	**0,44**	0,31	**0,48**	0,28	**0,60**	**0,63**	**0,54**	**0,46**	0,36	0,26	1,00													
7111	0,19	**0,47**	**0,42**	0,33	**0,57**	**0,45**	0,20	0,33	**0,63**	**0,64**	**0,63**	0,27	0,32	0,39	**0,43**	**0,48**	1,00												
7311	0,20	**0,43**	0,30	**0,55**	**0,42**	**0,45**	0,30	**0,71**	**0,50**	**0,40**	**0,56**	**0,59**	**0,47**	**0,83**	**0,69**	**0,51**	**0,52**	1,00											
7312	-0,28	-0,08	-0,22	0,15	0,19	0,12	0,07	-0,16	0,02	0,01	-0,10	-0,07	-0,09	0,01	0,06	-0,22	0,02	-0,18	1,00										
7410	0,23	**0,47**	**0,48**	0,06	**0,41**	0,30	**0,46**	**0,55**	**0,61**	0,38	**0,50**	**0,48**	**0,61**	**0,56**	**0,54**	**0,45**	**0,45**	**0,56**	-0,25	1,00									
7420	0,16	**0,52**	0,30	**0,41**	0,36	**0,47**	0,32	**0,69**	0,36	0,32	**0,65**	**0,57**	**0,50**	**0,69**	**0,56**	**0,50**	**0,53**	**0,80**	-0,20	**0,47**	1,00								
7430	0,28	0,24	0,27	0,33	**0,45**	**0,46**	**0,42**	**0,52**	**0,42**	**0,49**	**0,50**	**0,42**	**0,43**	**0,50**	**0,71**	**0,55**	**0,40**	**0,62**	-0,05	**0,42**	**0,43**	1,00							
8552	0,27	**0,43**	0,09	**0,48**	0,26	**0,48**	0,29	**0,66**	0,13	0,23	**0,41**	**0,60**	**0,56**	**0,60**	**0,46**	**0,45**	0,12	**0,59**	-0,05	0,32	**0,60**	**0,45**	1,00						
9001	0,19	0,24	0,37	**0,42**	0,22	**0,42**	**0,52**	0,34	**0,43**	0,28	**0,52**	0,33	**0,56**	0,35	0,29	**0,58**	**0,50**	**0,45**	-0,02	**0,45**	**0,50**	**0,49**	0,26	1,00					
9002	0,24	0,35	0,29	**0,57**	0,24	**0,45**	0,31	**0,65**	0,33	0,35	**0,74**	**0,60**	**0,47**	**0,68**	**0,44**	**0,63**	**0,52**	**0,81**	-0,18	**0,54**	**0,75**	**0,48**	**0,58**	**0,68**	1,00				
9003	0,17	**0,53**	0,17	0,11	0,05	0,26	0,20	**0,46**	**0,40**	**0,42**	**0,51**	**0,59**	**0,39**	**0,75**	**0,56**	0,33	0,33	**0,55**	0,09	**0,49**	**0,45**	**0,46**	0,38	0,33	**0,49**	1,00			
9004	0,34	**0,41**	0,24	**0,63**	0,33	**0,70**	**0,40**	**0,53**	**0,43**	**0,51**	**0,47**	0,38	0,32	**0,62**	**0,53**	**0,64**	**0,49**	**0,61**	0,05	0,23	**0,54**	**0,65**	**0,60**	0,37	**0,55**	**0,47**	1,00		
9101	0,38	0,23	**0,43**	0,38	0,32	**0,49**	**0,47**	**0,52**	**0,45**	0,27	**0,44**	0,37	**0,39**	0,37	0,31	**0,44**	0,25	**0,39**	-0,04	**0,40**	0,34	**0,57**	**0,48**	0,32	0,37	0,21	**0,48**	1,00	
9102	0,14	0,35	0,34	**0,57**	0,37	0,32	**0.6755***	0,26	0,29	0,14	**0,45**	0,31	**0,48**	0,35	**0,46**	**0,48**	**0,40**	**0,45**	0,21	**0,41**	**0,41**	**0,60**	**0,40**	**0,70**	**0,53**	0,19	**0,46**	0,35	1,00

Source: Calculated by the authors using TURKSTAT's Annual Industry and Service Statistics 2009-2015 Micro Dataset and Labour Statistics.

Note: The coefficients inside the coloured cells in the table are statistically significant at 5% level. High correlation represents a coefficient between 0.89 and 0.70, medium correlation represents a coefficient between 0.69 and 0.50 and low correlation represents a coefficient between 0.49 and 0.30.

Co-Location Between Creative Industries and Other Industries

Knowledge intensive business services (KIBS) and high technology industries have been selected to determine if there is co-location relationship between them and the creative industries[14]. The reason behind such selection is that these industries have high innovation potential. KIBS generally relate to generating, accumulating and distributing knowledge (Antonelli, 1998). Although there is no standard definition for KIBS, Miles et al. (1995) define three characteristics: i) They are mainly based on professional knowledge (employing significant numbers of scientists, engineers or individuals expert in their respective fields); ii) They are sources of primary knowledge themselves (for instance, reporting or consultancy services) or they utilise knowledge for producing intermediary services (for instance, communication and computer services) for their clients' production processes; iii) They are of importance in regards to competition, and provide services to companies as priority. In short, it is possible to define KIBS as companies whose fundamental activity is providing knowledge intensive services for their clients. As economic units that generate, utilise and transmit innovation, KIBS play an important role in generating, accumulating and distributing social, institutional and organisational innovations. With these features, they also create positives for other actors of economy (Gallego and Maroto, 2015). Where creative sectors display co-location with KIBS and/or high technology industries, the spill-over of innovations to other fields of economy will increase (Chapain et al., 2010). In other words, the creative spillover in the region will be further strengthened, and this, in turn, will be of considerable significance in terms of promoting regional innovation and therefore economic growth.

Table 2.12: Correlation between Main Creative Industry Groups and Other Industries at NUTS-2 Regions Level (Co-Location), 2015

Creative Industries	Industry Displaying High Co-Location	Industry Displaying Medium Co-Location	Industry Displaying Low Co-Location
Advertising and Marketing	*KIBS*		
Architecture			*KIBS*
Crafts			
Design: Product, Graphic and Fashion Design		*KIBS*	
Film, TV, Video, Radio and Photography (FTVRP)	*KIBS*		
Information Technologies, Software and Computer Services (ITSCS)	*KIBS*		*High Technology*
Publishing			
Museums, Galleries and Libraries (MGL)		*KIBS*	
Music, Performing and Visual Arts (MPVA)	*KIBS*		*High Technology*

Source: Calculated by the authors using TURKSTAT's Annual Industry and Service Statistics 2009-2015 Micro Dataset.
Note: All results in the table are statistically significant at 5% level. High correlation represents a coefficient between 0.89 and 0.70, medium correlation represents a coefficient between 0.69 and 0.50 and low correlation represents a coefficient between 0.49 and 0.30.

14 For the scope of KIBS industries, see Schnabl and Zenker (2013); for the scope of high technology industries, see Eurostat https://ec.europa.eu/eurostat/cache/metadata/Annexes/htec_esms_an3.pdf

Table 2.12 presents the results of the correlation analysis conducted to see if there is a co-location relationship between KIBS and high technology industries, and the creative industries. However, it should be noted that co-location between creative industries and these industries does not necessarily mean causality. The reason for co-location of these industries may be the presence of universities or research infrastructure or accumulation of qualified labour (Chapain et al., 2010). The creative industries tend to display co-location more often with KIBS, and less often with high technology industries. A similar result was recorded by Chapain et al. (2010) in the United Kingdom. There are two creative industries that display co-location with high technology industries (information technologies, software and computer services and Music, Performing and Visual arts). However this is a low level correlation. KIBS display high level co-location with four creative industries (advertising and marketing, FTVRP, ITSCS, MPVA) medium level co-location with two creative industries (design and MGL) and low level co-location with one creative industry (architecture). No statistically significant correlation was found between crafts and publishing and either KIBS or high technology industries.

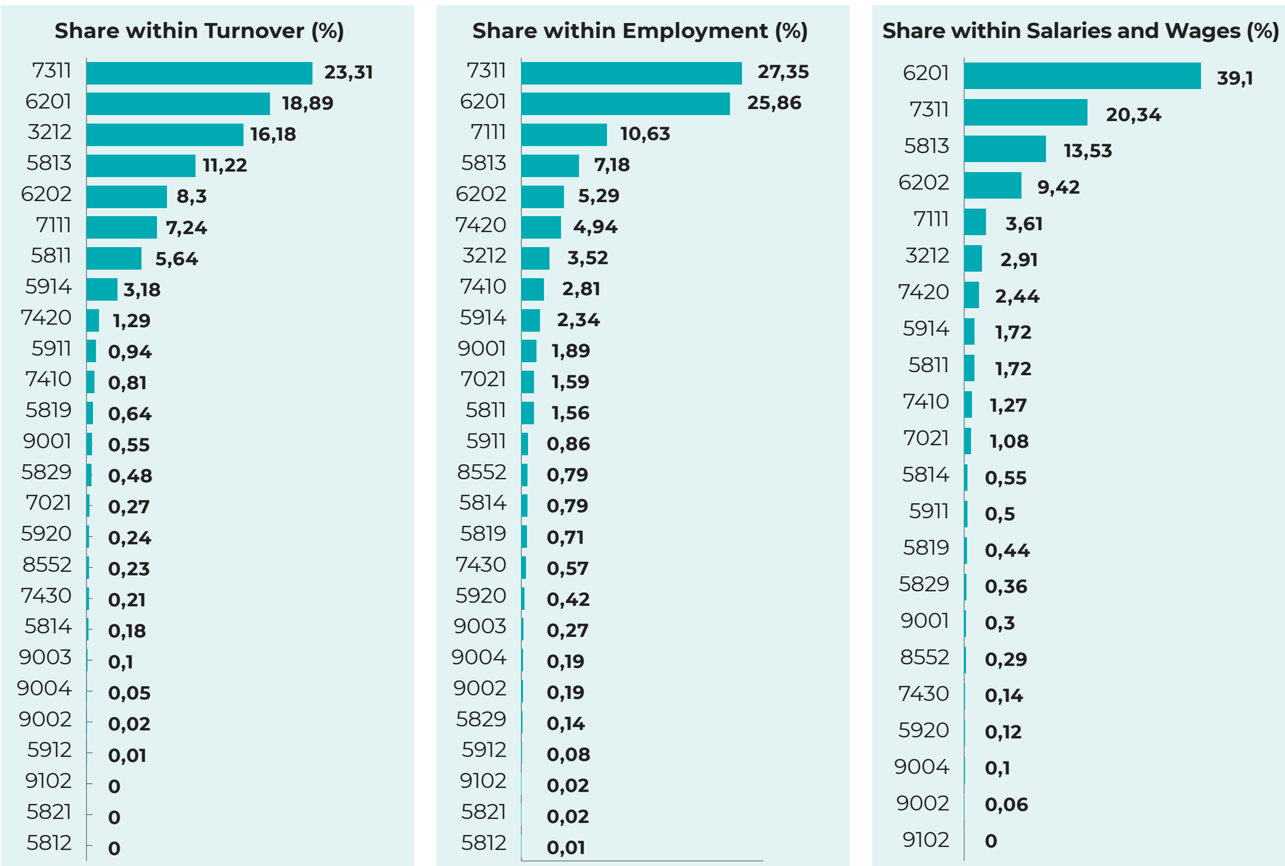
2.5. Creative Industries in İzmir

2.5.1. An Overview of the Creative Industries in İzmir

n 2015, the overall turnover of the creative industries in İzmir was $544 million and the number of employees was 12,971. The shares of the creative industries in İzmir within Turkey's overall creative economy turnover and employment were, respectively, 2.6% and 4.6% (see table 2.8). Their share within the overall turnover in İzmir turnover was 0.6% and their share within overall employment was 0.9%[15] (When evaluating these observations, it should be noted that the share of creative economy within overall Turkey turnover is 2% and its share within overall employment is 1% as of 2017; see Table 2.2).

Graph 2.14 shows the share of each creative industry within the creative economy of İzmir. In terms of turnover, the highest share is advertising agencies (7311) with a value of 23.3%. This is followed by computer programming activities (6201) with a value of 19% and manufacture of jewellery and related articles (3212) with a value of 16%. The total turnover from the five industries with the highest turnover shares (the codes: 7311, 6201, 3212, 5813 and 6202) corresponds to 78% of the turnover generated by İzmir's creative economy.

Graph 2.14: The Share of Creative Industries within the Creative Economy in İzmir (%), 2015



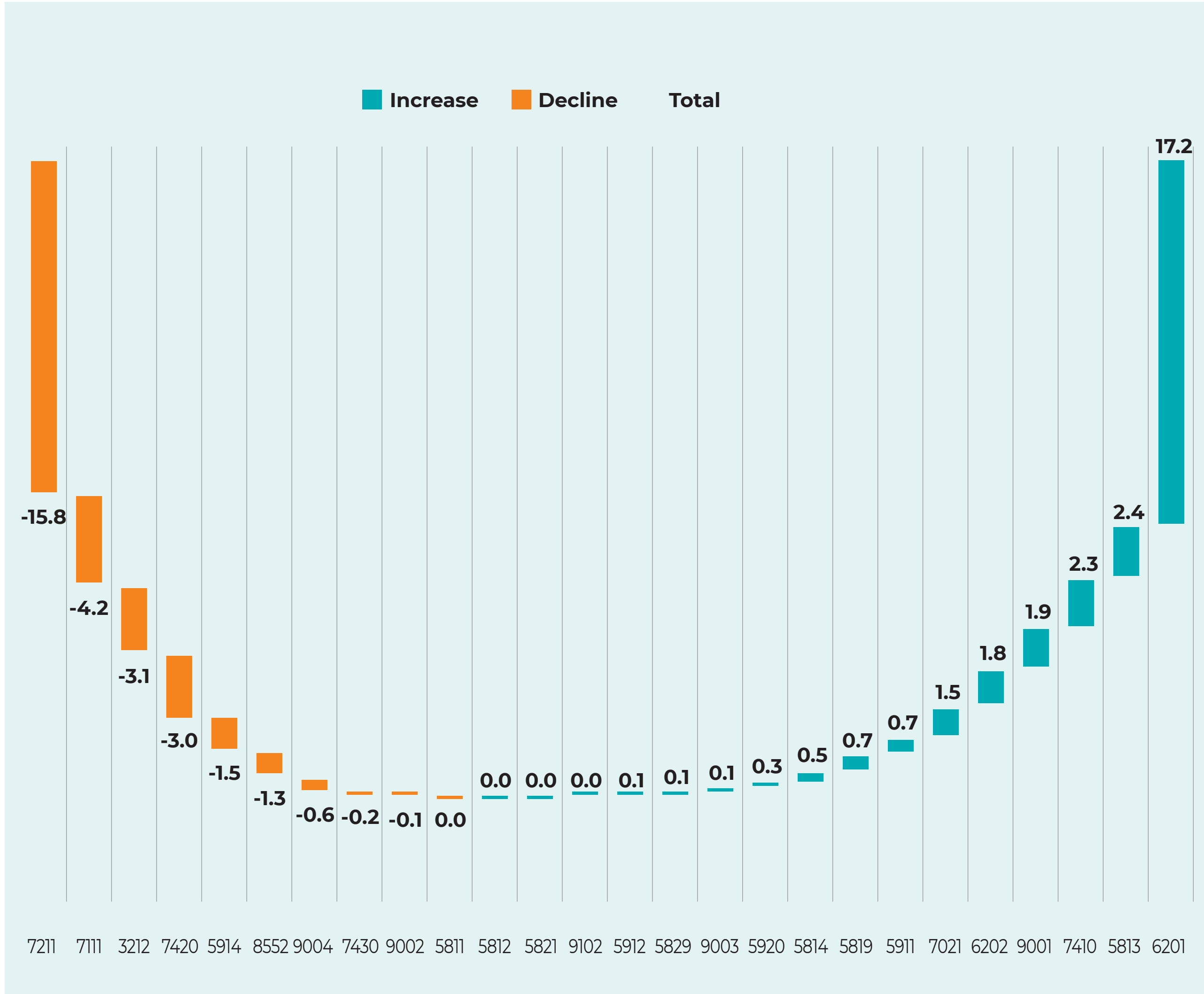
Source: Calculated by the authors using TURKSTAT's Annual Industry and Service Statistics 2009-2015 Micro Data Set.

15 When calculating the overall turnover value for İzmir, only the industries included under TURKSTAT's annual industry and service statistics were taken into account; the industries not included in this dataset were not included in the overall value.

Considering the employment shares of creative industries, the first two places are yet again occupied by advertising agencies (7311) and computer programming activities (6201). While architectural activities (7111) occupied a lower place in turnover ranking, it is third in regards to employment ranking with a share of 10.6%. The five creative industries with the highest employment shares (the codes: 7311, 6201, 7111, 5813 and 6202) correspond to 76% of the creative economy employment in İzmir (see Graph 2.14).

Graph 2.15 shows the change in employment shares of İzmir's creative industries between 2010 and 2015. The sharpest employment decline was in advertising agencies (7311), from 43.2% in 2010 to 27.4% as of 2015, a 16% decrease. The highest increase was in computer programming activities (6201). While this industry had a share of 8.7% in 2010, this rose to 25.9% as of 2015.

Graph 2.15: Change in Employment Share of Creative Industries in İzmir between 2010 and 2015



Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Data Set.

2.5.2. Three Star Analysis of the Creative Industries in İzmir

In this chapter, the clustering potentials of the creative industries of İzmir are investigated using three star analysis. This analysis method considers three fundamental indicators: specialisation, size and dominance, and threshold values for each indicator are used. An industry gains one star for each different threshold value it exceeds. The term “candidate cluster” is used for the industries that gained one star, the term “potential cluster” is used for the industries that gained two stars, and the term “mature cluster” is used for the industries that gained all three stars.

As was previously mentioned, that the critical value for specialisation indicators (location quotient) is 1. However, there are no critical values recognised in literature for the size and dominance, and different critical values are used in different studies. In this study, the critical value for size was recognised as the share of overall employment of creative industries within the overall employment throughout Turkey. This value is calculated approximately as 1% for both 2010 and 2015. A value above this would indicate that the industry in question had a share above Turkey’s average.

$$\textit{Specialisation}=\frac{\textit{The share of region's employment in industry ``i'' within region's overall employment}}{\textit{The share of Turkey's employment in industry ``i'' within Turkey's overall employment}}$$

$$\textit{Size}=\frac{\textit{Region's employment in industry ``i''}}{\textit{Turkey's employment in industry ``i''}}$$

$$\textit{Dominance}=\frac{\textit{Region's employment in industry ``i''}}{\textit{Region's overall employment}}$$

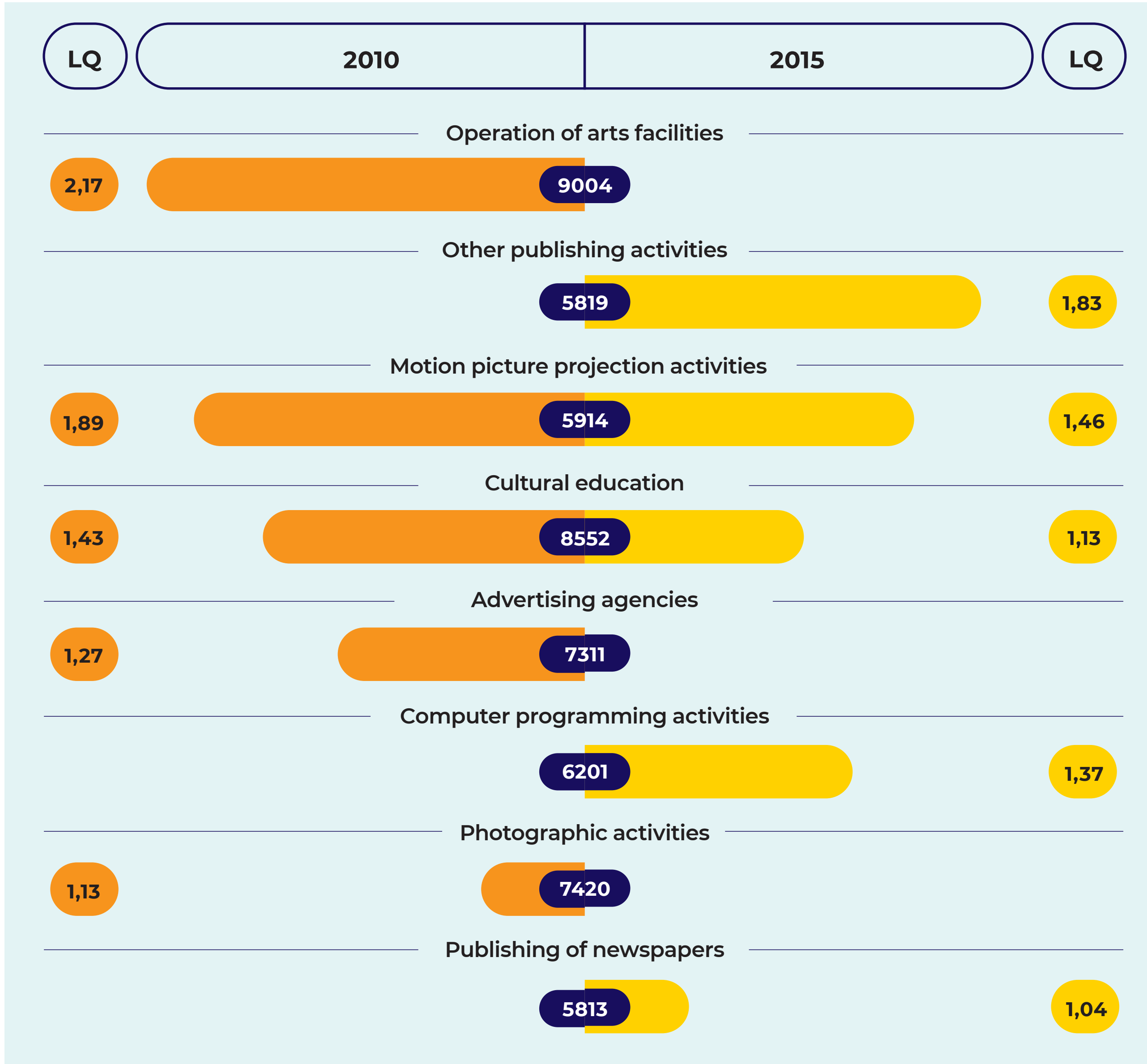
The critical value for the dominance is calculated as follows: initially, an assumption is made that the creative economy shares of NUTS-2 regions within Turkey’s overall creative economy are equal, so the share of each region is 1/26 . When it is also assumed that each industry within the creative economy in a region also has equal share, this share equals 1/31. Consequently, the share of each industry collectively comprising the creative economy in a region was calculated as (1/26)(1/31) = 0.001. This means that the critical value for each industry was determined as 1 per mille.

In Chapter 2.4, we mentioned that İzmir did not display specialisation in the creative economy but came very close to the critical threshold. Below, each of the creative industries in İzmir are analysed one by one for both specialisation and the other two indicators, defining the potential of each creative industry separately. The information to be gathered from this exercise will show which industries should be focused on to develop the creative economy in İzmir.

In this chapter, we start by studying the creative industries where specialisation exists, and then the clustering potentials of creative industries in light of the three star analysis. Figure 2.9 presents the data for which industries İzmir specialised in and the changes over time. While İzmir displayed specialisation in operation of arts facilities (9004), advertising agencies (7311) and photographic activities in 2010, this disappeared as of 2015. İzmir displayed specialisation in 2015 for certain creative industries for which it did not do so previously: other publishing activities (5819), computer programming activities (6201) and publishing of newspapers (5813).

In 2010, İzmir has specialisation in motion picture projection activities (5914) and cultural education activities (8552), and this continued in 2015, albeit with some decline.

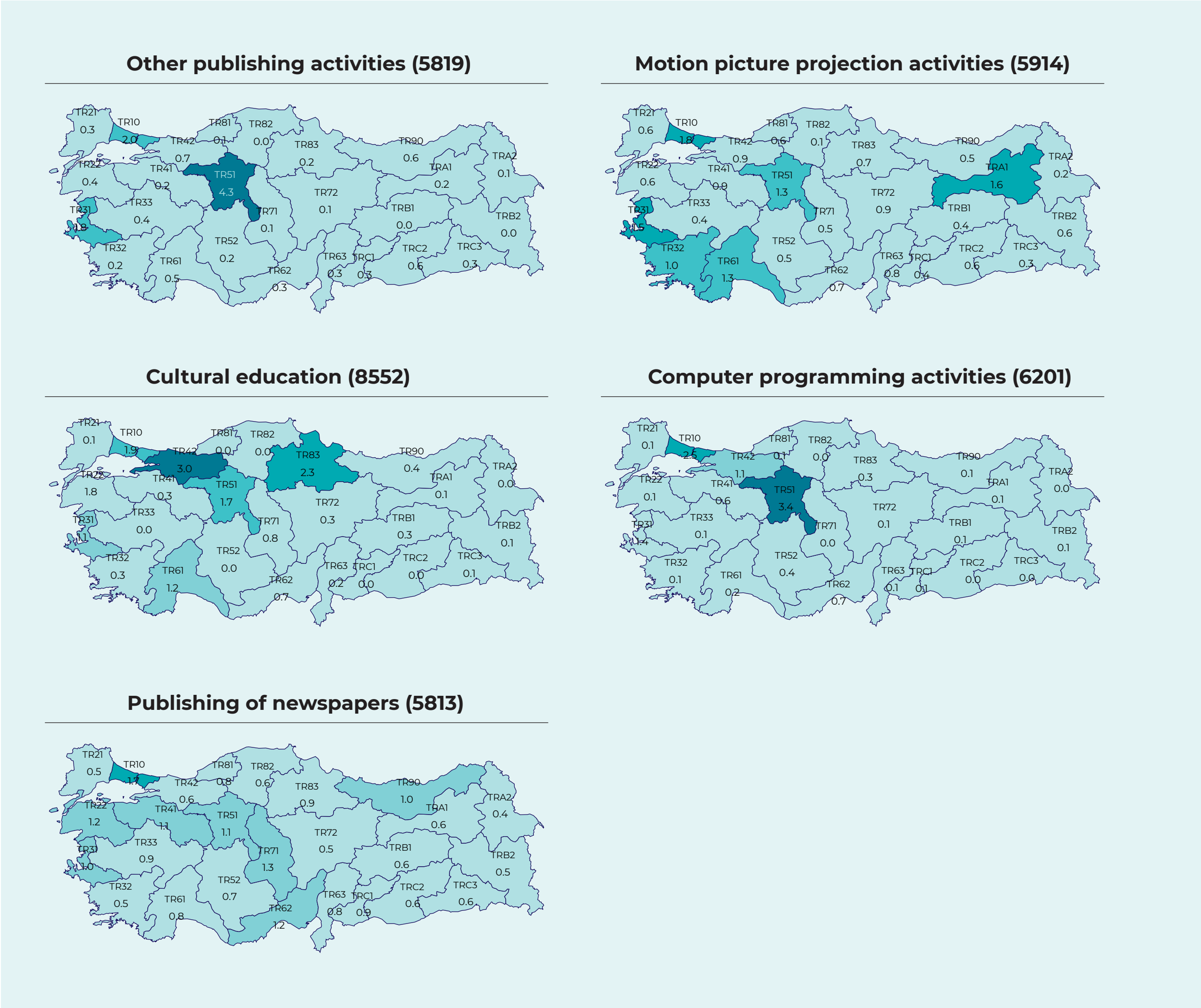
Figure 2.9: The Change in the Sub-Creative Industries for which İzmir Displayed Specialisation



Source: Calculated by authors by using TURKSTAT’s “Annual Industry and Service Statistics 2009-2015” Micro Dataset and Labour Statistics.

The specialisation coefficients of the creative industries for which İzmir displayed specialisation in 2015 have been presented in comparison with the other NUTS-2 regions in Figure 2.10.

Figure 2.10: Relative Status of Creative Industries with Specialisation in İzmir, 2015



Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.

Mature Cluster

Table 2.13 presents the three star analysis results of İzmir for 2015. **Computer programming activities (6201) was the only creative industry in the region with three stars.** It received only one star in 2010, but displayed rapid progress during the five year period to fulfil all three clustering criteria by 2015 (see Table 2.13 and Table 2.14). According to TURKSTAT data, employment in this industry increased more than four times and the number of companies increased more than seven times.

Potential Cluster

Potential clusters in Izmir, which received two stars in 2015, are: Publishing of newspapers (5813), other publishing activities (5819), motion picture projection activities (5914), advertising agencies (7311) and cultural education (8552).

Among the industries that received two stars, advertising agencies have a much higher potential than the others. This was the only industry with mature cluster status in 2010 (see Table 2.13 and Table 2.14). This industry experienced a decline, with employment decreasing by 10% between 2010 and 2015, causing the industry to fail to fulfil the specialisation criterion in 2015 and thus receive only two stars. However, the specialisation coefficient for the year 2015 is still very close to the threshold value of 1. In other words, it is the industry closest to becoming a mature cluster in İzmir. Supporting this industry may rapidly reinstate the industry to its former status.

Table 2.13: Results of Three Star Analysis for the Creative Industries in TR-31 Region, 2015

NACE.Rev.2	TR31-İZMİR	Dominance	Size	Specialisation	Number of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0001	**0,04**	0,79	1
7311	Advertising agencies	**0,0024**	**0,05**	0,96	2
7312	Media representation	0,0000	0,00	0,00	0
	Architecture				
7111	Architectural activities	0,0009	**0,03**	0,61	1
	Crafts				
3212	Manufacture of jewellery and related articles	0,0003	**0,02**	0,39	1
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0002	**0,05**	0,90	1
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0001	0,01	0,16	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,01	0,17	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0002	**0,08**	**1,46**	2
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0004	**0,05**	0,83	1

NACE.Rev.2	TR31-İZMİR	Dominance	Size	Specialisation	Number of Stars
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,01	0,14	0
5829	Other software publishing	0,0000	**0,02**	0,27	1
6201	Computer programming activities	**0,0023**	**0,08**	**1,37**	3
6202	Computer consultancy activities	0,0005	**0,03**	0,55	1
	Publishing				
5811	Book publishing	0,0001	**0,04**	0,68	1
5812	Publishing of directories and mailing lists	0,0000	**0,02**	0,43	1
5813	Publishing of newspapers	0,0006	**0,06**	**1,04**	2
5814	Publishing of journals and periodicals	0,0001	**0,02**	0,44	1
5819	Other publishing activities	0,0001	**0,10**	**1,83**	2
7430	Translation and interpretation activities	0,0000	**0,03**	0,57	1
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,01	0,13	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	**0,04**	0,64	1
8552	Cultural education	0,0001	**0,06**	**1,13**	2
9001	Performing arts	0,0002	**0,04**	0,69	1
9002	Support activities to performing arts	0,0000	0,01	0,16	0
9003	Artistic creation	0,0000	**0,05**	0,93	1
9004	Operation of arts facilities	0,0000	**0,01**	0,24	1

Source: Calculated by the authors using TURKSTAT's Annual Industry and Service Statistics 2009-2015 Micro Dataset and Labour Statistics.

Note: Cells with coloured fonts represent values that exceed critical values.

y: No data.

Table 2.14: Results of Three Star Analysis for the Creative Industries in TR-31 Region, 2010

NACE. Rev.2	TR31-İZMİR	Dominance	Size	Specialisation	Number of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,05	0
7311	Advertising agencies	**0,0030**	**0,07**	**1,27**	3
7312	Media representation	0,0000	0,00	0,00	0
	Architecture				
7111	Architectural activities	0,0010	**0,05**	0,90	1
	Crafts				
3212	Manufacture of jewellery and related articles	0,0005	**0,03**	0,56	1
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	**0,01**	0,16	1
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,05	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0003	**0,11**	**1,89**	2
6010	Radio broadcasting	y	y	y	y
6020	Television programming and broadcasting activities	y	y	y	Y
7420	Photographic activities	0,0006	**0,07**	**1,13**	2
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,06	0
6201	Computer programming activities	0,0006	**0,04**	0,62	1
6202	Computer consultancy activities	0,0002	**0,02**	0,37	1
	Publishing				
5811	Book publishing	0,0001	**0,04**	0,63	1
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0003	**0,05**	0,87	1
5814	Publishing of journals and periodicals	0,0000	**0,02**	0,32	1
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0001	**0,03**	0,47	1
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	**0,01**	0,22	1
8552	Cultural education	0,0001	**0,08**	**1,43**	2
9001	Performing arts	0,0000	0,00	0,01	0
9002	Support activities to performing arts	0,0000	**0,01**	0,15	1
9003	Artistic creation	0,0000	**0,03**	0,56	1
9004	Operation of arts facilities	0,0001	**0,13**	**2,17**	2

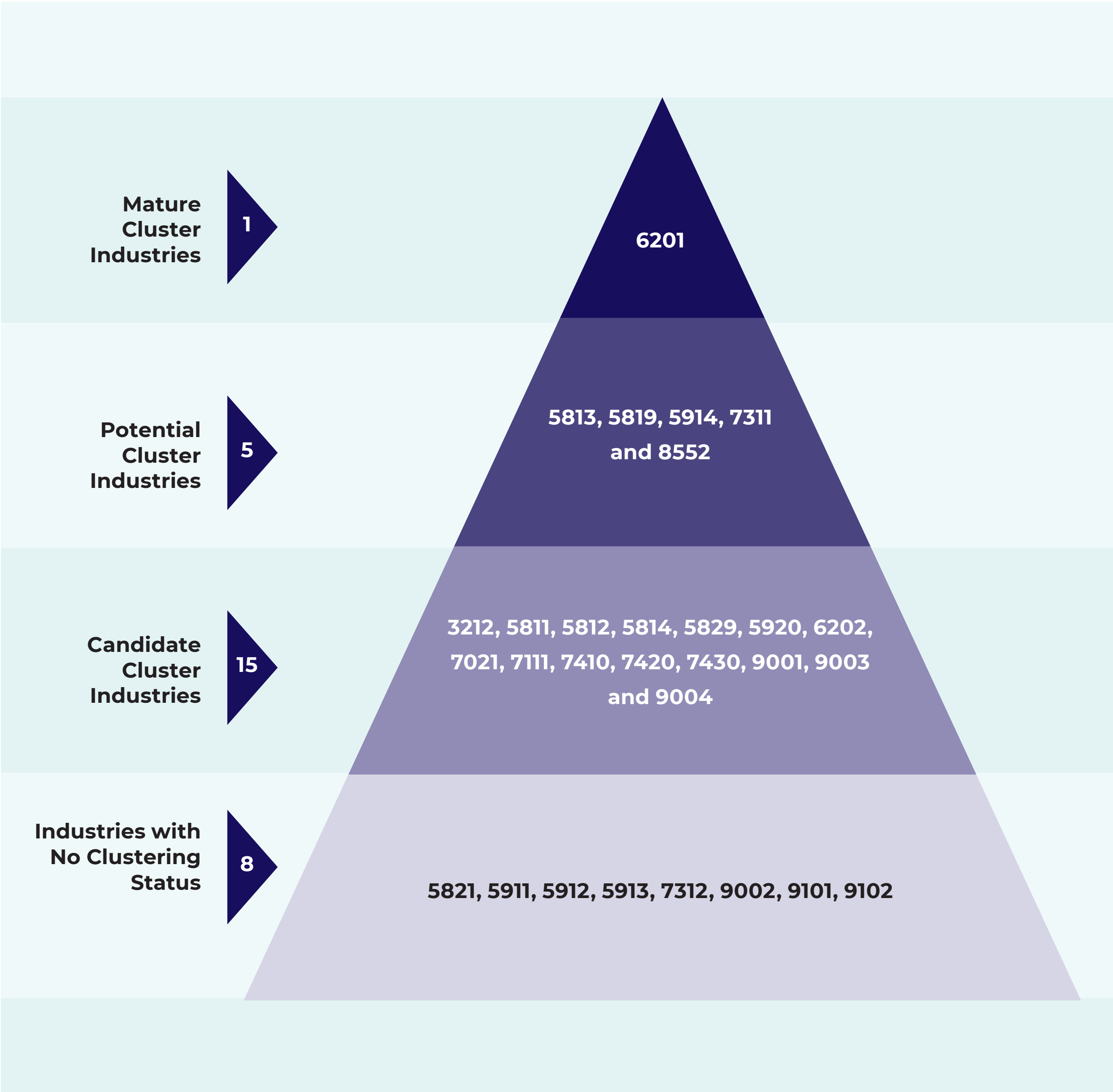
Source: Calculated by the authors by using TURKSTAT's Annual Industry and Service Statistics 2009-2015 Micro Dataset.
Note: Cells with coloured fonts represent values that exceed critical values.

y: No data

In 2010, four industries (5914, 7420, 8552 and 9004) displayed potential cluster status in İzmir by fulfilling only size and specialisation criteria. Among these, motion picture projection activities (5914) and cultural education activities (8552) succeeded in continuing their existing status as of 2015; while photographic activities (7420) and operation of arts facilities activities (9004) could not fulfil the specialisation criterion, thus moving to the group of industries receiving one star.

The decline of the specialisation coefficient, especially in the operation of arts facilities, was steep, from 2.17 back in 2010 to to 0.24 as of 2015. This points to a significant employment decline in this field. There are two industries in İzmir that were not in the potential cluster (two star industries) group back in 2010 but which entered this group in 2015.: publishing of newspapers (5813) and other publishing activities (5819).

Figure 2.11: Clustering Potential of İzmir's Creative Industries, 2015



INFO BOX 2.1: CREATIVE INDUSTRIES IN İZMIR IN 2005

As explained in Chapter 2.1, due to TURKSTAT transitioning from NACE Rev.1 classification to NACE Rev.2 classification in 2009, the possibility for comparing the information on an industry before and after this date disappeared. Although no comparison could be conducted for the following years, the results of the three star analysis conducted on creative industries in İzmir for the year 2005 are presented here. To that end, initially the industries in NACE Rev.1.1 corresponding to the ones defined in NACE Rev.2 classification are obtained, and then the analyses are conducted for the year 2015, and specialisation is observed in nine creative industries in İzmir for the year in question. These industries and their LQ values are provided in the table below.

Table: Creative Industries With Specialisation in İzmir, 2005

NACE Rev.1.1	DESCRIPTION	LQ
2214	Publishing of sound recordings	2.35
2222	Printing n.e.c.	**2.84**
7222	Other software consultancy and supply	1.07
7420	Architectural and engineering activities and related technical consultancy	**1.02**
7440	Advertising	**1.6**
7481	Photographic activities	2.28
7487	Other business activities n.e.c.	**1.46**
8042	Adult and other education n.e.c.	**1.48**
9211	Motion picture and video production	1.06

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2003-2008" Micro Dataset and Labour Statistics.

Among the industries defined above to have specialisation, the industries coded 2222, 7420, 7440, 7487 and 8042 also fulfilled the size and dominance criteria, and gained the status of mature cluster in İzmir as of 2005.

Candidate Cluster

As of 2015, there were 15 industries (see Table 2.13) that fulfilled only the size criteria and received one star in İzmir. Among these, specialised design activities (7410) has significant potential. The specialisation coefficient was calculated as 0.90, close to the critical value. It is possible for this industry to enter the group of potential clusters if this industry is to be enabled to grow by way of appropriate incentives.

Industries Not Displaying Clustering Characteristics

Twelve creative industries failed to fulfil any clustering criteria (thus, no stars) in İzmir in 2010, which decreased to 8 in 2015. The creative industries that failed to fulfil any criteria in İzmir in both 2010 and 2015 were: publishing computer games (5821); motion picture, video and television programme production activities (5911); motion picture, video and television programme post-production activities (5912); motion picture, video and television programme distribution activities (5913); Media representation (7312); library and archives activities (9101) and museums activities (9102).

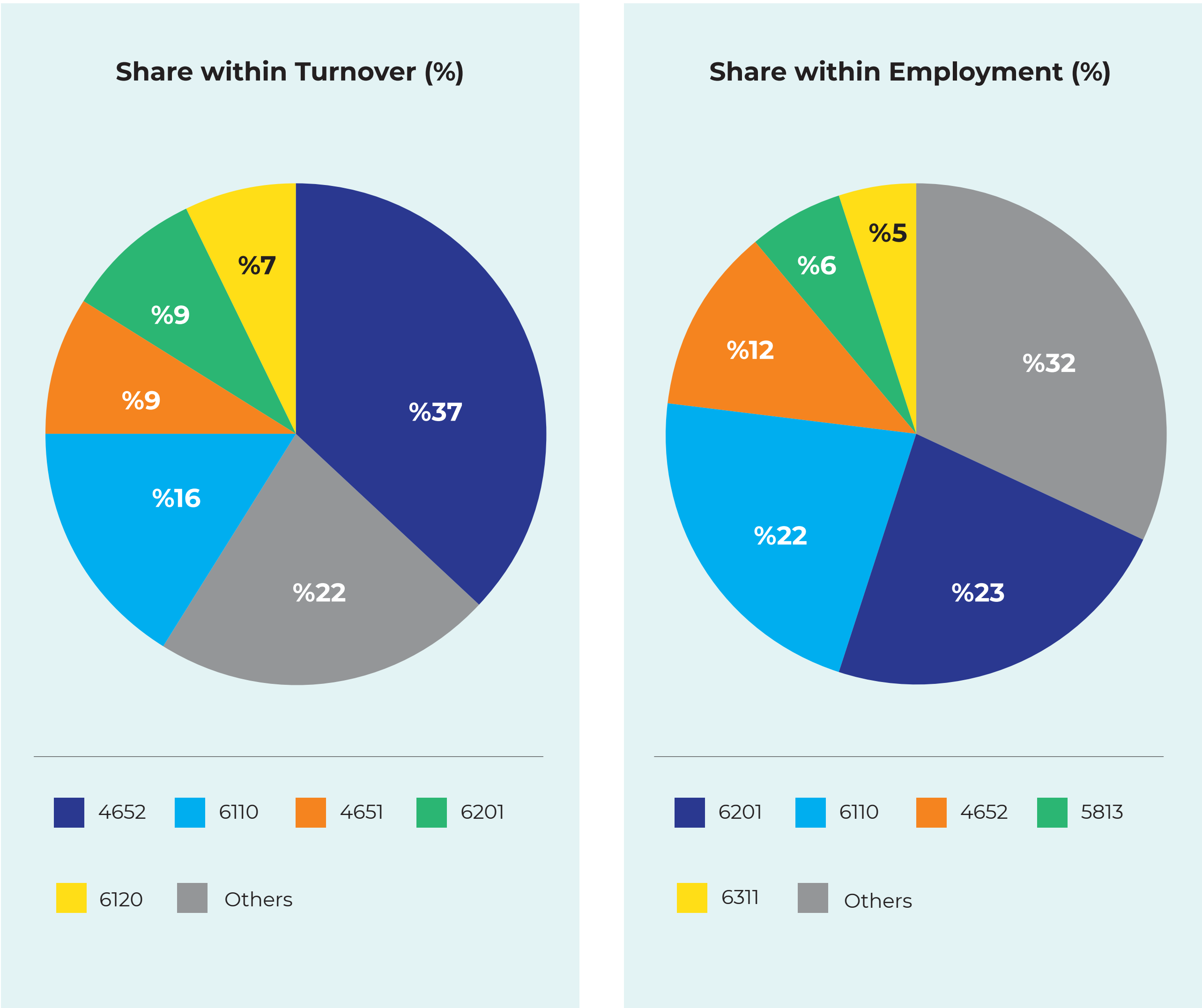
The results of the three star analysis for all NUTS-2 regions in 2010 and 2015 are presented in Tables from 2.10 to 2.59 in the appendix at the end of this report.

2.5.3. Digital Sectors in İzmir

In the first chapter, the relationship between the creative industries and digital sectors was explained. Following this, this chapter presents information and analyses regarding the digital sectors in İzmir in 2015 to determine where İzmir sits in the digital sectors. The digital sectors in İzmir generate 5.1% of Turkey's overall turnover, and employ 2.3% of the employees in this field. These industries generate 1.3% of İzmir's overall turnover, and comprise 1% of overall employment (note that the same ratios for Turkey's economy are 2% and 1%, respectively; see Table 2.2).

Graph 2.16 shows the top five digital sectors in İzmir with the highest share of overall turnover and employment. These five represent 77% of the overall digital economy turnover and 69% of overall digital economy employment. Computer programming activity (6201), included under both creative and digital industries, has a significant place in the digital economy of İzmir (see Graph 2.16) as well as in its creative economy (see Graph 2.14).

Graph 2.16: Shares of Digital Sectors within the Digital Economy of İzmir (%), 2015



Source: Calculated by the authors using TURKSTAT's Annual Industry and Service Statistics 2009-2015 Micro Dataset.

Table 2.14 shows the results of the three star analysis of the digital sectors of İzmir in 2015. At the bottom of the table, the LQ value of the digital economy is given as the sum of all industries. Although an LQ value of 0.92 indicates that İzmir has not specialised in digital economy, it is very close to the threshold. While there is not a specialisation in the digital economy as a whole in İzmir, individual specialisations exist for nine digital sectors: Manufacture of loaded electronic boards (2612), Wholesale of electronic and telecommunications equipment and parts (4652), Publishing of newspapers (5813), Other publishing activities (5819); Motion picture projection activities (5914), Wired telecommunications activities (6110), Computer programming activities (6201), Data processing, hosting and related activities (6311) and Repair of computers and peripheral equipment (9511). The activities coded as 5813, 5819, 5914 and 6201 are also included under creative industries classification.

According to the results in Table 2.15, three industries display mature cluster characteristics, six industries display potential cluster characteristics, and 18 industries display candidate cluster characteristics. There are seven digital sectors in İzmir that failed to fulfil any of the criteria.

Mature Cluster: Wholesale of electronic and telecommunications equipment and parts (4652), Wired telecommunications activities (6110) and computer programming activities (6201).

Potential Cluster: Industries coded as 2612, 5813, 5819, 5914, 6311 and 9511 fulfil the size and specialisation criteria to display potential cluster characteristics.

Candidate Cluster: There are 18 digital sectors that fulfilled only the size criterion and received one star, however activity among these (particularly Web portals (6312)) is very close to the critical value at 0.98. Supporting this activity in İzmir will enable it to move to the potential clusters group. Wireless telecommunications activities (6120) with 0.79 specialisation coefficient and computer facilities management activities (6203) with 0.77 specialisation coefficient have similar conditions.

Table 2.14: Results of Cluster Analysis for the Digital Sectors in TR-31 Region, 2015

NACE.Rev.2	Digital Industries	Dominance	Size	Specialisation	Stars
Manufacture of Electronic Devices and Computers					
2611	Manufacture of electronic components	0.0000	**0.02**	0.31	1
2612	Manufacture of loaded electronic boards	0.0001	**0.09**	**1.58**	2
2620	Manufacture of computers and peripheral equipment	0.0000	**0.02**	0.30	1
2630	Manufacture of communication equipment	0.0000	**0.01**	0.22	1
2640	Manufacture of consumer electronics	0.0000	0.00	0.01	0
2680	Manufacture of magnetic and optical media	0.0000	0.01	0.10	0
Wholesale of Computers and Electronic Devices					
4651	Wholesale of computers, computer peripheral equipment and software	0.0003	**0.02**	0.35	1
4652	Wholesale of electronic and telecommunications equipment and parts	**0.0012**	**0.07**	**1.24**	3
Publishing (excluding translation and interpretation activities)					
5811	Book publishing	0.0001	**0.04**	0.66	1
5812	Publishing of directories and mailing lists	0.0000	**0.02**	0.43	1
5813	Publishing of newspapers	0.0006	**0.06**	**1.04**	2
5814	Publishing of journals and periodicals	0.0001	**0.02**	0.44	1
5819	Other publishing activities	0.0001	**0.10**	**1.84**	2

NACE.Rev.2	Digital Industries	Dominance	Size	Specialisation	Stars
Software Publishing					
5821	Publishing computer games	0.0000	0.01	0.14	0
5829	Other software publishing	0.0000	**0.02**	0.27	1
Film, TV, Video, Radio and Music					
5911	Motion picture, video and television programme production activities	0.0001	0.01	0.16	0
5912	Motion picture, video and television programme post-production activities	0.0000	0.01	0.16	0
5913	Motion picture, video and television programme distribution activities	0.0000	0.00	0.00	0
5914	Motion picture projection activities	0.0002	**0.08**	**1.42**	2
5920	Sound recording and music publishing activities	0.0000	**0.04**	0.66	1
6010	Radio broadcasting	y	y	y	
6020	Television programming and broadcasting activities	y	y	y	
Telecommunication					
6110	Wired telecommunications activities	**0.0021**	**0.11**	**2.03**	3
6120	Wireless telecommunications activities	0.0003	**0.04**	0.79	1
6130	Satellite telecommunications activities	0.0000	0.01	0.11	0
6190	Other telecommunications activities	0.0005	**0.03**	0.62	1
Computer Programming, Consultancy And Related Activities					
6201	Computer programming activities	**0.0023**	**0.08**	**1.36**	3
6202	Computer consultancy activities	0.0005	**0.03**	0.55	1
6203	Computer facilities management activities	0.0000	**0.04**	0.77	1
6209	Other information technology and computer service activities	0.0001	**0.04**	0.64	1
Knowledge Services Activities					
6311	Data processing, hosting and related activities	0.0005	**0.06**	**1.04**	2
6312	Web portals	0.0001	**0.05**	0.98	1
6391	News agency activities	0.0000	**0.01**	0.20	1
6399	Other information service activities n.e.c.	0.0000	**0.02**	0.30	1
Repair of Computers and Communication Equipments					
9511	Repair of computers and peripheral equipment	0.0003	**0.06**	**1.09**	2
9512	Repair of communication equipment	0.0001	**0.03**	0.46	1
Digital Economy (Sum of All Industries)				0,92	

Source: Calculated by the authors using TURKSTAT's Annual Industry and Service Statistics 2009-2015 Micro Dataset and Labour Statistics.

Note: Cells with coloured fonts represent values that exceed critical values.

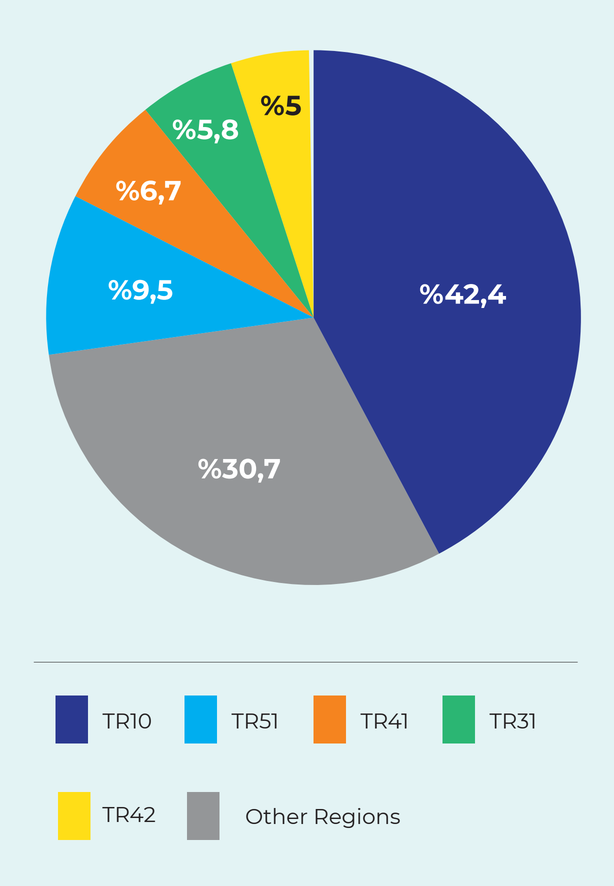
y: No data

1.5.4. Creative and Digital Occupations in İzmir

It was mentioned in the first chapter that a digital transformation is occurring throughout the world, that occupations requiring creative skills will become even more prominent and that individuals specialised in creative occupations will be among those to benefit the most from the digital age. In line with this perspective, we looked at the present situation of İzmir in regards to creative occupations. A study conducted by Nathan et al. (2015) for NESTA was taken into consideration when determining creative occupations. In that study, The Standard Occupational Classification system (SOC2010) was used for occupational classification. However, The International Standard Classification of Occupations (ISCO-08 and ISCO-88) are used in Turkey in line with international standards. Conversion is possible between SOC2010 and ISCO-08, and the creative occupations converted from SOC2010 to ISCO-08 comprise 30 occupations under nine main titles (see Table 2.15)

hose in creative occupations may be employed in a creative industry or a non-creative industry. Thus, taking into account creative occupations in all industries is more accurate when measuring the creative labour potential of a region. According to Social Security Institution (SSI) data, there are approximately 542,000 employees in creative occupations in Turkey as of 2019. More than 40% of these employee works in İstanbul, while 5.8% work in İzmir. With this share, İzmir is the fourth region with the highest number of creative professionals. The TR51 region with 9.5% and TR41 with 6.7% are ahead of İzmir, and it is followed by the TR42 region with 5%. Approximately 70% of those employed in creative occupations work in these five regions (see Graph 2.17).

Graph 2.17: Shares of NUTS-2 Regions within Creative Occupations (%): The First Five Regions

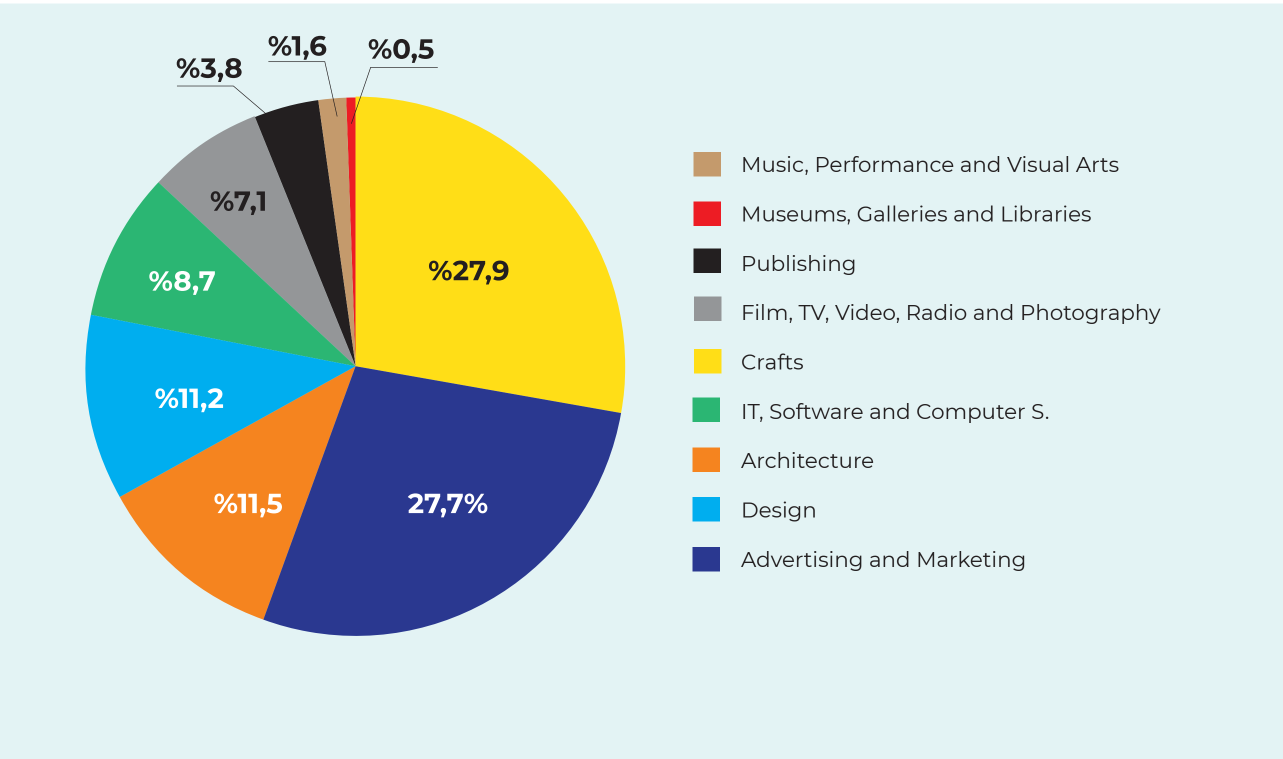


Source: SSI General Directorate

Table 2.15 presents employment in creative occupations in İzmir and Turkey. Employees in creative occupations comprise 1.6% of the country's overall labour. The highest number of employee within the creative occupation groups in Turkey is in crafts, with 142,000 workers. The second highest number of employees is in advertising and marketing, with approximately 135,000 workers.

İzmir has 31,000 employees in creative occupations, comprising 1.6% of the overall regional labour, parallel to Turkey's overall economy. Likewise, crafts and advertising and marketing groups come top of the creative occupations with the highest number of employees in İzmir. The total number of employees in these two fields is more than 50% of the creative professionals in İzmir. The third group with the highest number of employees is design. This, approximately 3,600 employees, is approximately 11.5%. This is followed by architecture with a share of 11.2% (see Graph 2.18). Of all creative professionals in İzmir, 59% work in creative services occupations and 41% work in content production occupations.

Graph 2.17: Shares of Occupation Groups within Creative Occupations in İzmir (%), 2019



Source: SSI General Directorate

Table 2.15 Creative Occupations in İzmir and Turkey, 2019

ISCO - 08	Occupation Description	Number of Employees Working in Creative Occupations in Turkey	Number of Employees Working in Creative Occupations in İzmir	Share of the Creative Occupations in İzmir within Turkey (%)	Share of Occupation within All Creative Occupations in İzmir (%)
Creative Services Occupations					
Advertising and Marketing		**134.814**	**8.661**	**6,4**	**27,7**
1221	Sales and Marketing Managers	79,082	5,607	7,1	17,9
1222	Advertising and Public Relations Managers	2,424	122	5,0	0,4
2432	Public Relations Professionals	28,066	1,701	6,1	5,4
2431	Advertising and Marketing Professionals	25,242	1,231	4,9	3,9
Architecture		**63,389**	**3,492**	**5,5**	**11,2**
2161	Architects	23,823	1,263	5,3	4,0
2164	Town and Traffic Planners	2,108	136	6,5	0,4
3112	Civil Engineering Technicians	37,458	2,093	5,6	6,7
Design: Product, Graphic and Fashion Design		**60,296**	**3,588**	**6,0**	**11,5**
2166	Graphic and Multimedia Designers	24,828	1,628	6,6	5,2
2163	Product and Garment Designers	29,309	1,571	5,4	5,0
3432	Interior Designers and Decorators	6,159	389	6,3	1,2
Information Technologies, Software and Computer Services		**50,979**	**2,731**	**5,4**	**8,7**
1330	Information and Communications Technology Services Managers*	5,977	267	4,5	0,9
2511	System analysts*	7,912	233	2,9	0,7
2512	Software developers*	35,387	2,153	6,1	6,9
2513	Web and Multimedia Developers*	1,703	78	4,6	0,2
Content Production Occupations					
Crafts		**142,445**	**8,714**	**6,1**	**27,9**
7221	Blacksmiths, Hammersmiths and Forging Press Workers	18,710	1,202	6,4	3,8
7318	Handicraft Workers in Textile, Leather and Related Materials	20,181	904	4,5	2,9
7314	Potters and Related Workers	20,428	1,136	5,6	3,6
7522	Cabinet-makers and Related Workers	67,933	4,630	6,8	14,8
7316	Signwriters, Decorative Painters, Engravers and Etchers	15,193	842	5,5	2,7
Film, TV, Video, Radio and Photography		**39,907**	**2,231**	**5,6**	**7,1**
2654	Film, Stage and Related Directors and Producers	4,916	123	2,5	0,4
3431	Photographers	7,365	490	6,7	1,6
3521	Broadcasting and Audiovisual Technicians	27,626	1,618	5,9	5,2

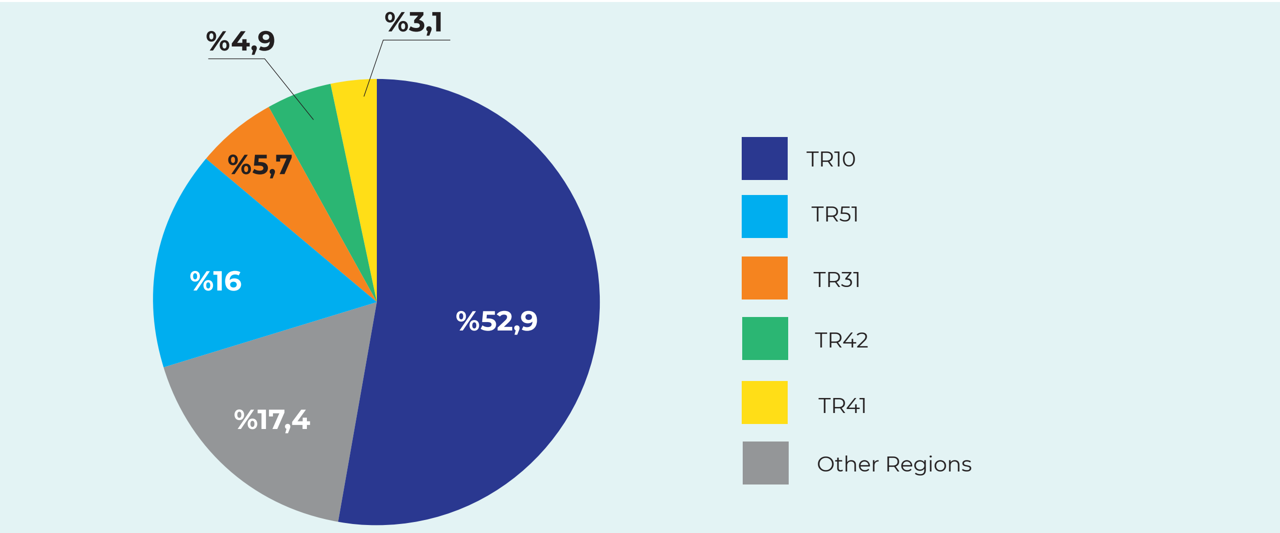
ISCO - 08	Occupation Description	Number of Employees Working in Creative Occupations in Turkey	Number of Employees Working in Creative Occupations in İzmir	Share of the Creative Occupations in İzmir within Turkey (%)	Share of Occupation within All Creative Occupations in İzmir (%)
Publishing		15,894	497	3,1	1,6
2642	Librarians and Related Information Professionals	15,059	441	2,9	1,4
2641	Archivists and Curators	835	56	6,7	0,2
Museums, Galleries and Libraries		**3,369**	**166**	**4,9**	**0,5**
2622	Librarians and Related Information Professionals	1,795	89	5,0	0,3
2621	Archivists and Curators	1,574	77	4,9	0,2
Music, Performing and Visual arts		**30,786**	**1,173**	**3,8**	**3,8**
2651	Visual Artists	1,496	38	2,5	0,1
2655	Actors	20,062	121	0,6	0,4
2355	Other Arts Teachers	2,920	265	9,1	0,8
2652	Musicians, Singers and Composers	6,308	749	11,9	2,4
	TOTAL	**541,879**	**31,253**	**5,8**	**100**

Source: SSI General Directorate

** These occupations are also included in the digital occupations group.*

Creative and digital occupations feed each other, and some creative occupations are also defined as digital occupations. Digital occupations and creative occupations play an important role in the development of a region in today's world. In line with this, we provide information below on digital occupations in İzmir. Digital occupation classification was taken from the DCMS (2016b). As was the case with creative occupations, the ISCO-08 equivalents of the digital occupations defined as per SOC2010 were taken into account. Codes and names of these nine digital occupations, of which four are also creative occupations (occupation codes: 1330, 2511, 2512 and 2513), are presented in Table 2.16.

Graph 2.19: Shares of NUTS-2 Regions within Digital Occupations (%): The First Five Regions



Source: SSI General Directorate

As of 2019, there were 101,000 employees working in digital occupations, of which more than 50% were employed in İstanbul alone. İzmir employed 5.7% of the employees working in digital occupations throughout Turkey, as the third highest region (see Graph 2.19). TR10, TR51, TR31, TR42 and TR41 regions collectively employ more than 80% of the digital professionals in Turkey.

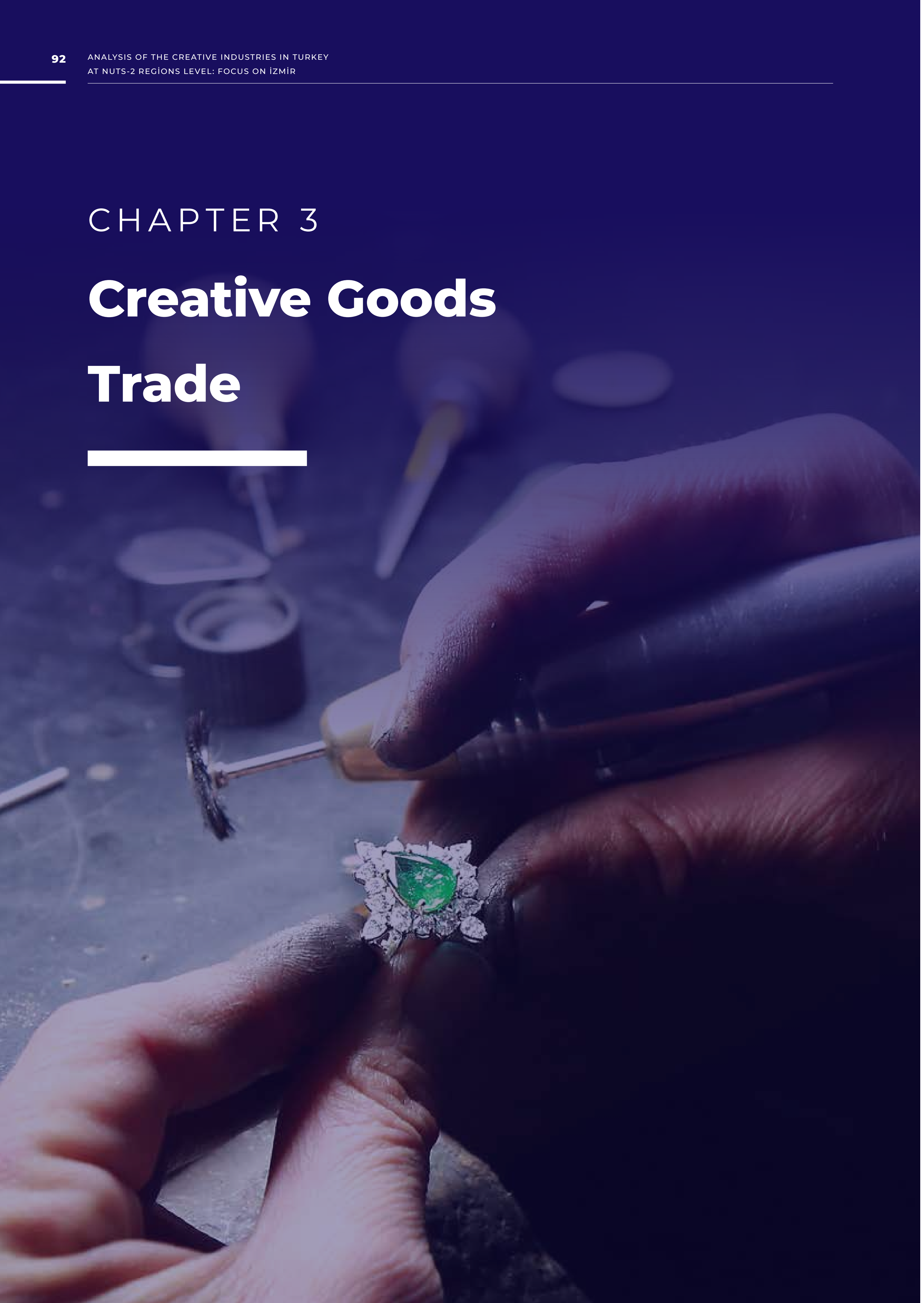
In 2019, 5,779 people were employed in digital occupations in İzmir. 37% (2,153 employees) was comprised of software developers. This is followed by information and communications technology user support technicians, coded as 3512 (see Table 2.16).

Table 2.16: Digital Occupations in İzmir and Turkey, 2019

ISCO-08	Description	Number of Employees Working in Digital Occupations in Turkey	Number of Employees Working in Digital Occupations in İzmir	Share of Digital Occupations in İzmir within Turkey (%)	Share of Occupation within All Digital Occupations in İzmir (%)
1330	Information and Communications Technology Services Managers*	5.979	267	4,5	4,6
2153	Telecommunications Engineers	4.181	255	6,1	4,4
2519	Software and Applications Developers and Analysts n.e.c.	2.033	115	5,7	2,0
2511	System Analysts*	7.943	233	2,9	4,0
2512	Software Developers*	35.306	2.153	6,1	37,3
2513	Web and Multimedia Developers*	1.691	78	4,6	1,3
3511	Information and Communications Technology Operations Technicians	7.913	397	5,0	6,9
3512	Information and Communications Technology User Support Technicians	23.839	1.534	6,4	26,5
7422	Information and Communications Technology Installers and Servicers	12.192	747	6,1	12,9
	Total	101.077	5.779	5,7	100,0

Source: SSI General Directorate

** These occupations are also included in the creative occupations group.*



CHAPTER 3

Creative Goods Trade

3.1. Global Creative Goods Trade

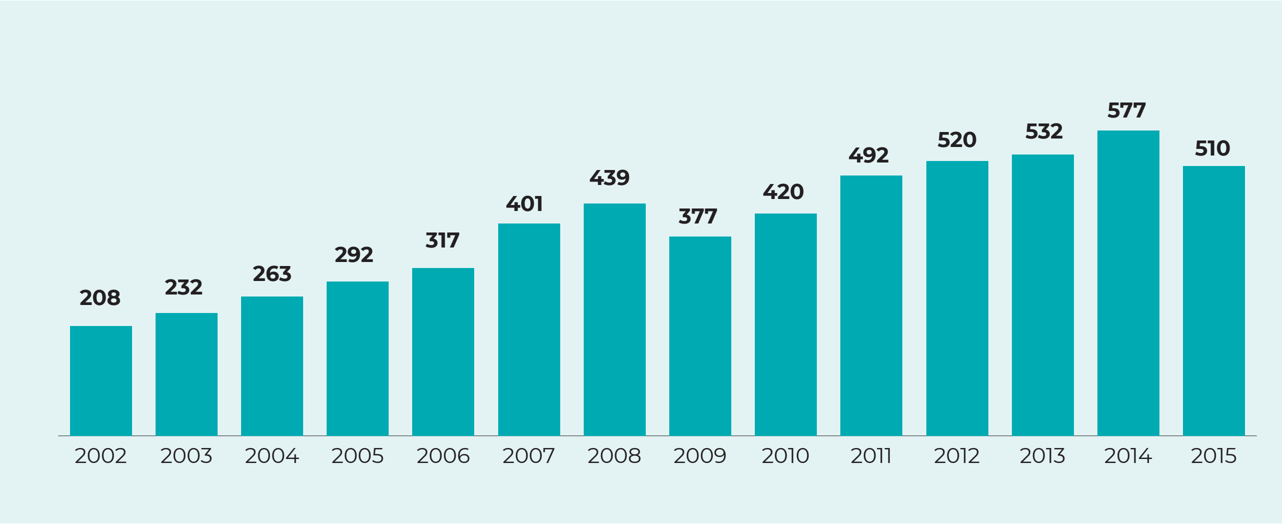
In this chapter, we focus on the global trade of creative goods, using the UNCTAD (2010) definition, which looks at the trade of goods it defines as creative products. Thus, the foreign trade analyses in this chapter are conducted on the foreign trade of goods defined according to UNCTAD (harmonised system). UNCTAD (2010) classifies approximately 200 products in the category of creative goods, and assesses these goods under seven separate sub-categories (see Figure 3.1):

Figure 3.1: UNCTAD Creative Goods Categories

Source: UNCTAD, 2010

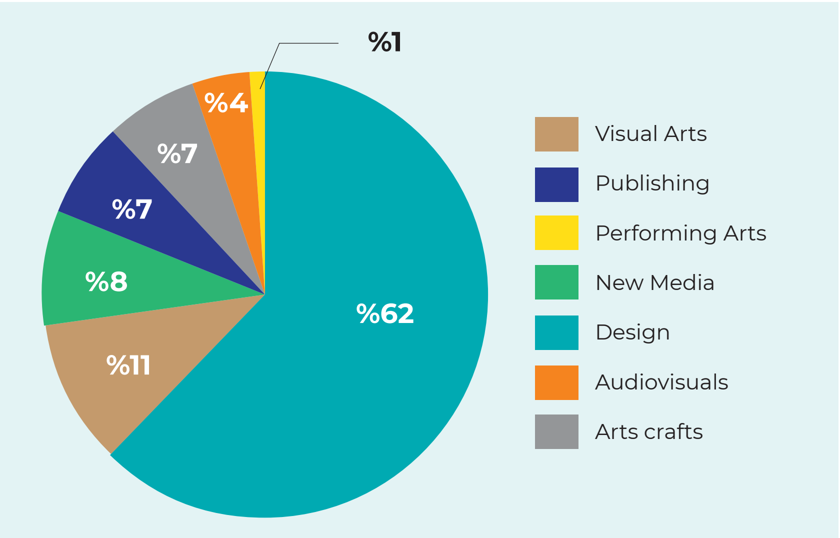
Data on creative goods trade in the UNCTAD database covers only the period between 2002 and 2015, so the assessments in this report regarding foreign trade are limited to this period. The global creative goods trade that was $208 billion back in 2002 reached $510 billion in 2015. Graph 3.1 shows that this value had risen to $577 billion in 2014. Creative goods exports have always had a rising trend, excluding 2009 (the year following the global financial crisis) and 2015. Creative goods exports comprise approximately 3% of the overall global goods exports.

Graph 3.1: World Creative Goods Exports (billion $)



Source: UNCTAD, www.unctad.org

Graph 3.2: Exports Shares of Creative Goods by Product Groups (%), 2015



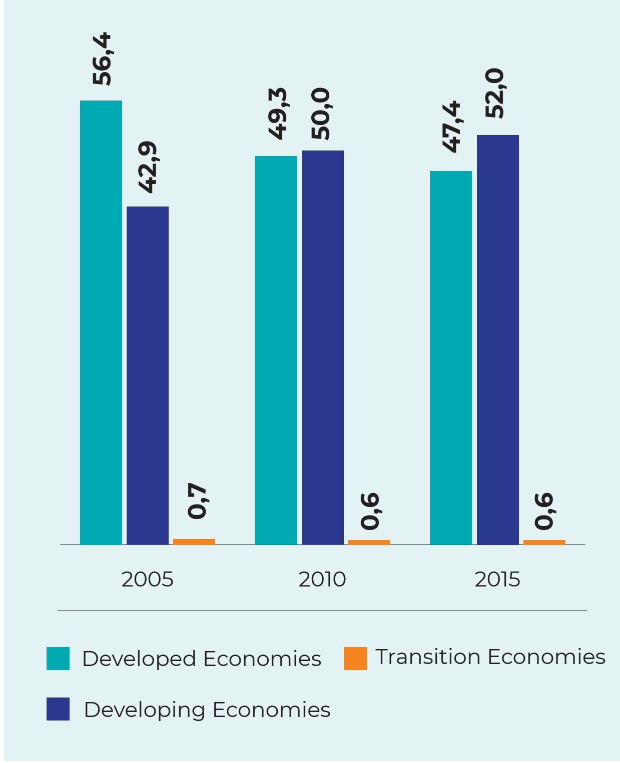
Source: UNCTAD, www.unctad.org

In 2015, design products has the largest share within global creative goods exports. This was 56% back in 2002 and rose to 62% in 2015. The second highest share belonged to visual arts with a share of 11%, followed by new media product with a share of 8%. The lowest share within global creative goods exports belonged to performing arts, with a value of 1% (see Graph 3.2).

raph 3.3 displays the exports shares of creative goods by country groups with five year intervals. Developing countries began to have more say in the field of creative goods export compared to developed countries within 10 years. While developed countries had the highest share of global creative goods exports with a ratio of 56.4% in 2005, this declined to less than 50% in five years. As the share of developed countries declined to 47.4% in 2015, the share of developing countries rose to 52%. China has an important role in this rapid increase in the share of developing countries. During this period, the share of transition economies remained very low, not displaying any significant changes.

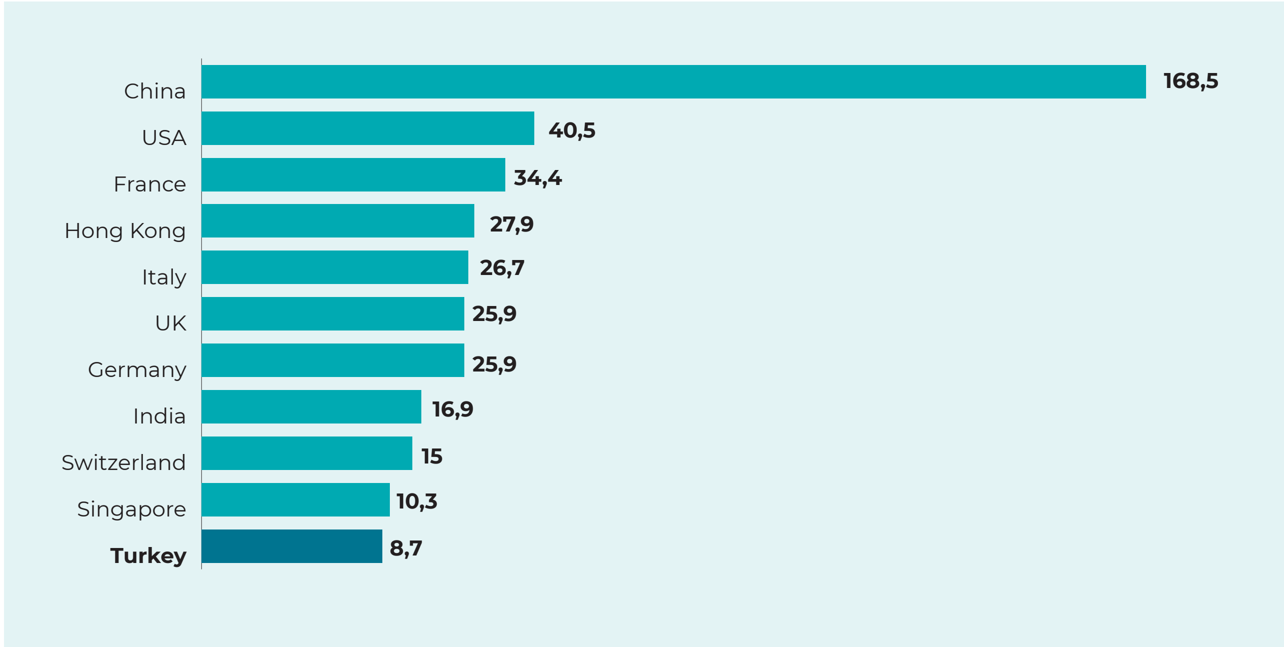
Graph 3.4 presents the exports values of the top 10 countries' creative goods exports and Turkey in 2015. China ranks in first place throughout the world in creative goods exports with an exports value of approximately $168 billion. This is 33% of the global creative goods exports (see Table 3.1). China is followed by USA ($40 billion) and France ($34 billion). China's exports' value is more than four times that of its closest follower.

Graph 3.3: Exports Shares of Creative Goods by Country Groups (%)



Source: UNCTAD, www.unctad.org

Graph 3.4: Creative Goods: Top 10 Exporters Worldwide and Turkey (billion $), 2015



Source: UNCTAD, www.unctad.org

Turkey ranked 12th in the world for creative goods exports with a value of $8.7 billion in 2015, up from 19th place in 2005 with a value of $3.3 billion (although the country declined to 23rd place in 2010, it compensated for this in the following years) (see Table 3.3). Table 3.1 presents the shares of global creative goods exports from leading countries. When the shares between 2005 and 2015 are compared, five countries (China, France, India, Switzerland and Singapore) increased, while four countries (Hong Kong, Italy, the United Kingdom and Germany) decreased, and the share of the US remained the same. Turkey grew from 1.2% in 2005 to 1.7% in 2015. According to UNCTAD data, considering that Turkey's overall global goods exports share was 0.91% in 2015, the country's share of creative goods exports is not to be underestimated.

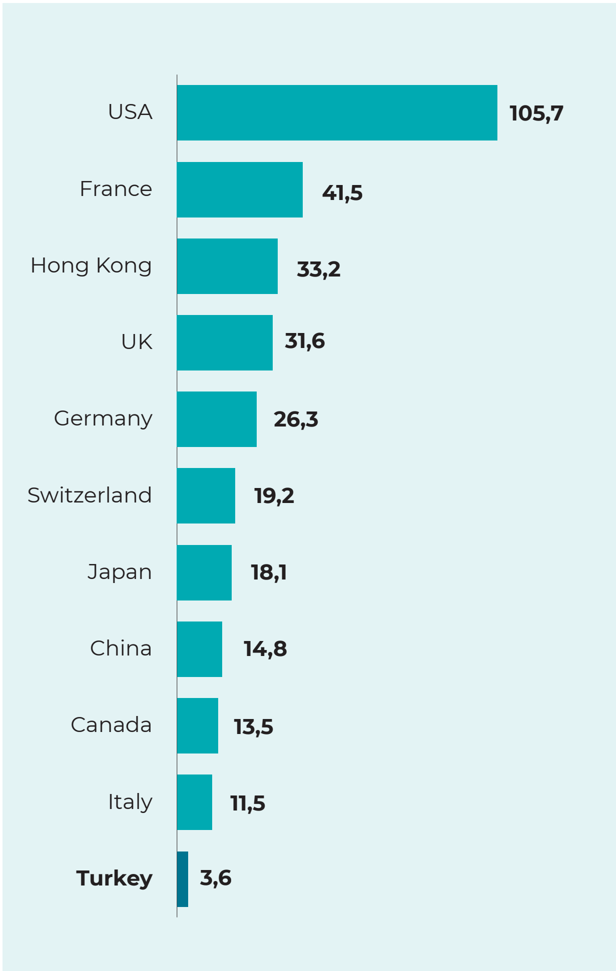
Table 3.1: Shares within Global Creative Goods Exports (%): Top 10 Countries and Turkey

Order (2015)	Country	2005	2010	2015
1	China	18,8	24,2	33,1
2	USA	7,9	8,1	7,9
3	France	4,2	3,8	6,8
4	Hong Kong	9,1	7,1	5,5
5	Italy	6,9	5,5	5,2
6	The United Kingdom	6,1	4,7	5,1
7	Germany	7,4	7,1	5,1
8	India	2,6	3,3	3,3
9	Switzerland	2,2	2,4	2,9
10	Singapore	0,8	2,3	2,0
12	Turkey	1,2	1,2	1,7

Source: UNCTAD, www.unctad.org

raphs 3.4 and 3.5 show that a significant number of countries with the highest exports of creative goods (USA, France, Hong Kong, the United Kingdom, Germany, Switzerland, China and Italy) are also countries with the highest creative goods imports in the world. The USA is in first place with a value of approximately $106 billion, France is second with $41 billion and Hong Kong is with $33 billion. Turkey ranked 24th in the world with a creative goods imports value of $3.6 billion in 2015. Turkey's share within global creative goods imports is less than 1%.

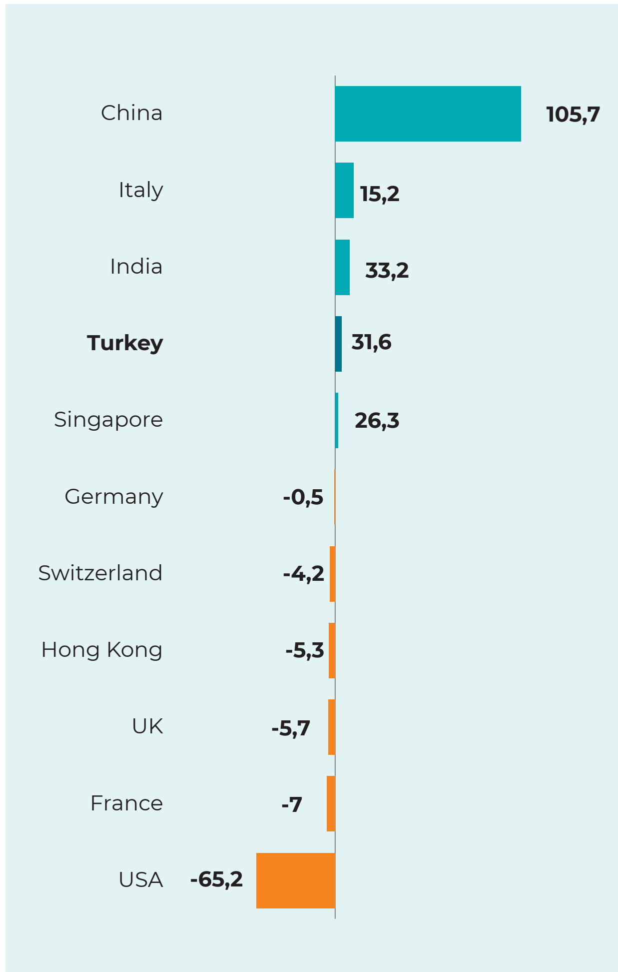
Graph 3.5: Top 10 Creative Goods Importers Worldwide and Turkey (billion $), 2015



Source: UNCTAD, www.unctad.org

The fact that countries leading in creative goods exports also lead in imports of these goods limited these countries' foreign trade gains (see Graph 3.6). Only four out of the ten export leader countries (China, Italy, Singapore and India) had a surplus in creative goods trade, while the others (Germany, Switzerland, Hong Kong, the United Kingdom, France and USA) had a deficit. The highest foreign trade surplus was recorded by China, with approximately $154 billion, and the highest deficit was recorded by USA with $65 billion. Although Turkey did not rank in the top 10 countries for creative goods foreign exports, it surpassed many leading countries with its $5 billion surplus in creative goods trade.

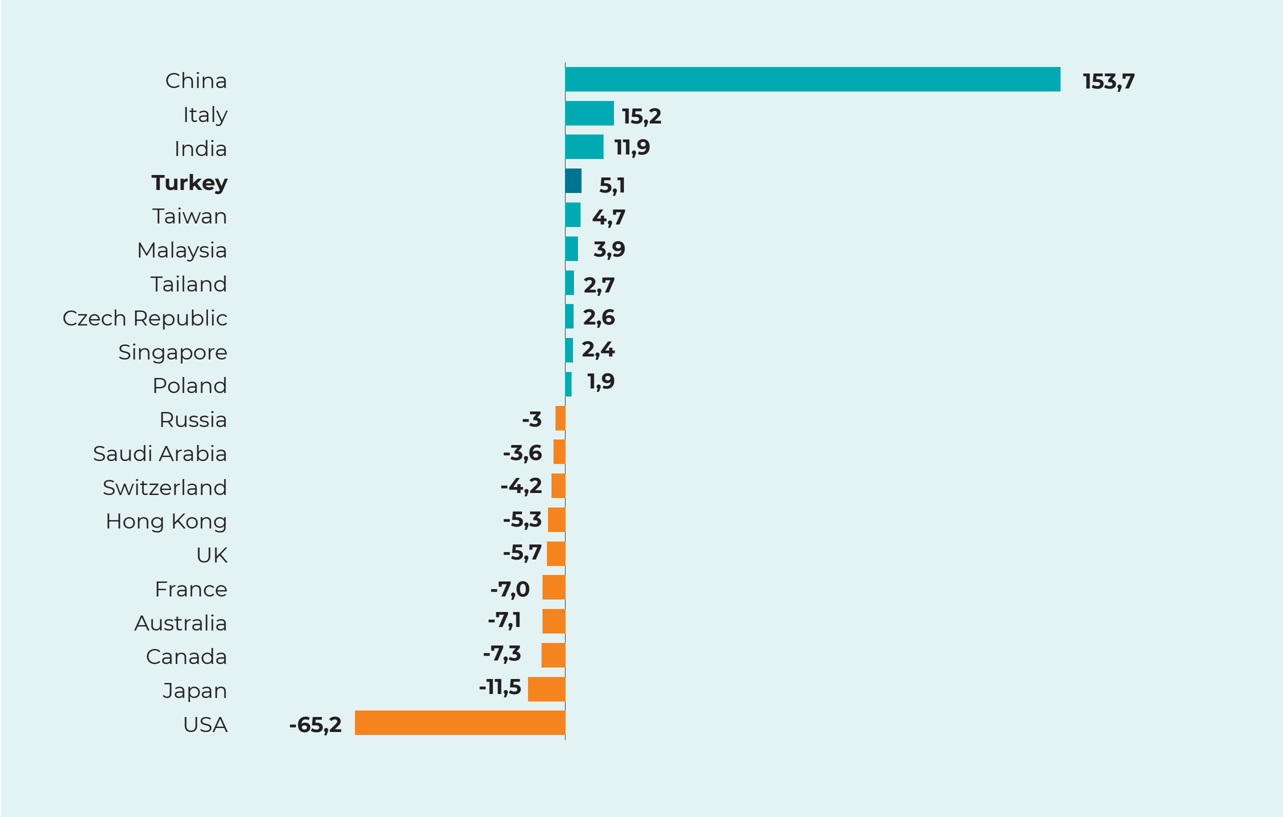
Graph 3.6: Trade Balance of Creative Goods in Top 10 Exporters and Turkey (billion $), 2015



Source: UNCTAD, www.unctad.org

Graph 3.7 shows the ten countries with the highest surpluses and the ten countries with the highest deficits for creative goods trade throughout the world. Turkey ranks fourth within the countries that have a surplus in foreign trade of creative goods. Therefore, Turkey has a higher gain regarding creative goods trade than many major exporter countries.

Graph 3.7: Creative Goods Top 10 Surplus and Deficit Countries (Billion $), 2015



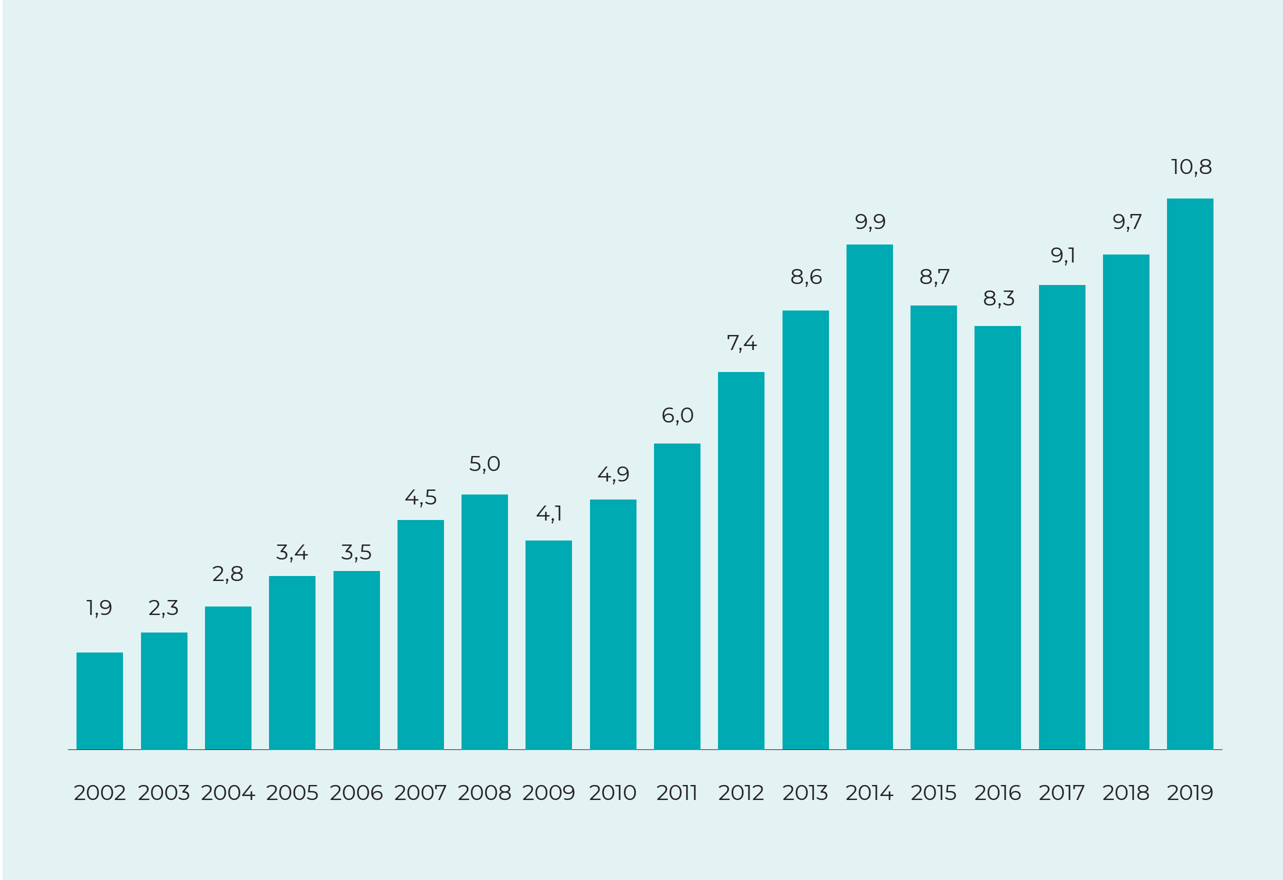
Source: UNCTAD, www.unctad.org

3.2. Turkey's Creative Goods Trade

The analyses in the previous chapter had to stop in 2015 because the data from UNCTAD ended then. For the analysis of Turkey's creative goods trade by itself, data for the period following 2015 was obtained from TURKSTAT.

Graph 3.8 shows the values for creative goods exports from Turkey from 2002-2019. The creative goods exports of Turkey, which corresponded to approximately $2 billion in 2002, rose to approximately $11 billion by 2019. According to TURKSTAT data, Turkey's creative goods imports reached $3.6 billion in the same year. Therefore, Turkey annually produces a surplus of more than $7 billion in creative goods trade. Turkey has produced higher and higher percentages of surplus in the creative goods trade since the year 2002.

Graph 3.8: Turkey's Creative Goods Exports (billion $)



Source: UNCTAD, www.unctad.org

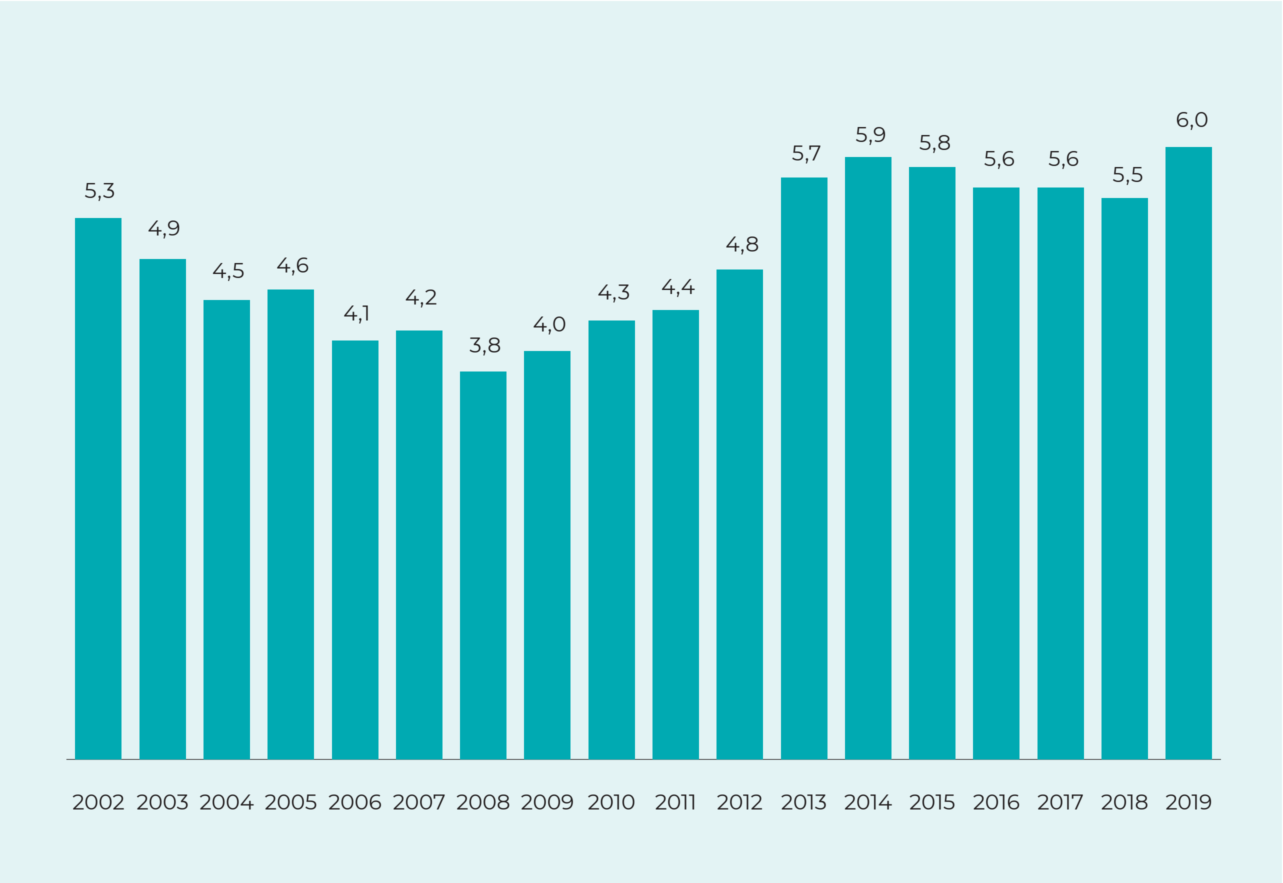
Table 3.2: Shares of Exports of Creative Goods in Turkey by Product Groups (%)

Product Group	2005	2010	2015	2019
Handicrafts	30,59	35,94	31,69	29,05
Audiovisual Products	0,47	0,52	0,25	0,03
Design	66,67	61,30	66,65	69,62
New Media	0,28	0,34	0,21	0,13
Performing Arts	0,16	0,19	0,11	0,11
Publishing	1,35	1,40	0,86	0,75
Visual Arts	0,47	0,31	0,23	0,31

Source: Calculated by the authors using TURKSTAT and UNCTAD data.

Note: The values for the period of 2002-2015 were received from UNCTAD, while the values for the period following the year 2015 were calculated by the authors using TURKSTAT data.

Graph 3.9: Share of Creative Goods within Turkey's Overall Goods Exports (%)



Source: UNCTAD and TURKSTAT
Note: The data for the period of 2002-2015 were received from UNCTAD, while the values for the period following the year 2015 were calculated by the authors by using TURKSTAT data.

Graph 3.9 shows Turkey's share of creative goods exports within overall goods exports. This ratio, more than 5% in 2002, declined in the following years and continued until 2008 when the global finance crisis occurred, down to 3.8%. It grew again from 2009, and reached 6% as of 2019.

Table 3.2 shows the shares of creative product groups within Turkey's overall creative goods exports. Design products were subject to the highest exports numbers. As of 2019, the share of such products reached almost 70%. This is followed by handicrafts with a share value of 30%. Table 3.2 shows that all other product groups remained below 1% as of 2019.

Ranked 19th throughout the world with a 1.1% share of the global creative goods trade in 2005, Turkey went down four steps by 2010 despite little change in its share. In 2015, Turkey's share rose to 1.7%, making Turkey 12th in the world. Thus, Turkey became a candidate to join the top 10 countries in regards to global creative goods exports (see Table 3.3).

Table 3.3: Turkey's share (%) and Rank in the World Exports of Creative Goods by Product Groups

	2005		2010		2015	
Product Group	Share (%)	Rank	Share (%)	Rank	Share (%)	Rank
Handicrafts	3,90	6	5,56	3	7,71	2
Audiovisual Products	0,10	39	0,07	44	0,10	37
Design	1,31	19	1,25	18	1,82	10
New Media	0,08	38	0,04	45	0,04	45
Performing Arts	0,14	30	0,20	30	0,22	27
Publishing	0,11	49	0,17	44	0,22	37
Visual Arts	0,07	40	0,06	41	0,04	35
All Creative Goods	**1,15**	**19**	**1,17**	**23**	**1,70**	**12**

Source: Calculated by the authors by using UNCTAD dataset.

Table 3.3 presents information not only on overall creative goods exports but also on the exports of creative product groups. Turkey ranked in 6th place among the exporter countries throughout the world, receiving approximately 4% from the global exports of handicrafts products in 2005. Turkey raised this share and rank to even higher levels in the following years. In 2015, Turkey became the 2nd ranked exporter country in this field with an approximate share of 8%. Compared to 2005, Turkey's global rankings rose in all goods groups, excluding new media products (which declined from 38th place to 45th place) by 2015. Turkey displayed particularly significant progress in regards to design products, entering the top 10 exporter countries. In 2015, the top five countries with the highest exports of design products were: United Arab Emirates, Iran, Iraq, Germany and Libya. According to UNCTAD data, the design products exported to these five countries reached $3.4 billion in that year.

Table 3.4: Turkey's Creative Goods Exports by Region (%)

Continent	2005	2010	2015
Africa	3,3	5,4	8,5
America	16,8	7,2	6,7
Asia	24,2	40,5	56,2
Europe	51,6	45,3	27,6
Oceania	0,5	0,5	0,4

Source: Calculated by the authors by using UNCTAD data.

Table 3.4 presents the distribution of creative goods exports from Turkey among different markets. In 2005, 52% of Turkey's exports went to Europe. The region with the second largest share is Asia with 24%, and then America with 17%. However, significant changes occurred regarding the shares of these export regions. As of 2015, Europe's share declined to approximately 28% and America's share declined to 7%. The Asia and Africa markets significantly increased during this period, with the Asia exports market rising from 24% in 2005 to 56% in 2015.

Table 3.5: Top 10 Exports Partners for Creative Goods from Turkey (million dollars)

2005		2010		2015	
USA	527	United Arab Emirates	608	United Arab Emirates	1,293
Germany	295	Germany	362	Iraq	993
Russia	263	Russia	357	Iran	947
United Arab Emirates	224	Iraq	324	Saudi Arabia	526
Italy	158	USA	301	USA	481
France	122	Italy	251	Germany	418
the United Kingdom	108	Saudi Arabia	182	Italy	374
Saudi Arabia	102	the United Kingdom	133	Libya	291
Spain	97	Kazakhstan	132	the United Kingdom	248
Romania	82	France	131	Russia	176

Source: UNCTAD, www.unctad.org

The order of the top 10 countries to which Turkey exports creative goods is shown in Table 3.5. In 2005, Turkey's top three export partners were the USA, Germany and Russia. Significant changes occurred in the order of export partners, and as of 2015, first place was occupied by the United Arab Emirates, followed by Iraq, Iran and Saudi Arabia. Analysis of this period shows a regional shift regarding the targets of Turkey's creative goods exports.

Table 3.6: Trade Balance of Turkey with the Top 10 Exports Partners for Creative Goods (2015)

	Creative Goods Exports (million $)	Creative Goods Import (million $)	Creative goods trade Balance (million $)
United Arab Emirates	1293	99	1194
Iraq	993	1	992
Iran	947	2	945
Saudi Arabia	526	0,13	526
USA	481	47	434
Germany	418	115	302
Italy	374	447	-72
Libya	291	0,05	291
the United Kingdom	248	61	186
Russia	176	75	100

Source: UNCTAD, www.unctad.org

Table 3.6 lists Turkey's top 10 exports partners for creative goods in 2015. Turkey also imports from these partner countries, and there is a surplus in the creative goods trade with all countries except Italy, where there is $72 million deficit. According to UNCTAD data, Turkey has a deficit in its trade with Italy regarding all creative products groups except handicrafts ($213 million surplus). The trade deficit with Italy is particularly noticeable with regards to design products, reaching $284 million as of 2015.

3.3. Revealed Comparative Advantage of NUTS-2 Regions in Creative Goods Trade

TURKSTAT does not share detailed goods trade data with the public, and permits analyses only over micro datasets. Therefore, exact values of the creative goods trade could not be presented but instead the comparative advantages of regions were analysed in regards to creative goods trade. To that end, the revealed comparative advantage (RCA) index was used. The index is calculated as below:

$$RCA = \frac{\textit{Region's Creative Goods Exports} \,/\, \textit{Turkey's Creative Goods Exports}}{\textit{Region's Overall Exports} \,/\, (\textit{Turkey's Overall Exports})}$$

Value exceeds 1, then the region in question has specialisation (in other words, comparative advantage) in the relevant goods trade.

RCA indexes were calculated separately for each creative products group, and the results of such calculations are presented in Table 3.7. According to the analysis, İstanbul has comparative advantage in all creative products groups except handicrafts. TR31-İzmir region has comparative advantage in new media and visual arts products, and the region's RCA value particularly regarding new media products is higher than that of the other three regions with advantage in this field.

A high RCA value was recorded for handicrafts for TRC1 (Gaziantep, Adıyaman, Kilis). The region's carpet exports played an important role in this high value. Likewise, there is a high RCA value for TR83 (Samsun, Tokat, Çorum, Amasya) for design and performing arts. The jewellery and musical instrument trade plays an important role in this regard. The high comparative advantage value recorded for TRA1 (Erzurum, Erzincan, Bayburt) region is based mostly on foreign trade of magnetic and optical media products.

Table 3.7: Revealed Comparative Advantage Index, 2019

Region	Crafts	Audiovisual Goods	Design	New Media	Performing Arts	Publishing	Visual Arts
TR10	0.61	1.01	1.30	1.56	1.36	1.62	1.42
TR21	0.71	4.31	0.47	0.29	0.00	0.40	0.17
TR22	0.01	0.01	0.28	1.26	0.00	0.23	0.39
TR31	0.18	0.31	0.28	2.06	0.33	0.49	1.95
TR32	0.34	0.01	0.22	0.00	0.17	0.21	1.24
TR33	1.49	0.10	0.52	0.04	0.28	0.09	1.30
TR41	0.49	0.36	0.82	0.06	0.03	0.19	0.24
TR42	0.04	0.72	0.11	0.04	0.00	0.06	0.05
TR51	0.04	5.81	0.25	1.12	0.13	1.95	0.43
TR52	0.07	1.14	0.16	0.86	0.02	0.22	0.15
TR61	0.14	0.71	0.34	0.07	0.18	0.93	1.96
TR62	0.13	0.24	0.12	0.06	0.02	0.23	0.27
TR63	1.42	0.01	0.19	0.03	0.02	0.01	0.61
TR71	0.53	0.00	0.07	0.00	0.00	0.02	0.15
TR72	0.49	0.36	1.98	0.02	0.04	0.34	0.17
TR81	0.01	0.00	0.11	0.00	0.00	0.01	0.02
TR82	0.00	0.02	0.03	0.00	0.00	0.00	0.01
TR83	0.01	0.00	12.40	0.00	19.06	0.03	0.03
TR90	0.01	0.01	0.04	0.00	0.07	0.01	0.12
TRA1	0.06	19.60	0.06	0.69	0.00	0.51	0.00
TRA2	0.40	0.00	0.49	0.13	0.41	0.36	0.44
TRB1	0.22	0.00	0.10	0.00	0.00	0.04	0.01
TRB2	0.14	0.00	0.71	0.00	0.00	0.94	2.24
TRC1	12.58	0.20	0.21	0.14	0.06	0.09	0.24
TRC2	0.08	0.00	0.96	0.01	0.00	0.25	0.49
TRC3	0.28	2.30	1.05	0.05	0.65	0.49	1.45

Source: Calculated by the authors by using TURKSTAT's Foreign Trade Micro Dataset (Special Trade System).

Note: Highlighted cells represent values that exceed critical values.

CHAPTER 4

Ecosystem Approach to Creative Industries and İzmir Creative Industries Ecosystem

4.1. Ecosystem Approach To Creative Industries

An ecosystem is the system that exists through the mutual relationships of the living beings in a given space and the non-living environment surrounding them(Britannica, 2020, Tansley, 1935). The concept of an ecosystem, defined by the botanist Arthur Tansley in 1935 and originally applied only in biology, has become frequently used in social sciences because it can define clusters comprised of different but intertwined actors. In this regard, an ecosystem can decide systems that comprise individuals, groups and even companies, without fixed or persisting connections between them but changing interactions (Comunian, 2010). In this chapter, the ecosystem is expressed as a toolkit to explain the functioning of creative industries in certain environments.

The ecosystem approach may also be used to understand the close relationship between innovation and creativity. The increasing role of knowledge in production processes and the resulting changes in the global economy make the formation of dynamic interaction environments necessary. These generate innovation and technology, living ecosystems that accelerate the circulation of knowledge. Economies capable of synthesising knowledge, technology and creativity may have advantages for growth and competition, and it is indicated that the formation of a knowledge based economy is necessary for developed economies to maintain their advantages and for the developing countries to progress (Rosenberg, 1982, Naisbitt,2006). Creativity is converted into products and services thanks to interaction among companies, suppliers and consumers. Interaction between central and regional public actors, local administrations, universities as fundamental knowledge generation and research infrastructures, and private sector as the structure responsible of commercialisation of innovation and communities affect how successful regions are. The importance of proximity among actors is highlighted for the generation of innovation in the Triple Helix Model (Etkowitz, 1998, Etzkowitz and Leydersdorff, 2008), a fundamental model for shaping of innovation. The interaction among actors at all levels is the key to generate, spread and utilise knowledge (Freeman, 1989; Lundvall, 1985,1992; Nelson, 1993).

Table 4.1: Similarities Between Biological Ecosystems and Creative Ecosystems

Characteristics of Biological Ecosystems	Characteristics of Creative Ecosystems
Organisms interact with the environment and with the other organisms in their environment.	Actors involved in creative processes interact with themselves, and with their social and physical environment.
Each interaction creates an outcome.	The flow between creativity and knowledge is continuous within the value chain.
Growth and resource exploitation have an ending point for every species.	Growth and resource exploitation have an ending point for every actor inside the ecosystem.
Organisms continuously face new challenges and develop due to such.	The actors inside the ecosystem and their social environment develop as they face new challenges.
Space is important. Space constantly changes based on environmental conditions.	Space is important. Interaction with space is determinative regarding creative processes.
No life may occur without interaction between species.	No creativity may occur without social interaction.

Source: Mengi, 2015 (derived from the study of Chen, 2012)

In Table 4.1, the similarities between biological ecosystems and creative ecosystems are shown; the interactions and environmental aspects are of particular importance in this analogy.

A creative ecosystem is a subset of the national innovation ecosystem, and many of the innovation actors are also stakeholders in the creative ecosystem. A creative ecosystem is defined as the entities and actors responsible for the generation, spread and consumption of creative goods and services (Bakhshi, Hargreaves and Mateos-Garcia, 2013; Green, Miles and Rutter, 2007).

Spatial proximity has a role in facilitating and supporting interaction and leading to clustering. Although business models underwent changes through digitisation, and remote access applications became widespread in recent years, spatial proximity continues to be an advantage (Bakalli, 2014). Also, for the development of creative industries, clusters that enable creative centres and ecosystem actors to be located together (Flew, 2002; Kelly and O'Hagan, 2007) and creative cities as subsystems of a creative ecosystem (Florida, 2002) increase their significance worldwide. Creative clusters provide to their members the advantage of geographical convergance towards developing cooperation that presents multifaceted benefits to the actors comprising the creative ecosystem. The collective action enabled by the presence of the cluster presents to the companies labour, knowledge, technology utilisation and further opportunities as inputs for them to generate innovation, thus increasing their productivity. Creative cities that accommodate professionals trained in different fields and continuing specialisation, where an open minded and tolerant urban life culture is developed, have a high employment of creative occupations and thus host the "creative class". Such a diversity (Landry and Bianchini, 1995; Markusen and King, 2003) enable supporting of employment opportunities in the field of creativity and expansion of the labour market in the creative sector and related sectors. (Lazzeretti, 2012; Santagata, 2006).

4.2. Creative Industries Ecosystem Actors and Relationships Between The Actors

As is the case with other industries, the fundamental condition for development in the creative industries is a facilitative and growth-friendly environment. The public sector, private sector, and bodies governing education, communities and individuals all play a roles in offering at all levels (UNIDO, 2014: 47). The concept of the creative industries projects a direct relationship between education and prosperity, ascribing a functional role particularly to higher education (Universities, 2010). In terms of the creative industries, they encompass many things that support creativity and innovation, from infrastructure development to local governance, to financial and legal frameworks. We took the ecosystem strengthening model for creative industries developed by UNIDO as the basis from which to examine the creative industries ecosystem and the ecosystem actors in this study,. We used a scaling that feeds creativity, prioritises further interaction for emergence of ideas, and determines its own limits by interaction intensity and direction to define the levels: intertwining micro, mezzo and macro levels.

It is important that creative communities and creative individuals, private sector, education sector and public sector are investigated on three analysis levels in order to understand importance and roles in shaping the creative industries. Each sector 's impact has to be considered. For instance, the public sector has the highest impact and is needed the most at macro level (i.e. infrastructure, legislation). However, communities and individuals have the highest impact at micro level.

4.2.1. Micro Level Actors and Method of Intervention

Richard Florida argues that regional economic growth stems from the outcomes of "creative capital", and that creative capital begins with the production realised by the "creative class" (Florida, 2011, quoted by Özen, 2014:3). According to Florida, the creative class comprises people who work towards creating new significant forms and gain income from such work. In his original classification, Florida divides the creative class into two categories:creative core and creative professionals. Scientists, engineers, university researchers, poets and writers, artists, actors, designers and architects, as well as editors, think-tank researchers, analysts and people generating new ideas, comprise the creative core. High technology sectors, the judiciary, and healthcare professionals and business management fall into the category of creative professionals. The core of the creative ecosystem is the micro-level, which includes creative individuals, communities, creative clusters and enterprises. At this level, creative activity, products and services are key to creating entrepreneurs and assets. The most important aspect at this level is the creative products/outputs being marketed and ensured to provide value to innovation. In order to create a dynamic and competitive industry, it is important to embrace knowledge intensive entrepreneurship and to record development over individuals possessing such knowledge accumulation for creating. Particularly in developing economies, a private sector enriched by creative individuals and creative communities is required in order for products and services based on innovation and creativity to be converted into "commodifiable" assets. Micro-level intervention by way of "building communities" that encourage creative individuals creates suitable conditions and allows cooperation opportunities to arise. (Markusen, 2014:22)

Table 4.2: Micro Level Creative Ecosystem and Its Actors

MICRO LEVEL

Creative Communities and Creative Individuals	Private Sector	Education Sector and Education Structures	Public Sector Actors and Regional Policy Making
▸ Communities that are impacted by the specific characteristics of the region and fed by its cultural and historical heritage ▸ First link in the value chain ▸ Starting point for the formation and comprehension of creative industries ecosystem	▸ The level that defines the value chain and covers creative clusters ▸ The field that innovation strategy aims for, that contribute to its design, where it is implemented for expanding the market and awaken new demand		

Source: UNIDO (2014).

TAs shown in Table 4.2, the core of the micro level is creative individuals, communities, creative clusters and enterprises. Creative clusters are developed as a subset of industrial clusters, and are the key actor within local/regional innovation systems (NESTA, 2010). It is of critical importance that creative products and services are developed, markets are expanded, and entrepreneurship and creativity are promoted and supported, in order to achieve these objectives. Conditions that allow innovative or creative ideas to be converted into tangible and/or "commodifiable" assets have to be established in order to have a dynamic and competitive creative industries sector. The commodification of ideas is closely related to business culture. Central and regional policies, particularly in education, can engender an environment that promotes innovation and creativity within daily life and professional life from childhood.

4.2.2. Mezzo Level Actors and Method of Intervention

The mezzo level is comprised of schools, vocational and technical education centres, universities and research infrastructures.

Table 4.3: Mezzo Level Creative Ecosystem and Its Actors

MEZZO LEVEL

Creative Communities and Creative Individuals	Private Sector	Education Sector and Education Structures	Public Sector Actors and Regional Policy Making
▸ Communities that are impacted by the specific characteristics of the region and fed by its cultural and historical heritage ▸ First link in the value chain ▸ Starting point for the formation and comprehension of creative industries ecosystem	▸ The level that defines the value chain and covers creative clusters ▸ The field that innovation strategy aims for, that contribute to its design, where it is implemented for expanding the market and awaken new demand	▸ The level that transfers the needs of region and society to the individuals, training them, building their thought systematics and have strong impact on creativity	

Source: UNIDO (2014).

As shown in Table 4.3, the mezzo level has a direct impact on the formation of creative individuals and communities at micro level. Individuals shaped by the technical and human qualifications at mezzo level become the owners of creative enterprises at micro level. The relationship between mezzo level and micro level should not be overlooked with a "top-down" approach. A successful creative enterprise or entrepreneur may find success, generate solutions to issues faced at all stages from raw material and procurement to delivery, and all these aspects are also part of the creative process. The mezzo level is where creative individuals and enterprises are guided on where to seek cooperation and solutions when turning their ideas into marketable products and services.

The emergence of creative enterprises inside the creative ecosystem is especially shaped by the relationship between the mezzo and the micro levels. Entrepreneur qualifications are shaped via education, and prior to higher education, institutions providing vocational education have strong impacts on creative entrepreneurship. Ideas based on individual creativity are shaped by building up skills and gaining fundamental qualifications based on business and finance management. Creative enterprises are fed, at mezzo level, by the relationship between creativity and innovation is supported over entrepreneurship, where entrepreneurship is promoted during education, and individuals are steered towards thinking creatively.

4.2.3. Macro Level Actors and Method of Intervention

Macro level actors comprise public institutions, local administrations, public professional organisations and organised structures within the private sector that are responsible for decision making, and generating and devising ways to actualise policies.

The responsibilities of actors at a macro level are shown in Table 4.4, and include: developing the capacities of ecosystem actors, providing mentorship and financial support, and realising incubation actions.

These three levels and intervention methods, taken together, will help the creative industries' development. However, due to the complexities of measuring the effectiveness of such an approach, performance is usually defined by considering one or two levels together (micro, micro-and-mezzo or mezzo-and-macro).

Table 4.4: Macro Level Creative Ecosystem and Its Actors

MACRO LEVEL

Creative Communities and Creative Individuals	Private Sector	Education Sector and Education Structures	Public Sector Actors and Regional Policy Making
▸ Communities that are impacted by the specific characteristics of the region and fed by its cultural and historical heritage ▸ First link in the value chain ▸ Starting point for the formation and comprehension of creative industries ecosystem	▸ The level that defines the value chain and covers creative clusters ▸ The field that innovation strategy aims for, that contribute to its design, where it is implemented for expanding the market and awaken new demand	▸ The level that transfers the needs of region and society to the individuals, training them, building their thought systematics and have strong impact on creativity	▸ Policy generation aiming for establishing an inclusive and sustainable creative ecosystem ▸ Designing and utilising policy instruments that are supporting and developing ▸ Harmonising innovation and creativity policies

Source: UNIDO (2014).

4.3. İzmir Creative Industries Ecosyste

We attempted to determine micro, mezzo and macro level actors by use of a survey conducted between 1st of July and 15th of August 2020, in order to analyse the creative industries ecosystem in the TR31 İzmir region.

Respondents were asked to define their fields of activity in line with NACE Rev.2 to build a picture of İzmir's creative industries ecosystem as a part of İzmir's innovation ecosystem, and assessments were made based on answers to closed question. The survey included closed and multiple choice questions about the respondents' functions. We received 65 responses, with 24% from Information Technologies, Software and Computer Services (6201) and 16% from Advertising and Marketing Activities (7311). These results are congruent with the specialisation and localisation statuses of İzmir, as reported in the second chapter of this analysis.

Among all the answers given to the survey, "financial support" was most often mentioned (by 40 people) as the area requiring most development. The second most common answer (34 respondents) to what is most required for the development of creative industries ecosystem in İzmir was about "capacity building", and the third most common answer (27 respondents) was about "project consultancy", which includes awareness raising, project development, project preparation, project management etc. services for accessing financial supports.

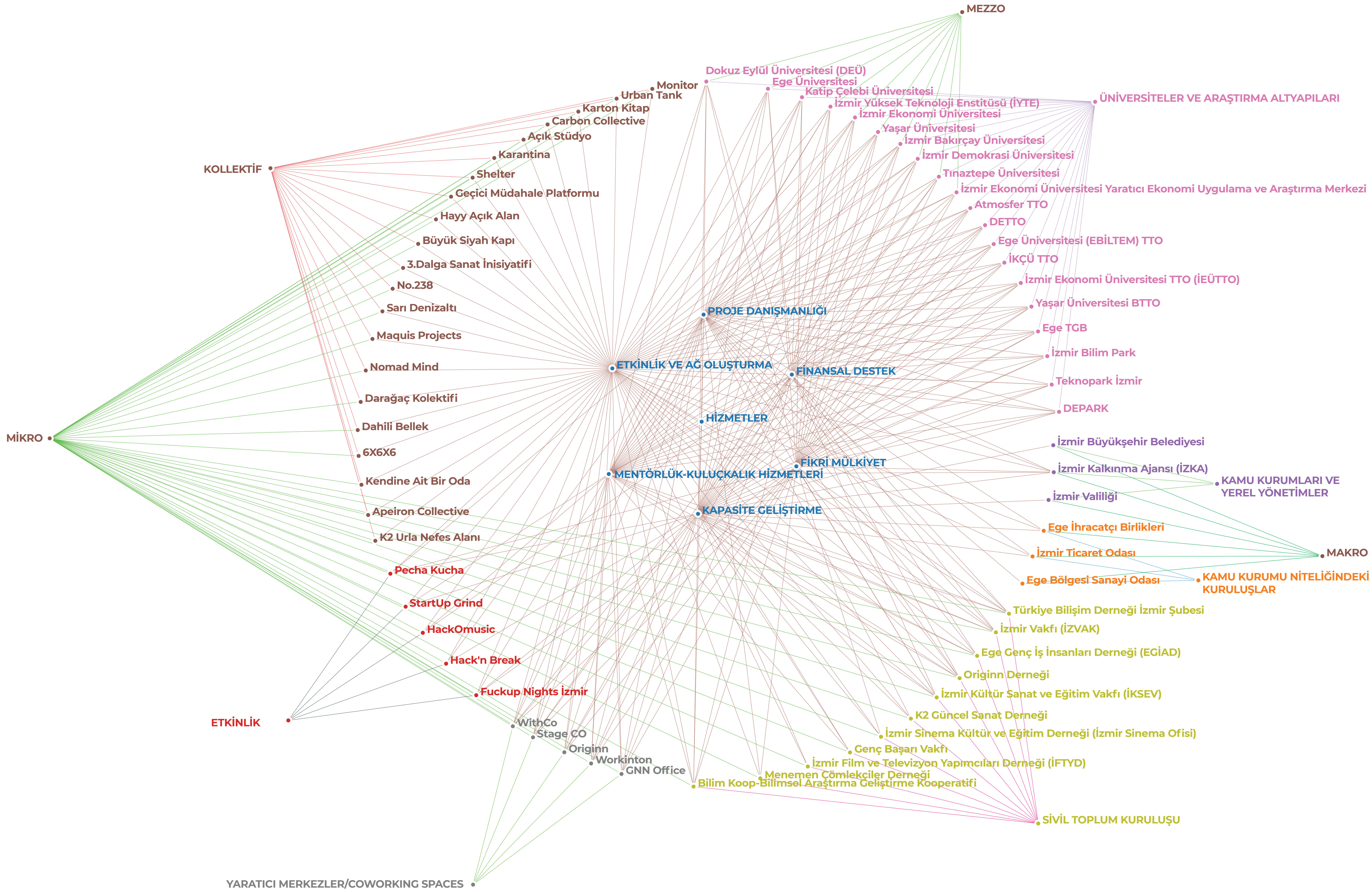
In addition to these services, respondents mentioned a need for more: "activity and network organisation" services (hackathon, ideathon, creathon, summit, meeting etc.); activities bringing together stakeholders within the creative industries ecosystem and strengthening their interaction and cooperation; registration and protection of intellectual property rights; mentorship around growing creative enterprises; and incubation activities for creative entrepreneurship.

From the responses given to open-ended questions, it is clear that providing business development training and finance management training, raising awareness of creative industries among regional NGOs, increasing the number of schemes bringing corporate companies and creative enterprises together, increasing the number of spaces that will support creative enterprises, opening certificate and/or graduate programmes in universities such as culture management, culture diplomacy, policy, culture and arts management, and establishing a technology based communication network are also of significance.

In light of the ecosystem approach, and in consideration of the functions of organisations and institutions that responded to the survey, an İzmir Creative Industries Ecosystem Map is shown in Table 4.5.

Table 4.5: İzmir Creative Industries Ecosystem Map

MICRO LEVEL				MEZZO LEVEL	MACRO LEVEL	
Collectives	**Events**	**Creative Hubs / Co-Working Spaces**	**Non-governmental Organisations**	**Universities and Research Structures**	**Governmental Bodies**	**Public Professional Organisations/ Business Organizations**
Darağaç Collective	Pecha Kucha	Originn	Izmir Foundation for Culture Arts and Education (IKSEV)	Dokuz Eylul University	İzmir Governorship	İzmir Chamber of Commerce (IZTO)
İzmir Culture Platform Initiative (İKPG)	Fuckup Nights İzmir	Workinton	İzmir Foundation (İZVAK)	Ege University	İzmir Metropolitan Municipality	Aegean Region Chamber of Industry (EBSO)
Open Studio	HackOmusic	GNN Office	Aegean Young Business Association (EGİAD)	İzmir Katip Çelebi University	İzmir Development Agency (IZKA)	Aegean Exporters Association (EIB)
Big Black Door	StartUp Grind	Stage CO	Izmir Cinema Culture and Education Association (Izmir Cinema Office)	İzmir Technology Institute (IYTE)		
Carbon Collective	Hack'n Break	WithCo	Turkey Informatics Association İzmir Branch Office	İzmir University of Economics		
Apeiron Collective			Originn Association	Yaşar University		
Dahili Bellek			Intellectual Property Rights and Project Consultancy Cooperative	İzmir Bakırçay University		
Temporary Intervention Platform			K2 Contemporary Arts Association	İzmir University of Democracy		
Hayy Open Air			Junior Achievement Foundation	Tınaztepe University		
K2 Urla Breathing Room			İzmir Film and television Producers Association (İFTYD)	İzmir University of Economics Creative Economy Research and Application Centre		
A Room for One's Own			Menemen Potters Association			
Karantina						
Karton Kitap						
Maquis Projects						
Monitor						
Nomad Mind						
No.238						
Shelter						
Urban Tank						
6x6x6						
Yellow Submarine						
3rd Wave Arts Initiative						


MEZZO
Dokuz Eylül Üniversitesi (DEÜ)
Ege Üniversitesi
Katip Çelebi Üniversitesi
İzmir Yüksek Teknoloji Enstitüsü (İYTE)
İzmir Ekonomi Üniversitesi
Yaşar Üniversitesi
İzmir Bakırçay Üniversitesi
İzmir Demokrasi Üniversitesi
Tınaztepe Üniversitesi
İzmir Ekonomi Üniversitesi Yaratıcı Ekonomi Uygulama ve Araştırma Merkezi
Atmosfer TTO
DETTO
Ege Üniversitesi (EBİLTEM) TTO
İKÇÜ TTO
İzmir Ekonomi Üniversitesi TTO (İEÜTTO)
Yaşar Üniversitesi BTTO
Ege TGB
İzmir Bilim Park
Teknopark İzmir
DEPARK
ÜNİVERSİTELER VE ARAŞTIRMA ALTYAPILARI
Monitor
Urban Tank
Karton Kitap
Carbon Collective
Açık Stüdyo
Karantina
Shelter
Geçici Müdahale Platformu
Hayy Açık Alan
Büyük Siyah Kapı
3.Dalga Sanat İnisiyatifi
No.238
Sarı Denizaltı
Maquis Projects
Nomad Mind
Darağaç Kolektifi
Dahili Bellek
6X6X6
Kendine Ait Bir Oda
Apeiron Collective
K2 Urla Nefes Alanı
KOLLEKTİF
MİKRO
PROJE DANIŞMANLIĞI
ETKİNLİK VE AĞ OLUŞTURMA
FİNANSAL DESTEK
HİZMETLER
FİKRİ MÜLKİYET
MENTÖRLÜK-KULUÇKALIK HİZMETLERİ
KAPASİTE GELİŞTİRME
İzmir Büyükşehir Belediyesi
İzmir Kalkınma Ajansı (İZKA)
İzmir Valiliği
KAMU KURUMLARI VE YEREL YÖNETİMLER
Ege İhracatçı Birlikleri
İzmir Ticaret Odası
Ege Bölgesi Sanayi Odası
MAKRO
KAMU KURUMU NİTELİĞİNDEKİ KURULUŞLAR
Pecha Kucha
StartUp Grind
HackOmusic
Hack'n Break
Fuckup Nights İzmir
ETKİNLİK
WithCo
Stage CO
Originn
Workinton
GNN Office
YARATICI MERKEZLER/COWORKING SPACES
Türkiye Bilişim Derneği İzmir Şubesi
İzmir Vakfı (İZVAK)
Ege Genç İş İnsanları Derneği (EGİAD)
Originn Derneği
İzmir Kültür Sanat ve Eğitim Vakfı (İKSEV)
K2 Güncel Sanat Derneği
İzmir Sinema Kültür ve Eğitim Derneği (İzmir Sinema Ofisi)
Genç Başarı Vakfı
İzmir Film ve Televizyon Yapımcıları Derneği (İFTYD)
Menemen Çömlekçiler Derneği
Bilim Koop-Bilimsel Araştırma Geliştirme Kooperatifi
SİVİL TOPLUM KURULUŞU

The core of İzmir's Creative Industries Ecosystem is constituted, at micro level, by creative enterprises, communities, networking activities, creative centres and non-governmental organisations. Considering the intersection of culture industries and creative industries, the arts collectives in İzmir are one of the most important pieces of the ecosystem, providing a platform that nourishes the city's creative atmosphere and contributes to production. Co-working spaces also function as creative centres by way of the contribution they make to creative cooperation in İzmir. We must not underestimate activities that create interaction inside the ecosystem by creating belief culture in the city, and provide a platform for creative individuals and communities to present their works. A particular example is Pecha Kucha and FuckUpNights İzmir, where ideas that resulted in failure are shared, thus providing the opportunity for the exchange of knoweldge and experience. HackNBreak, the first open innovation camp in Turkey, HackOMusic, offering opportunities for interdisciplinary cooperation as the first ever music hackathon in Turkey, and StartupGrindİzmir, which provides international enterprise activity, all strengthen the ecosystem.

Evaluating İzmir's creative industries ecosystem in regards to non-governmental organisations, we found that organisations that do not directly target this field still influence it through their fields of activity. The strengthening of interaction between creative enterprises and the business world is of significance for developing the marketing, production and prototyping stages.

At mezzo level, universities and research centres function within the creative ecosystem. Ten universities located inside TR31 (İzmir) region have a direct impact on the development of "creativity", feeding the ecosystem with their faculties, technology transfer offices, research centres and technoparks. Students receiving design-based lessons at higher education level, and opening certificate and/or graduate programmess in fields such as culture management, culture diplomacy, policy, culture and arts management, would contribute to the development of the ecosystem.

At macro level, İzmir Metropolitan municipality, İzmir Chamber of Commerce, Aegean Region Chamber of Industry, Aegean Exporters Association and İzmir Development Agency are responsible for developing the policies and instruments to support the development of the creative industries, in the form of central and regional public institutions, local administrations and public professional organisations. Taking into consideration the impact of the macro level on the development of creative industries, creating regional and national culture management policies, organising support programmes for specialisation fields at regional level, providing supports for to access finance and management, and for internationalisation, implementing acceleration and incubation programmes, and conducting planning and infrastructure works aimed at establishing creative centres, are among the duties and responsibilities of macro level actors. For this field to be developed further, creative industries should be included as a development axis in strategic plans and action programmes, with coordination at policy level, clear value chain, and monitoring and evaluation studies to track progress. Local specialisation fields for İzmir may be considered as starting points for keeping track of the development in question.

4.4. Evaluation of The Creative Industries Ecosystem

To understand the relationship between innovation and creativity, the ecosystem approach may be helpful. Etzkowitz's Triple Helix Model, recognised as the fundamental model for generation of innovation, underlines the importance of proximity between actors for generating innovation, and highlights that interaction at all levels is key to generating, spreading and utilising knowledge. The creative industries ecosystem, as a subset of a national innovation ecosystem, is defined by the entities and actors who produce, distribute and consume creative goods and services. As is the case with other industrial fields, the development of the creative industries ecosystem is only possible through the creation of an environment that has the conditions for facilitation and growth. Public sector, private sector, bodies governing education, communities and individuals all play their roles. Regions' creative industries ecosystems may be analysed by assessing the actors' interactions and ecosystem contributions at three separate levels: macro, mezzo and micro levels. When İzmir is examined in line with such evaluations, we note that at micro level, the city is relatively dynamic in terms of creative platforms and communities, and activities, and that further development is required in terms of interaction and cooperation between non-governmental organisations and creative enterprises; that at mezzo level promotion and capacity building to develop creativity and creative enterprises on higher education axis is important; that at macro level actors should include creative industries as a development axis in their strategic plan and action programs, that coordination should be at policy level, that value chain analyses should be conducted in the creative industries for which the city has specialisation, and that monitoring and evaluation studies should be conducted to keep track of progress.

Summary Findings and Recommendations

The concept of the creative industries, which emerged back in the 1990s, has become a subject for intensive academic studies. Studies noted that these industries had a high potential to create growth, value added and employment, and to have a transformative power on countries' economies. These characteristics have made the creative industries a critical component of economic policy and strategic development plans. The increasing importance of these industries motivated studying their potential for the Turkish economy. In this report, structural analyses of the creative industries of Turkey were conducted, focused particularly on TR31-İzmir region. The findings are summarised below:

- Turkey has the lowest share of creative economy within its overall economy of all OECD countries.
- When compared to the traditional sectors of economy (manufacturing and construction), the creative industries in Turkey have a higher value added ratio (value added share within production).
- In recent years, a rapid increase has been observed in Turkey regarding creative industries' employment and number of enterprises.
- According to various indicators (turnover, employment, value added, labour productivity etc.), "computer programming activities" has the highest performance among the creative industries in Turkey, followed by "computer consultancy activities".
- The value added ratio of Turkey's "computer programming activities" industry is higher than that of many OECD countries.
- Five NUTS-2 regions (TR10, TR51, TR42, TR31 and TR61) generate more than 90% of Turkey's overall creative economy turnover.
- There are three regions that have specialisation in creative economy. These are TR10 (İstanbul), TR51 (Ankara) and TR61 (Antalya, Isparta, Burdur) regions.
- TR31 (İzmir) region is the region closest to displaying specialisation in creative economy.
- Some creative industries have the tendency to co-locate in a region.
- According to 2015 data, Turkey ranked 12th in the world for global creative goods exports.
- Turkey ranks 4th among countries that produce a surplus in their creative goods trade.
- Turkey ranks 2nd regarding exports of handicrafts, and 10th regarding exports of design products.

The findings on İzmir are as follows:

- The share of İzmir's creative industries within the overall creative economy turnover and employment of Turkey were 2.6% and 4.6% as of 2015.
- The share of creative industries within the overall turnover of İzmir is 0.6% and their share within overall employment is 0.9%.
- During the 2010-2015 period, "advertising agencies" experienced a rapid decline, while "computer programming activities" experienced a rapid increase with regards to employment in İzmir.
- According to three star analysis results, the only industry displaying mature cluster characteristics in İzmir was "computer programming activities".
- It is possible for "design" and "advertising agencies" in İzmir to ascend to the higher cluster group if they are supported.
- Approximately 6% of all creative professionals in Turkey work in İzmir.
- The three occupation groups that have the highest share among the creative occupations in İzmir are handicrafts (27.9%), advertising and marketing (27.7%) and design (11.5%) groups.

The recommendations in line with the findings are as indicated below:

- It is necessary to create and monitor a national level "creative economy policy" to use the creative industries' innovation development, high value added generation, spillover of innovations into other fields of economy and acting as a driving force in economic transformation. This policy should consider how to increase the share of these industries in the economy, which industries are to be granted incentives and how such incentives are to be provided, and a roadmap should be prepared.
- To accurately observe the development of creative industries, national and regional level statistics (production, value added, turnover, number of employees etc.) should be compiled via TURKSTAT data, and published periodically. The creativity capacity of an industry is closely related to the number of creative professionals employed in that industry. Thus, it will become possible to determine the "creative agglomeration" of industries if the numbers of employees are defined under four categories: 1) Creative professionals in creative industries 2) Other professionals in creative industries 3) Creative professionals in other industries 4) Other professionals in other industries.
- The creative industries grow through creativity, innovation and technology skills. Technology progresses rapidly in today's world, and this progress automates and eliminates many jobs. However, the fact that creativity is not able to be provided by a machine will increase the demand for creative professionals and industries in the coming years. Thus, the national education system should be redesigned at all levels to support the provision of these skills.
- The Covid-19 pandemic has been significant in revealing the critical importance of digital technologies. Special strategy studies based on industries should be conducted on how to integrate digital technologies in creative industries for both producing higher value added products and ensuring their survival.
- Emergence of "creative spillover" in a region will make it more attractive for all creative industries. Taking into account the co-location relationship, spaces and mechanisms should be designed at a regional level that allow the creative industries to interact among themselves and with other industries.
- A major portion of the companies dealing in creative industries are SMEs (small and medium level enterprises). Converting creative ideas into products and services requires large capital, high cost technological expenses and other professional services. Studies should be conducted towards financing such companies.
- An active and functioning property rights system should be established for ensuring the development of creative industries.
- In Turkey, especially "computer programming activities" have significant potential. Studies should be conducted towards increasing the international competitiveness of this industry.

.In addition to the actions listed above, conducting the studies indicated below is also deemed important:

- İzmir is the region closest to displaying specialisation in the creative industries throughout Turkey. If appropriate supports are provided for creative industries, the region will be able to rapidly transform into an area with specialised creative economy. To that end, support to be given to three industries are recognised to be most important. These are "computer programming activities", "advertising agencies" and "design". The fact that high and medium level co-location relationships were defined between these industries through the analyses conducted in the second chapter indicates that support given to any one of these industries will be effective in indirectly attracting the others in the region. Supporting all three industries together will further increase this effect. In short, the provision of sufficient and appropriate support to the industries in question will provide important contributions to increasing the share of creative industries within the economy of İzmir, and to the transformation of the region's economy.

APPENDICES

Appendix Table 1.1: Creative Industries, Cultural Sector and Digital Sector Classification

NACE Code	Description	Creative Industries	Digital Industries	Culture Industries
1820	Reproduction of recorded media			*
2611	Manufacture of electronic components		*	
2612	Manufacture of loaded electronic boards		*	
2620	Manufacture of computers and peripheral equipment		*	
2630	Manufacture of communication equipment		*	
2640	Manufacture of consumer electronics		*	
2680	Manufacture of magnetic and optical media		*	
3212	Manufacture of jewellery and related articles	*		*
3220	Manufacture of musical instruments			*
4651	Wholesale of computers, computer peripheral equipment and software		*	
4652	Wholesale of electronic and telecommunications equipment and parts		*	
4763	Retail sale of music and video recordings in specialised stores			*
5811	Book publishing	*	*	
5812	Publishing of directories and mailing lists	*	*	
5813	Publishing of newspapers	*	*	
5814	Publishing of journals and periodicals	*	*	
5819	Other publishing activities	*	*	
5821	Publishing computer games	*	*	
5829	Other software publishing	*	*	
5911	Motion picture, video and television programme production activities	*	*	*
5912	Motion picture, video and television programme post-production activities	*	*	*
5913	Motion picture, video and television programme distribution activities	*	*	*
5914	Motion picture projection activities	*	*	*
5920	Sound recording and music publishing activities	*	*	*
6010	Radio broadcasting	*	*	*
6020	Television programming and broadcasting activities	*	*	*
6110	Wired telecommunications activities		*	
6120	Wireless telecommunications activities		*	
6130	Satellite telecommunications activities		*	
6190	Other telecommunications activities		*	
6201	Computer programming activities	*	*	
6202	Computer consultancy activities	*	*	
6203	Computer facilities management activities		*	
6209	Other information technology and computer service activities		*	
6311	Data processing, hosting and related activities		*	
6312	Web portals		*	
6391	News agency activities		*	
6399	Other information service activities n.e.c.		*	
7021	Public relations and communication activities	*		
7111	Architectural activities	*		
7311	Advertising agencies	*		
7312	Media representation	*		
7410	Specialised design activities	*		
7420	Photographic activities	*		*
7430	Translation and interpretation activities	*		
8552	Cultural education	*		*
9001	Performing arts	*		*
9002	Support activities to performing arts	*		*
9003	Artistic creation	*		*
9004	Operation of arts facilities	*		*
9101	Library and archives activities	*		*
9102	Museums activities	*		*
9103	Operation of historical sites and buildings and similar visitor attractions			*
9511	Repair of computers and peripheral equipment		*	
9512	Repair of communication equipment		*	

Source: DCMS (2019)

Appendix Table 1.2: Share of İzmir's Cultural Economy within Turkey's Overall Cultural Economy (%), 2015

Number of Employees	Turnover	Salaries / Wages
3.0	2.5	2.0

Source: Calculated by authors by using TURKSTAT's Labour and Annual Industry and Service Statistics 2009-2017 datasets

Appendix Table 1.3: Shares of Sectors within İzmir’s Cultural Economy (%), 2015

	Shares of Sectors within İzmir's Cultural Economy regarding Employment (%)	Shares of Sectors within İzmir's Cultural Economy regarding Turnover (%)	Shares of Sectors within İzmir's Cultural Economy regarding Total Wage/ Salary Payments (%)
1820	0.0	0.0	0.0
3212	21.2	70.5	33.9
3220	3.4	0.3	1.4
4763	3.2	0.4	0.0
5911	5.2	4.1	5.9
5912	0.5	0.1	0.0
5913	0.0	0.0	0.0
5914	14.1	13.9	20.1
5920	2.6	1.0	1.5
6010	y	y	y
6020	y	y	y
7420	29.7	5.6	28.4
8552	4.7	1.0	3.4
9001	11.4	2.4	3.5
9002	1.2	0.1	0.7
9003	1.6	0.4	0.0
9004	1.2	0.2	1.2
9101	0.0	0.0	0.0
9102	0.1	0.0	0.0
9103	0.0	0.0	0.0

Source: Calculated by authors by using TURKSTAT’s Labour and Annual Industry and Service Statistics 2009-2017 datasets

Note: y: No data

Appendix Table 2.1: Comparison of Creative Industries with Other Industries (NACE Rev.2), 2010

	Creative Industries (Total)	Manufacture	Construction	Information and Communication	Turkey Average
Ciro					
Share within Turkey’s Overall Turnover (%)[a]	2	27	6	2	-
Production					
Share within Turkey’s Overall Production (%)[a]	3	44	10	4	-
Value Added					
Value Added Ratio (%)[a]	22	18	16	34	25
Share within Turkey’s Overall Value Added (%)[a,b]	3	32	7	5	-
Share within Turkey’s Overall Value Added[a] / Share within Turkey’s Overall Production (%)[a]	0.9	0.7	0.7	1.4	-
Employment					
Labour Productivity (dollars)	34.704	22.968	13.600	61.350	18.586[a]
Share within Turkey’s Overall Employment (%)	1,06	12,7	4,4	0.7	-
Share within Turkey’s Overall Number of Enterprises (%)[a]	2	12	5	1	-

Source: Calculated by authors by using TURKSTAT’s Labour Statistics and Annual Industry and Service Statistics 2009-2017 dataset.
Note:
Value added share was obtained by comparing the industry’s value added to its production.
Labour productivity was calculated by dividing value added by the number of employees.
Calculated over TL by using TURKSTAT data, the labour productivity was converted to dollars over the dollar exchange rate obtained from WDI database.
a While calculating overall value for Turkey, only the industries included under TURKSTAT’s annual industry and service statistics were taken into account, the industries not included in this dataset were not included in the overall value.
b Calculated by using factor cost and value added data.

Appendix Table 2.2: Türkiye'de Yaratıcı Ekonominin Ayrıntılı Profili (NACE Rev.2), 2010

NACE Rev.2	Turnover (million dollars)	Value Added (million dollars)	Production Value (million dollars)	Value Added Ratio (%)	Number of Employees	Labour Productivity (dollars)	Number of Enterprises
Advertising and Marketing							
7021	127	38	126	30	2,048	18,317	528
7311	5,263	933	5,105	18	59,426	15,695	12,011
7312	2,597	215	2,594	8	3,009	71,423	299
Architecture							
7111	1,556	450	1,480	30	27,425	16,400	9,141
Crafts							
3212	6,175	369	5,887	6	35,983	10,243	12,054
Design: Product, Graphic and Fashion Design							
7410	209	37	185	20	3,540	10,490	1,257
Film, TV, Video, Radio and Photography							
5911	1,043	200	1,033	19	4,615	43,362	1,097
5912	95	22	94	24	717	31,290	131
5913	218	44	206	21	429	101,890	82
5914	291	77	282	27	3,456	22,138	274
6010	107	28	110	25	1,760	15,786	747
6020	1,513	447	1,546	29	7,124	62,745	501
7420	230	43	216	20	12,475	3,468	7,340
Information Technologies, Software and Computer Services							
5821	5	-3	5	-51	29	-88,276	23
5829	g	22a	26	84	617	35,238	32
6201	2,133	976	1,950	50	28,503	34,230	2,643
6202	1,918	692	1,592	43	17,779	38,937	3,504
Publishing							
5811	601	135	550	25	5,535	24,458	1,205
5812	g	g	g	g	g	g	g
5813	1,719	538	1,633	33	11,865	45,307	863
5814	214	27a	201	13	2,128	12,511	430
5819	g	g	g	g	g	g	g
7430	84	29	83	35	1,988	14,564	1,126
Museums, Galleries and Libraries							
9101	9	3	7a	42	246	11,946	23
9102	10	g	10	g	161	g	19
Music, Performing and Visual Arts							
5920	78	17	74	23	815	20,492	357
8552	11	3	11	25	853	3,264	357
9001	227	130	225	58	3,411	37,983	2,045
9002	149	33	142	23	1,889	17,326	334
9003	22	4	21	20	664	6,341	323
9004	169	31	163	19	988	31,609	181

Source: Calculated by the authors by using OECD data.
Not:
Value added share was obtained by comparing the industry's value added to its production.
Labour productivity was calculated by dividing value added by the number of employees. Converted into dollars over the dollar exchange rate obtained from WDI.
g, means confidential data or undisclosed data.
a data belongs to the year 2009.

Appendix Table 2.3: Production of Creative Industries in OECD Countries (million $), 2017

ISIC. Rev.4	Turkey	UK	Germany	France	Italy	Spain	Norway	Finland	Belgium	Greece	Portugal	Poland	Hungary	Latvia	Lithuania	Slovenia	Slovak R.
3211	g	g	1.743	g	6.492	g	g	124	g	g	109	g	23	g	g	46	g
5811	624	7.232	4.520	7.541	2.999	1.978	554	327	749	275	271	869	134	22	40	61	27
5812	g	121	867	g	g	109	3	159	14	13	15	2	g	g	g	g	g
5813	g	14.592	18.931	8.857	5.245	2.423	2.125	2.140	2.249	358	351	1.180	419	63	76	151	135
5819	g	3.915	1.987	g	g	212	75	112	170	30	39	393	40	g	17	g	157
5820	g	3.943	5.914	16.871	335	1.028	2.303	620	381	117	488	644	419	5	37	11	g
5911	1.293	24.263	4.752	8.605	3.083	1.866	641	372	1.868	259	431	936	521	27	56	175	99
5912	71	4.494	515	1.350	323	434	43	24	221	18	19	122	38	6	7	6	188
5913	111	8.976	1.293	2.161	1.163	896	156	57	256	70	114	308	318	8	9	13	21
5914	350	2.225	1.424	2.463	855	614	174	125	282	86	114	377	73	20	25	15	21
5920	83	3.568	2.465	1.381	410	260	232	120	206	14	39	177	29	4	6	15	6
6010	94	1.092	814	1.608	521	612	93	55	110	76	78	240	32	9	9	34	15
6020	1.469	19.424	6.080	18.876	7.702	4.333	1.534	562	918	743	784	3.474	358	50	74	52	132
6201	3.969	29.701	46.499	12.396	24.139	11.819	2.998	7.651	5.101	1.413	995	8.646	1.445	625	603	578	803
6202	g	58.844	34.648	71.502	14.274	14.703	7.583	3.950	12.046	485	2.153	2.432	1.336	63	153	491	777
7020	2.557	88.231	32.525	31.984	18.010	7.929	2.816	3.524	17.447	2.040	3.594	6.088	1.984	211	613	891	2.389
7110	9.311	75.099	71.500	53.717	21.554	21.075	11.397	5.827	10.332	2.296	2.548	5.223	2.021	263	390	1.408	1.620
7310	6.728	42.207	19.584	17.420	15.805	8.337	2.705	1.341	5.261	1.166	1.761	8.712	736	328	451	514	1.475
7410	504	6.805	4.184	3.028	4.384	1.373	726	298	554	27	293	497	61	42	43	69	46
7420	209	2.057	2.234	1.272	818	493	192	138	274	58	83	72	46	10	29	25	52
7490	1.027	16.292	9.988	5.121	12.474	4.240	854	900	741	203	675	1.664	568	117	119	173	1.494
8542	25	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
9000	740	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
9101	22	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
9102	17	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
Total	**29.207**	**413.080**	**272.465**	**266.154**	**140.588**	**84.737**	**37.203**	**28.426**	**59.179**	**9.746**	**14.954**	**42.056**	**10.601**	**1.874**	**2.757**	**4.727**	**9.457**

Source: Calculated by the authors by using OECD data.

Not:

- *All values included over national currencies in OECD database were converted into dollars over the exchange rates received from WDI database.*
- *Certain differences occur between calculations conducted in regards to creative industries for Turkey in the previous chapter and the calculations in this chapter due to the differences between NACE.Rev.2 and ISIC.Rev.4 classifications at 4 digit level.*
- *g, means confidential data or undisclosed data.*

Appendix Table 2.4: Value added of Creative Industries in OECD Countries (million $), 2017

ISIC. Rev.4	Turkey	UK	Germany	France	Italy	Spain	Norway	Finland	Belgium	Greece	Portugal	Poland	Hungary	Latvia	Lithuania	Slovenia	Slovak R.
3211	g	g	669	g	1.228	g	g	32	g	g	35	g	8	g	g	21	g
5811	153	3.838	2.086	2.118	830	947	195	130	246	94	95	391	49	9	13	25	8
5812	g	70	299	g	g	68	1	81	5	6	6	g	g	g	g	g	g
5813	258	8.404	8.599	3.421	1.863	1.111	868	811	892	58	134	476	176	22	33	58	56
5819	g	2.418	1.123	g	g	82	23	57	26	10	14	130	22	g	7	g	47
5820	g	2.267	2.568	8.066	166	722	1.220	289	203	80	235	346	277	2	24	7	g
5911	302	5.779	2.451	4.314	1.235	1.347	254	206	482	91	122	198	44	8	14	53	48
5912	19	2.408	322	704	124	300	26	13	71	7	9	42	20	1	2	4	35
5913	30	4.008	846	428	557	260	18	9	29	14	54	80	75	1	3	1	-2
5914	109	844	614	780	218	263	61	51	79	34	31	132	24	6	9	4	7
5920	18	1.730	1.722	391	139	87	58	54	67	6	20	72	10	2	2	4	2
6010	18	637	783	688	177	310	36	26	47	27	43	142	9	3	4	10	3
6020	408	1.758	6.642	6.149	1.796	1.989	613	106	221	323	340	1.275	140	18	27	g	49
6201	2.072	21.128	30.761	6.018	12.543	5.364	1.476	3.949	2.436	680	608	3.855	976	388	340	353	366
6202	1.045	38.142	23.312	36.407	6.753	9.051	3.929	1.773	5.127	227	1.208	1.231	780	30	87	247	456
7020	961	54.210	23.439	16.336	8.073	4.753	1.580	1.625	6.842	912	1.741	3.029	1.129	114	286	472	819
7110	2.681	43.665	48.667	23.813	10.157	10.217	5.398	3.034	3.338	765	1.118	2.182	1.023	118	198	503	547
7310	1.050	18.814	11.511	6.636	3.132	4.556	672	607	884	299	400	2.085	310	91	175	108	349
7410	96	4.367	2.497	1.187	2.081	1.049	345	127	164	10	134	195	29	14	18	38	8
7420	48	1.284	1.264	479	379	250	97	64	113	15	44	63	22	4	14	15	17
7490	426	9.812	6.585	2.057	6.112	3.066	377	384	254	78	318	630	329	56	54	90	179
8542	6	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
9000	263	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
9101	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
9102	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
Total	**9.964**	**225,581**	**176,761**	**119,995**	**57.562**	**45.791**	**17.245**	**13.428**	**21.527**	**3.737**	**6.709**	**16.553**	**5.451**	**887**	**1.309**	**2.013**	**2.995**

Source: Calculated by the authors by using OECD data.
Not:

- *All values included over national currencies in OECD database were converted into dollars over the exchange rates received from WDI database.*
- *Certain differences occur between calculations conducted in regards to creative industries for Turkey in the previous chapter and the calculations in this chapter due to the differences between NACE.Rev.2 and ISIC.Rev.4 classifications at 4 digit level.*
- *g, means confidential data or undisclosed data.*

Appendix Table 2.5: Turnovers of Creative Industries in OECD Countries (million $), 2017

ISIC. Rev.4	Turkey	UK	Germany	France	Italy	Spain	Norway	Finland	Belgium	Greece	Portugal	Poland	Hungary	Latvia	Lithuania	Slovenia	Slovak R.
3211	g	g	2,084	g	6,374	g	g	150	g	g	118	g	31	g	g	53	g
5811	745	6,930	5,688	10,212	2,888	2,417	565	357	769	297	357	1,094	168	26	40	68	35
5812	g	109	1,073	g	g	119	3	159	14	13	15	2	1	g	g	g	g
5813	g	13,943	22,077	8,870	4,890	2,848	2,125	2,031	2,289	368	364	1,202	472	61	77	152	138
5819	g	3,674	2,527	g	g	333	75	127	181	44	42	408	63	g	19	g	205
5820	g	3,719	7,097	15,704	354	1,091	2,308	611	386	117	476	708	559	5	41	9	g
5911	1,309	18,025	6,235	6,096	2,646	2,379	617	387	1,728	272	415	938	672	25	60	175	87
5912	72	4,325	604	1,338	312	1,576	43	23	244	21	19	121	51	6	7	7	188
5913	161	8,876	1,905	2,007	1,077	1,087	156	104	243	65	117	313	578	8	15	14	29
5914	367	2,282	1,830	2,417	761	804	181	136	312	84	119	402	87	20	29	16	21
5920	89	3,469	3,274	1,076	392	317	232	157	206	16	38	202	47	4	6	19	6
6010	92	1,056	1,055	1,570	462	642	93	57	110	70	75	227	35	9	9	34	15
6020	1,482	18,623	12,152	16,871	7,272	5,721	1,533	575	908	690	732	3,368	412	46	73	53	132
6201	4,372	37,124	61,991	11,288	23,126	13,261	2,993	7,565	5,145	1,522	986	9,031	1,990	633	624	612	891
6202	g	62,956	47,879	72,801	14,256	17,669	7,762	3,761	12,452	540	2,286	2,732	1,964	72	169	627	843
7020	2,789	82,941	39,423	32,721	17,270	8,583	2,819	3,447	17,847	2,092	3,605	6,149	3,128	210	645	1,023	3,405
7110	10,418	74,239	86,385	52,203	17,948	25,404	11,569	5,705	10,779	2,407	2,654	5,367	2,960	260	416	1,641	1,760
7310	7,058	42,366	33,186	17,255	13,922	18,948	2,704	1,897	5,300	1,326	1,773	9,095	1,762	443	550	527	2,027
7410	555	6,993	4,885	3,096	4,306	1,469	746	296	571	31	340	537	95	42	50	74	56
7420	224	2,007	2,321	1,286	828	548	192	137	280	73	89	251	69	10	30	27	64
7490	1,076	14,683	18,491	4,989	12,094	4,823	856	885	754	194	717	1,901	967	116	125	195	2,087
8542	27	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
9000	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
9101	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
9102	18	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
Total	**30,856**	**408,342**	**362,162**	**261,801**	**131,177**	**110,039**	**37,571**	**28,566**	**60,521**	**10,241**	**15,337**	**44,048**	**16,111**	**1,995**	**2,983**	**5,326**	**11,989**

Source: Calculated by the authors by using OECD data.
Not:

- *All values included over national currencies in OECD database were converted into dollars over the exchange rates received from WDI database.*
- *Certain differences occur between calculations conducted in regards to creative industries for Turkey in the previous chapter and the calculations in this chapter due to the differences between NACE.Rev.2 and ISIC.Rev.4 classifications at 4 digit level.*
- *g, means confidential data or undisclosed data.*

Appendix Table 2.6: Employment of Creative Industries in OECD Countries, 2017

ISIC. Rev.4	Turkey	UK	Germany	France	Italy	Spain	Norway	Finland	Belgium	Greece	Portugal	Poland	Hungary	Latvia	Lithuania	Slovenia	Slovak R.
3211	g	g	9.870	g	19.604	g	496	484	g	g	1.686	g	541	89	g	g	g
5811	5.974	g	22.933	25.577	8.112	12.521	1.990	1.457	2.299	2.578	2.072	8.209	1.878	634	655	625	282
5812	g	g	3.398	g	g	844	12	706	63	274	106	29	3	3	11	g	g
5813	16.177	g	117.849	42.855	17.887	19.278	8.620	10.438	5.776	4.773	3.872	12.042	4.942	1.601	2.233	1.268	1.565
5819	g	g	16.634	g	g	1.749	290	636	303	329	420	4.722	643	365	439	g	1.560
5820	952	g	19.394	73.228	1.864	7.414	9.211	1.691	1.109	1.177	3.757	8.310	4.424	75	487	109	g
5911	10.795	g	30.711	43.510	12.554	16.975	2.934	2.705	3.029	5.162	2.695	2.231	2.996	531	447	591	529
5912	1.037	g	3.546	8.746	1.434	3.014	299	216	386	234	191	545	354	91	39	43	590
5913	495	g	2.161	3.018	1.154	1.527	107	75	259	363	187	478	596	20	70	43	121
5914	4.383	g	24.497	10.212	5.112	6.507	1.327	580	765	1.054	992	1.743	359	242	293	72	43
5920	868	g	6.004	3.822	589	845	562	629	234	277	466	1.313	323	117	92	63	48
6010	1.431	5.056	8.613	7.686	2.353	5.564	371	356	241	1.680	1.115	3.838	616	198	118	299	55
6020	8.817	40.866	34.504	38.767	11.846	21.688	5.927	463	1.609	5.345	2.436	12.327	2.173	482	348	201	511
6201	50.326	185.276	288.935	62.093	126.398	70.159	14.252	36.290	16.188	14.416	12.739	82.100	21.979	11.088	9.718	5.373	7.683
6202	25.823	388.092	218.672	352.446	82.793	144.809	28.676	18.586	36.597	2.888	27.734	27.384	17.706	1.324	2.817	3.428	10.470
7020	53.293	489.485	177.374	163.695	71.836	67.992	12.761	17.682	31.130	19.766	41.303	63.771	29.863	5.449	10.140	6.595	22.187
7110	176.169	428.437	528.757	275.636	45.720	142.518	42.939	38.682	24.799	14.879	27.438	59.281	30.072	7.182	11.530	9.762	12.082
7310	65.865	126.794	196.611	89.360	46.087	74.229	7.473	9.061	9.487	8.921	10.649	40.080	9.694	5.139	6.153	1.778	10.218
7410	9.032	54.628	25.738	11.336	17.363	5.947	3.784	1.581	1.283	305	3.922	5.797	1.171	1.072	874	466	602
7420	7.954	16.870	14.097	5.161	3.123	6.062	876	850	663	1.714	1.894	3.431	1.035	476	493	239	791
7490	33.859	114.963	68.058	22.131	45.927	43.644	4.833	5.544	1.654	2.878	8.393	14.907	12.036	2.907	2.364	1.475	5.563
8542	1.335	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
9000	7.692	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
9101	708	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
9102	375	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
Total	**483.360**	**1.850.467**	**1.818.356**	**1.239.279**	**521.756**	**653.286**	**147.740**	**148.712**	**137.874**	**89.013**	**154.067**	**352.538**	**143.404**	**39.085**	**49.321**	**32.430**	**74.900**
Share within Overall Employment (%)	**1,7**	**5,8**	**4,4**	**4,6**	**2,3**	**3,5**	**5,6**	**6,0**	**3,0**	**2,4**	**3,2**	**2,1**	**3,2**	**4,4**	**3,6**	**3,4**	**3,0**

Source: Calculated by the authors by using OECD data.

Not:

- *All values included over national currencies in OECD database were converted into dollars over the exchange rates received from WDI database.*
- *Certain differences occur between calculations conducted in regards to creative industries for Turkey in the previous chapter and the calculations in this chapter due to the differences between NACE.Rev.2 and ISIC.Rev.4 classifications at 4 digit level.*
- *g, means confidential data or undisclosed data.*

Appendix Table 2.7: LQs of Main Creative Industry Groups, 2010

Region	Advertising and Marketing	Architecture	Crafts	Design	Film, TV, Video, Radio and Photography	Information Technologies, Software and Computer Services	Publishing	Museums, Galleries and Libraries	Music, Performing and Visual Arts
TR10	**3,57**	**1,53**	**3,88**	**4,14**	**2,82**	**2,96**	**3,13**	**3,78**	**4,26**
TR21	0,07	0,45	0,04	0,00	0,78	0,11	0,23	0,00	0,33
TR22	0,11	0,58	0,01	0,02	0,53	0,09	0,11	0,92	0,14
TR31	**1,22**	0,90	0,56	0,16	0,97	0,51	0,70	0,00	0,59
TR32	0,15	0,74	0,44	**1,89**	0,74	0,24	0,17	0,00	0,51
TR33	0,07	0,50	0,05	0,03	0,32	0,12	0,26	0,00	0,12
TR41	0,54	**1,07**	0,08	**1,81**	0,47	**1,36**	0,34	0,06	0,40
TR42	0,79	0,86	0,01	0,00	0,71	0,81	0,49	**5,63**	0,22
TR51	**1,59**	**4,23**	0,02	0,26	**1,30**	**3,19**	**2,70**	0,45	0,44
TR52	0,06	**1,37**	0,02	0,18	0,84	0,12	0,42	0,00	0,05
TR61	0,86	**1,30**	**3,34**	0,67	0,90	0,15	0,42	0,00	**1,59**
TR62	0,77	0,88	0,48	0,33	0,42	0,48	0,43	0,00	0,10
TR63	0,17	0,15	0,03	0,28	0,55	0,08	0,18	0,00	0,07
TR71	0,08	0,10	0,15	0,49	0,27	0,15	0,45	0,00	0,04
TR72	0,22	0,33	0,12	0,02	0,54	0,37	0,39	0,00	0,09
TR81	0,09	0,19	0,00	0,00	0,07	0,22	**1,48**	0,00	0,03
TR82	0,02	0,40	0,00	0,00	0,34	0,19	0,09	0,00	0,01
TR83	0,22	0,22	0,23	0,00	0,38	0,18	0,46	0,00	0,19
TR90	0,13	0,52	0,45	0,00	0,43	0,51	0,42	0,00	0,08
TRA1	0,08	0,03	**1,86**	0,00	0,51	0,40	0,39	0,00	0,01
TRA2	0,00	0,09	0,00	0,00	0,41	0,03	0,04	0,00	0,00
TRB1	0,05	0,23	0,13	0,00	0,68	0,08	0,26	0,00	**1,02**
TRB2	0,01	0,15	0,00	0,00	0,34	0,44	0,09	0,00	0,01
TRC1	0,27	0,32	0,00	0,02	0,40	0,36	0,37	0,85	0,06
TRC2	0,18	0,31	0,37	0,01	0,37	0,29	0,17	0,00	0,20
TRC3	0,12	0,25	0,63	0,01	0,35	0,01	0,05	0,00	0,05

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset.

Note: Values with coloured fonts are those that exceed the critical value.

Appendix Table 2.8: LQs of Sub-Creative Industries, 2010

Region	3212	5811	5812	5813	5814	5819	5821	5829	5911	5912	5913	5914	5920	6201	6202
TR10	3,88	2,91	5,49	3,10	4,14	4,25	5,26	3,93	5,33	5,49	5,71	2,28	4,98	2,27	3,91
TR21	0,04	0,00	0,00	0,33	0,37	0,00	0,00	2,71	0,00	0,00	0,00	0,60	0,00	0,07	0,01
TR22	0,01	0,00	0,00	0,21	0,09	0,00	0,00	0,00	0,00	0,00	0,00	0,67	0,00	0,06	0,14
TR31	0,56	0,63	0,00	0,87	0,32	0,00	0,00	0,06	0,05	0,00	0,00	1,89	0,22	0,62	0,37
TR32	0,44	0,00	0,00	0,19	0,66	0,00	0,00	0,02	0,01	0,00	0,00	0,55	0,00	0,32	0,15
TR33	0,05	0,02	0,00	0,47	0,07	0,00	0,00	0,00	0,00	0,00	0,00	0,18	0,00	0,16	0,07
TR41	0,08	0,29	0,00	0,45	0,06	0,00	0,00	2,66	0,01	0,00	0,00	0,91	1,12	1,34	1,32
TR42	0,01	0,05	0,00	0,70	0,14	0,00	0,00	1,06	0,00	0,00	0,00	0,86	0,19	1,25	0,13
TR51	0,02	6,49	0,00	1,06	0,91	0,00	0,85	0,79	0,95	0,17	0,05	2,17	0,66	3,41	3,03
TR52	0,02	0,00	0,00	0,78	0,02	0,00	0,00	0,03	0,01	0,00	0,00	0,51	0,04	0,20	0,01
TR61	3,34	0,00	0,00	0,34	1,66	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,09	0,23	0,04
TR62	0,48	0,00	0,00	0,68	0,36	0,29	0,00	0,00	0,02	0,00	0,00	0,68	0,00	0,76	0,08
TR63	0,03	0,00	0,00	0,31	0,12	0,00	0,00	0,00	0,00	0,00	0,00	0,24	0,03	0,11	0,04
TR71	0,15	0,00	0,00	0,78	0,18	0,00	0,00	0,00	0,00	0,00	0,00	0,22	0,00	0,25	0,00
TR72	0,12	0,00	0,00	0,74	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,62	0,00	0,64	0,00
TR81	0,00	0,00	0,00	0,46	1,16	5,43	0,00	0,00	0,01	0,00	0,00	0,39	0,00	0,37	0,00
TR82	0,00	0,00	0,00	0,17	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,05	0,00	0,06	0,40
TR83	0,23	0,00	0,00	0,88	0,02	0,00	0,00	0,00	0,00	0,00	0,00	0,63	0,00	0,31	0,02
TR90	0,45	0,34	0,00	0,64	0,00	0,00	0,00	0,00	0,01	0,00	0,00	0,60	0,00	0,88	0,01
TRA1	1,86	0,03	0,00	0,70	0,19	0,00	0,00	0,00	0,00	0,00	0,00	0,86	0,00	0,60	0,14
TRA2	0,00	0,00	0,00	0,07	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,05	0,00	0,06	0,00
TRB1	0,13	0,00	1,90	0,24	0,90	6,00	0,00	0,00	0,00	1,40	0,00	0,57	0,12	0,13	0,01
TRB2	0,00	0,00	0,00	0,16	0,00	0,82	0,00	0,00	0,00	0,00	0,00	0,31	0,00	0,76	0,00
TRC1	0,00	0,05	0,00	0,61	0,11	0,28	0,99	0,00	0,00	0,00	0,00	0,39	0,00	0,63	0,00
TRC2	0,37	0,21	0,00	0,22	0,00	0,00	0,00	0,04	0,10	0,00	0,00	0,49	0,00	0,49	0,00
TRC3	0,63	0,00	0,00	0,08	0,00	0,00	0,00	0,13	0,00	0,00	0,00	0,25	0,00	0,01	0,00

Appendix Table 2.9: LQs of Sub-Creative Industries, 2010 (continued)

Region	7021	7111	7311	7312	7410	7420	7430	8552	9001	9002	9003	9004	9101	9102
TR10	5,16	1,53	3,51	4,62	4,14	1,83	2,93	4,14	3,43	5,18	2,38	4,47	3,28	4,57
TR21	0,00	0,45	0,08	0,00	0,00	1,19	0,15	0,03	0,11	0,07	6,09	0,00	0,00	0,00
TR22	0,00	0,58	0,11	0,10	0,02	0,72	0,00	0,00	0,48	0,00	0,20	0,00	0,00	2,37
TR31	0,05	0,90	1,27	0,00	0,16	1,13	0,47	1,43	0,01	0,15	0,56	2,17	0,00	0,00
TR32	0,00	0,74	0,15	0,06	1,89	1,12	0,14	0,21	1,63	0,02	0,22	0,00	0,00	0,00
TR33	0,05	0,50	0,07	0,00	0,03	0,50	0,00	0,03	0,40	0,00	0,06	0,00	0,00	0,00
TR41	0,12	1,07	0,53	2,12	1,81	0,55	0,21	0,07	0,65	0,00	2,26	0,20	0,00	0,15
TR42	0,01	0,86	0,82	0,11	0,00	0,99	0,67	0,39	0,24	0,11	0,16	0,07	9,17	0,00
TR51	1,09	4,23	1,63	0,00	0,26	1,28	3,51	0,37	0,29	0,26	2,09	0,69	0,00	1,17
TR52	0,00	1,37	0,06	0,00	0,18	1,31	0,07	0,01	0,13	0,00	0,22	0,00	0,00	0,00
TR61	0,30	1,30	0,88	0,29	0,67	1,56	0,73	0,12	4,58	0,96	0,57	0,08	0,00	0,00
TR62	0,03	0,88	0,80	0,07	0,33	0,52	0,25	0,09	0,15	0,02	0,29	0,29	0,00	0,00
TR63	0,00	0,15	0,17	0,00	0,28	0,88	0,04	0,00	0,07	0,00	0,99	0,00	0,00	0,00
TR71	0,00	0,10	0,08	0,31	0,49	0,41	0,23	0,07	0,06	0,02	0,00	0,08	0,00	0,00
TR72	0,00	0,33	0,23	0,09	0,02	0,76	0,04	0,06	0,20	0,04	0,18	0,00	0,00	0,00
TR81	0,00	0,19	0,10	0,00	0,00	0,00	7,13	0,00	0,02	0,00	0,44	0,00	0,00	0,00
TR82	0,00	0,40	0,02	0,10	0,00	0,58	0,00	0,03	0,00	0,00	0,00	0,00	0,00	0,00
TR83	0,07	0,22	0,21	1,15	0,00	0,48	0,05	0,54	0,06	0,01	0,30	0,33	0,00	0,00
TR90	0,00	0,52	0,13	0,03	0,00	0,57	0,03	0,25	0,04	0,00	0,05	0,00	0,00	0,00
TRA1	0,00	0,03	0,09	0,00	0,00	0,64	0,00	0,00	0,03	0,00	0,16	0,00	0,00	0,00
TRA2	0,00	0,09	0,00	0,00	0,00	0,70	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
TRB1	0,00	0,23	0,05	0,00	0,00	0,95	0,04	4,04	0,00	0,00	0,12	0,00	0,00	0,00
TRB2	0,00	0,15	0,01	0,00	0,00	0,50	0,00	0,00	0,04	0,00	0,00	0,00	0,00	0,00
TRC1	0,00	0,32	0,29	0,00	0,02	0,58	0,21	0,05	0,15	0,00	0,18	0,00	0,00	2,20
TRC2	0,03	0,31	0,19	0,00	0,01	0,47	0,02	0,00	0,02	0,68	0,00	0,00	0,00	0,00
TRC3	0,00	0,25	0,12	0,00	0,01	0,54	0,05	0,11	0,05	0,00	0,00	0,10	0,00	0,00

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.

Note: Values with coloured fonts are those that exceed the critical value.

Appendix Table 2.10: Three Star Analysis Results of Creative Industries for TR-10 Region, 2015

NACE. Rev.2	TR10-İSTANBUL	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0008	**0,86**	**4,30**	2
7311	Advertising agencies	**0,0087**	**0,70**	**3,50**	3
7312	Media representation	0,0001	**0,82**	**4,10**	2
	Architecture				
7111	Architectural activities	**0,0026**	**0,34**	**1,71**	3
	Crafts				
3212	Manufacture of jewellery and related articles	**0,0031**	**0,78**	**3,93**	3
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0009	**0,63**	**3,18**	2
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	**0,0021**	**0,87**	**4,39**	3
5912	Motion picture, video and television programme post-production activities	0,0002	**0,79**	**3,94**	2
5913	Motion picture, video and television programme distribution activities	0,0001	**0,90**	**4,53**	2
5914	Motion picture projection activities	0,0002	**0,35**	**1,78**	2
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0008	**0,32**	**1,62**	2
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	**0,90**	**4,50**	2
5829	Other software publishing	0,0002	**0,72**	**3,59**	2
6201	Computer programming activities	**0,0042**	**0,50**	**2,52**	3
6202	Computer consultancy activities	**0,0030**	**0,72**	**3,61**	3
	Publishing				
5811	Book publishing	0,0006	**0,62**	**3,10**	2
5812	Publishing of directories and mailing lists	0,0000	**0,64**	**3,23**	2
5813	Publishing of newspapers	0,0010	**0,33**	**1,67**	2
5814	Publishing of journals and periodicals	0,0005	**0,65**	**3,24**	2
5819	Other publishing activities	0,0001	**0,39**	**1,98**	2
7430	Translation and interpretation activities	0,0003	**0,63**	**3,18**	2
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0001	**0,47**	**2,34**	2
9102	Museums activities	0,0000	**0,81**	**4,04**	2
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0002	**0,82**	**4,11**	2
8552	Cultural education	0,0001	**0,38**	**1,90**	2
9001	Performing arts	0,0007	**0,58**	**2,90**	2
9002	Support activities to performing arts	0,0004	**0,76**	**3,79**	2
9003	Artistic creation	0,0000	**0,38**	**1,88**	2
9004	*Operation of arts facilities*	0,0003	**0,89**	**4,49**	2

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.11: Three Star Analysis Results of Creative Industries for TR-21 Region, 2015

NACE. Rev.2	TR21-Tekirdağ, Edirne, Kırklareli	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,02	0
7311	Advertising agencies	0,0003	0,00	0,10	0
7312	Media representation	0,0000	**0,01**	0,54	1
	Architecture				
7111	Architectural activities	0,0007	**0,01**	0,44	1
	Crafts				0
3212	Manufacture of jewellery and related articles	0,0000	0,00	0,00	0
	Design: Product, Graphic and Fashion Design				0
7410	Specialised design activities	0,0005	**0,05**	**1,77**	2
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,04	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,13	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,01**	0,56	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0003	**0,01**	0,55	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0002	0,00	0,14	0
6202	Computer consultancy activities	0,0002	0,01	0,21	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,04	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0003	**0,01**	0,46	1
5814	Publishing of journals and periodicals	0,0001	**0,01**	0,44	1
5819	Other publishing activities	0,0000	0,01	0,30	0
7430	Translation and interpretation activities	0,0000	0,00	0,02	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,08	0
8552	Cultural education	0,0000	0,00	0,05	0
9001	Performing arts	0,0000	0,00	0,17	0
9002	Support activities to performing arts	0,0000	0,00	0,03	0
9003	Artistic creation	0,0000	**0,04**	**1,59**	2
9004	*Operation of arts facilities*	0,0000	0,00	0,02	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.12: Three Star Analysis Results of Creative Industries for TR-22 Region, 2015

NACE. Rev.2	TR22- Balıkesir, Çanakkale	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,01	0
7311	Advertising agencies	0,0005	0,00	0,20	0
7312	Media representation	0,0000	**0,02**	0,84	1
	Architecture				
7111	Architectural activities	0,0005	0,01	0,34	0
	Crafts				
3212	Manufacture of jewellery and related articles	0,0000	0,00	0,00	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,01	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,00	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,01**	0,58	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0007	**0,03**	**1,39**	2
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,17	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0002	0,00	0,10	0
6202	Computer consultancy activities	0,0002	0,00	0,20	0
	Publishing				
5811	Book publishing	0,0001	0,01	0,25	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0007	**0,03**	**1,20**	2
5814	Publishing of journals and periodicals	0,0000	0,00	0,19	0
5819	Other publishing activities	0,0000	0,01	0,39	0
7430	Translation and interpretation activities	0,0000	0,00	0,08	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	**0,05**	**2,04**	2
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,12	0
8552	Cultural education	0,0001	**0,04**	**1,81**	2
9001	Performing arts	0,0001	0,01	0,29	0
9002	Support activities to performing arts	0,0000	0,00	0,06	0
9003	Artistic creation	0,0000	0,00	0,20	0
9004	*Operation of arts facilities*	0,0000	0,00	0,09	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.13: Three Star Analysis Results of Creative Industries for TR-32 Region, 2015

NACE. Rev.2	TR32- Aydın, Denizli, Muğla	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,06	0
7311	Advertising agencies	0,0004	0,01	0,17	0
7312	Media representation	0,0000	0,00	0,05	0
	Architecture				
7111	Architectural activities	0,0007	**0,02**	0,43	1
	Crafts				
3212	Manufacture of jewellery and related articles	0,0002	0,01	0,21	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0005	**0,08**	**1,95**	2
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,04	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,04	0
5913	Motion picture, video and television programme distribution activities	0,0000	**0,06**	**1,48**	2
5914	Motion picture projection activities	0,0001	**0,04**	**1,03**	2
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0005	**0,04**	0,89	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,01	0,18	0
5829	Other software publishing	0,0000	0,00	0,04	0
6201	Computer programming activities	0,0001	0,00	0,08	0
6202	Computer consultancy activities	0,0001	0,00	0,11	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,02	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0003	**0,02**	0,53	1
5814	Publishing of journals and periodicals	0,0000	**0,01**	0,27	1
5819	Other publishing activities	0,0000	0,01	0,21	0
7430	Translation and interpretation activities	0,0000	**0,02**	0,40	1
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,01	0,16	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	**0,02**	0,51	1
8552	Cultural education	0,0000	**0,01**	0,29	1
9001	Performing arts	0,0002	**0,04**	1,00	1
9002	Support activities to performing arts	0,0000	0,00	0,10	0
9003	Artistic creation	0,0000	**0,02**	0,44	1
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.14: Three Star Analysis Results of Creative Industries for TR-33 Region, 2015

NACE. Rev.2	TR33- Manisa, Afyon, Kütahya, Uşak	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0004	0,01	0,18	0
7312	Media representation	0,0000	**0,02**	0,43	1
	Architecture				
7111	Architectural activities	0,0006	**0,02**	0,43	1
	Crafts				
3212	Manufacture of jewellery and related articles	0,0001	0,00	0,11	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,01	0,18	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,10	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,02**	0,44	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0002	**0,02**	0,42	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,02	0
6201	Computer programming activities	0,0001	0,00	0,07	0
6202	Computer consultancy activities	0,0000	0,00	0,00	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,00	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0005	**0,04**	0,90	1
5814	Publishing of journals and periodicals	0,0000	0,00	0,05	0
5819	Other publishing activities	0,0000	**0,02**	0,38	1
7430	Translation and interpretation activities	0,0000	0,00	0,00	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,03	0
8552	Cultural education	0,0000	0,00	0,00	0
9001	Performing arts	0,0000	0,01	0,13	0
9002	Support activities to performing arts	0,0000	0,00	0,07	0
9003	Artistic creation	0,0000	0,01	0,20	0
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.15: Three Star Analysis Results of Creative Industries for TR-41 Region, 2015

NACE. Rev.2	TR41- Bursa, Eskişehir, Bilecik	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,01	0,15	0
7311	Advertising agencies	**0,0013**	**0,03**	0,51	2
7312	Media representation	0,0000	0,00	0,00	0
	Architecture				
7111	Architectural activities	**0,0019**	**0,06**	**1,22**	3
	Crafts				
3212	Manufacture of jewellery and related articles	0,0003	**0,02**	0,33	1
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0001	**0,02**	0,48	1
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,03	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,03	0
5913	Motion picture, video and television programme distribution activities	0,0000	**0,01**	0,26	1
5914	Motion picture projection activities	0,0001	**0,04**	0,86	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0005	**0,05**	**1,03**	2
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,02	0
6201	Computer programming activities	0,0011	**0,03**	0,64	1
6202	Computer consultancy activities	0,0006	**0,04**	0,71	1
	Publishing				
5811	Book publishing	0,0001	**0,02**	0,30	1
5812	Publishing of directories and mailing lists	0,0000	**0,12**	**2,33**	2
5813	Publishing of newspapers	0,0006	**0,05**	**1,06**	2
5814	Publishing of journals and periodicals	0,0000	**0,02**	0,31	1
5819	Other publishing activities	0,0000	0,01	0,20	0
7430	Translation and interpretation activities	0,0001	**0,04**	0,87	1
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,06	0
9102	Museums activities	0,0000	0,00	0,07	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,06	0
8552	Cultural education	0,0000	**0,01**	0,27	1
9001	Performing arts	0,0000	0,01	0,15	0
9002	Support activities to performing arts	0,0000	**0,02**	0,41	1
9003	Artistic creation	0,0000	**0,08**	**1,53**	2
9004	*Operation of arts facilities*	0,0000	0,00	0,04	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.16: Three Star Analysis Results of Creative Industries for TR-42 Region, 2015

NACE. Rev.2	TR42- Kocaeli, Sakarya, Düzce, Bolu, Yalova	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0008	**0,02**	0,32	1
7312	Media representation	0,0000	0,00	0,09	0
	Architecture				
7111	Architectural activities	0,0003	**0,01**	0,21	1
	Crafts				
3212	Manufacture of jewellery and related articles	0,0001	0,01	0,10	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0001	**0,02**	0,40	1
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,06	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,02	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,04**	0,87	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0004	**0,04**	0,79	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,01	0,15	0
5829	Other software publishing	0,0000	**0,05**	0,96	1
6201	Computer programming activities	**0,0018**	**0,06**	**1,10**	3
6202	Computer consultancy activities	0,0005	**0,03**	0,58	1
	Publishing				
5811	Book publishing	0,0000	0,00	0,02	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0003	**0,03**	0,58	1
5814	Publishing of journals and periodicals	0,0000	**0,01**	0,26	1
5819	Other publishing activities	0,0000	**0,04**	0,73	1
7430	Translation and interpretation activities	0,0001	**0,06**	**1,11**	2
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0002	**0,51**	**10,19**	2
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,08	0
8552	Cultural education	0,0002	**0,15**	**2,97**	2
9001	Performing arts	0,0000	0,00	0,01	0
9002	Support activities to performing arts	0,0000	0,00	0,04	0
9003	Artistic creation	0,0000	**0,03**	0,53	1
9004	*Operation of arts facilities*	0,0000	0,01	0,17	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.17: Three Star Analysis Results of Creative Industries for TR-51 Region, 2015

NACE. Rev.2	TR-51 Ankara	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0001	**0,02**	0,34	1
7311	Advertising agencies	**0,0027**	**0,07**	**1,08**	3
7312	Media representation	0,0000	**0,06**	0,90	1
	Architecture				
7111	Architectural activities	**0,0048**	**0,22**	**3,17**	3
	Crafts				0
3212	Manufacture of jewellery and related articles	0,0002	**0,02**	0,23	1
	Design: Product, Graphic and Fashion Design				0
7410	Specialised design activities	0,0002	**0,04**	0,57	1
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0006	**0,09**	**1,24**	2
5912	Motion picture, video and television programme post-production activities	0,0001	**0,13**	**1,96**	2
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,05	0
5914	Motion picture projection activities	0,0002	**0,09**	**1,31**	2
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0006	**0,08**	**1,10**	2
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	**0,02**	0,28	1
5829	Other software publishing	0,0001	**0,19**	**2,72**	2
6201	Computer programming activities	**0,0056**	**0,23**	**3,41**	3
6202	Computer consultancy activities	**0,0014**	**0,12**	**1,68**	3
	Publishing				
5811	Book publishing	0,0009	**0,29**	**4,24**	2
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0006	**0,07**	**1,07**	2
5814	Publishing of journals and periodicals	0,0004	**0,19**	**2,69**	2
5819	Other publishing activities	0,0001	**0,30**	**4,30**	2
7430	Translation and interpretation activities	0,0002	**0,13**	**1,93**	2
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	**0,01**	0,16	1
9102	Museums activities	0,0000	**0,09**	**1,33**	2
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	**0,05**	0,78	1
8552	Cultural education	0,0001	**0,12**	**1,67**	2
9001	Performing arts	0,0002	**0,05**	0,68	1
9002	Support activities to performing arts	0,0000	**0,03**	0,40	1
9003	Artistic creation	0,0000	**0,10**	**1,43**	2
9004	*Operation of arts facilities*	0,0000	**0,01**	0,19	1

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.18: Three Star Analysis Results of Creative Industries for TR-52 Region, 2015

NACE. Rev.2	TR52- Konya, Karaman	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0005	0,01	0,20	0
7312	Media representation	0,0000	0,01	0,23	0
	Architecture				
7111	Architectural activities	0,0004	0,01	0,23	0
	Crafts				0
3212	Manufacture of jewellery and related articles	0,0000	0,00	0,04	0
	Design: Product, Graphic and Fashion Design				0
7410	Specialised design activities	0,0000	0,00	0,16	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,10	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,03	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,01**	0,49	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0003	**0,02**	0,55	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,13	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0006	**0,01**	0,39	1
6202	Computer consultancy activities	0,0001	0,00	0,14	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,03	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0004	**0,02**	0,72	1
5814	Publishing of journals and periodicals	0,0000	0,00	0,06	0
5819	Other publishing activities	0,0000	0,00	0,15	0
7430	Translation and interpretation activities	0,0000	0,01	0,29	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,06	0
8552	Cultural education	0,0000	0,00	0,00	0
9001	Performing arts	0,0000	0,00	0,10	0
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0001	**0,07**	**2,23**	2
9004	*Operation of arts facilities*	0,0000	0,00	0,02	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.19: Three Star Analysis Results of Creative Industries for TR-61 Region, 2015

NACE. Rev.2	TR61- Antalya, Isparta, Burdur	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0001	**0,03**	0,64	1
7311	Advertising agencies	**0,0019**	**0,03**	0,77	2
7312	Media representation	0,0000	0,00	0,00	0
	Architecture				
7111	Architectural activities	**0,0042**	**0,12**	**2,78**	3
	Crafts				0
3212	Manufacture of jewellery and related articles	0,0004	**0,02**	0,54	1
	Design: Product, Graphic and Fashion Design				0
7410	Specialised design activities	0,0001	0,01	0,18	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,09	0
5912	Motion picture, video and television programme post-production activities	0,0000	**0,04**	0,96	1
5913	Motion picture, video and television programme distribution activities	0,0000	**0,01**	0,36	1
5914	Motion picture projection activities	0,0002	**0,05**	**1,30**	2
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0012	**0,10**	**2,31**	2
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,09	0
5829	Other software publishing	0,0000	0,00	0,06	0
6201	Computer programming activities	0,0004	0,01	0,22	0
6202	Computer consultancy activities	0,0001	0,01	0,16	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,04	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0005	**0,03**	0,75	1
5814	Publishing of journals and periodicals	0,0000	0,01	0,17	0
5819	Other publishing activities	0,0000	**0,02**	0,51	1
7430	Translation and interpretation activities	0,0001	**0,02**	0,57	1
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,04	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,11	0
8552	Cultural education	0,0001	**0,05**	**1,20**	2
9001	Performing arts	**0,0013**	**0,23**	**5,60**	3
9002	Support activities to performing arts	0,0004	**0,16**	**3,84**	2
9003	Artistic creation	0,0001	**0,10**	**2,37**	2
9004	*Operation of arts facilities*	0,0000	**0,01**	0,31	1

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.20: Three Star Analysis Results of Creative Industries for TR-62 Region, 2015

NACE. Rev.2	TR62- Adana, Mersin	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0001	**0,02**	0,39	1
7311	Advertising agencies	0,0012	**0,02**	0,46	1
7312	Media representation	0,0000	0,00	0,00	0
	Architecture				
7111	Architectural activities	0,0011	**0,04**	0,74	1
	Crafts				0
3212	Manufacture of jewellery and related articles	0,0002	**0,01**	0,25	1
	Design: Product, Graphic and Fashion Design				0
7410	Specialised design activities	0,0001	**0,02**	0,33	1
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,05	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,05	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,04	0
5914	Motion picture projection activities	0,0001	**0,03**	0,66	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0006	**0,06**	**1,21**	2
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,08	0
5829	Other software publishing	0,0000	0,00	0,05	0
6201	Computer programming activities	0,0012	**0,04**	0,73	1
6202	Computer consultancy activities	0,0000	0,00	0,04	0
	Publishing				
5811	Book publishing	0,0000	0,01	0,18	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0007	**0,06**	**1,24**	2
5814	Publishing of journals and periodicals	0,0000	0,01	0,12	0
5819	Other publishing activities	0,0000	**0,01**	0,30	1
7430	Translation and interpretation activities	0,0000	0,00	0,00	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,04	0
8552	Cultural education	0,0000	**0,03**	0,70	1
9001	Performing arts	0,0000	0,00	0,02	0
9002	Support activities to performing arts	0,0000	0,01	0,21	0
9003	Artistic creation	0,0000	**0,02**	0,45	1
9004	*Operation of arts facilities*	0,0001	**0,05**	0,99	1

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.21: Three Star Analysis Results of Creative Industries for TR-63 Region, 2015

NACE. Rev.2	TR63- Hatay, Kahramanmaraş, Osmaniye	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,04	0
7311	Advertising agencies	0,0002	0,00	0,06	0
7312	Media representation	0,0000	0,01	0,29	0
	Architecture				
7111	Architectural activities	0,0005	0,01	0,34	0
	Crafts				0
3212	Manufacture of jewellery and related articles	0,0006	**0,02**	0,79	1
	Design: Product, Graphic and Fashion Design				0
7410	Specialised design activities	0,0000	0,00	0,00	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,00	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,01	0,35	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,02**	0,84	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0002	0,01	0,37	0
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0001	0,00	0,05	0
6202	Computer consultancy activities	0,0000	0,00	0,02	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,05	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0005	**0,02**	0,81	1
5814	Publishing of journals and periodicals	0,0000	0,00	0,01	0
5819	Other publishing activities	0,0000	0,01	0,31	0
7430	Translation and interpretation activities	0,0000	0,01	0,27	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,05	0
8552	Cultural education	0,0000	0,01	0,21	0
9001	Performing arts	0,0000	0,00	0,04	0
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	**0,02**	0,71	1
9004	*Operation of arts facilities*	0,0000	0,00	0,04	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.22: Three Star Analysis Results of Creative Industries for TR-71 Region, 2015

NACE. Rev.2	TR71- Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0001	**0,01**	0,73	1
7311	Advertising agencies	0,0004	0,00	0,16	0
7312	Media representation	0,0000	0,00	0,06	0
	Architecture				
7111	Architectural activities	0,0003	0,00	0,18	0
	Crafts				
3212	Manufacture of jewellery and related articles	0,0003	0,01	0,33	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0001	0,01	0,28	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,01	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	0,01	0,51	0
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0002	0,01	0,34	0
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	**0,02**	0,79	1
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0000	0,00	0,03	0
6202	Computer consultancy activities	0,0000	0,00	0,01	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,01	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0008	**0,02**	**1,29**	2
5814	Publishing of journals and periodicals	0,0000	0,00	0,06	0
5819	Other publishing activities	0,0000	0,00	0,06	0
7430	Translation and interpretation activities	0,0000	0,01	0,33	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,08	0
9102	Museums activities	0,0000	0,01	0,36	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,10	0
8552	Cultural education	0,0001	**0,02**	0,83	1
9001	Performing arts	0,0001	0,01	0,41	0
9002	Support activities to performing arts	0,0000	0,00	0,04	0
9003	Artistic creation	0,0000	0,00	0,15	0
9004	*Operation of arts facilities*	0,0000	0,00	0,03	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.23: Three Star Analysis Results of Creative Industries for TR-72 Region, 2015

NACE. Rev.2	TR72- Kayseri, Sivas, Yozgat	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,01	0
7311	Advertising agencies	0,0009	0,01	0,36	0
7312	Media representation	0,0000	0,00	0,00	0
	Architecture				
7111	Architectural activities	0,0005	0,01	0,30	0
	Crafts				
3212	Manufacture of jewellery and related articles	0,0002	0,01	0,21	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0001	**0,01**	0,49	1
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,01	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,03**	0,95	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0006	**0,03**	**1,10**	2
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,14	0
6201	Computer programming activities	0,0002	0,00	0,12	0
6202	Computer consultancy activities	0,0002	0,01	0,23	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,07	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0003	**0,01**	0,48	1
5814	Publishing of journals and periodicals	0,0000	0,00	0,07	0
5819	Other publishing activities	0,0000	0,00	0,11	0
7430	Translation and interpretation activities	0,0000	0,01	0,23	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,01	0,18	0
8552	Cultural education	0,0000	0,01	0,25	0
9001	Performing arts	0,0000	0,00	0,08	0
9002	Support activities to performing arts	0,0000	0,00	0,01	0
9003	Artistic creation	0,0000	**0,02**	0,76	1
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.24: Three Star Analysis Results of Creative Industries for TR-81 Region, 2015

NACE. Rev.2	TR81- Zonguldak, Karabük, Bartın	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,04	0
7311	Advertising agencies	0,0007	0,00	0,26	0
7312	Media representation	0,0000	0,00	0,08	0
	Architecture				
7111	Architectural activities	0,0005	0,00	0,33	0
	Crafts				
3212	Manufacture of jewellery and related articles	0,0001	0,00	0,12	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,13	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,00	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,06	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	0,01	0,64	0
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0004	0,01	0,68	0
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0001	0,00	0,07	0
6202	Computer consultancy activities	0,0001	0,00	0,09	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,00	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0005	**0,01**	0,83	1
5814	Publishing of journals and periodicals	0,0001	0,01	0,44	0
5819	Other publishing activities	0,0000	0,00	0,08	0
7430	Translation and interpretation activities	0,0000	0,00	0,12	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,00	0
8552	Cultural education	0,0000	0,00	0,00	0
9001	Performing arts	0,0000	0,00	0,08	0
9002	Support activities to performing arts	0,0000	0,00	0,05	0
9003	Artistic creation	0,0000	0,00	0,10	0
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.25: Three Star Analysis Results of Creative Industries for TR-82 Region, 2015

NACE. Rev.2	TR82- Kastamonu, Çankırı, Sinop	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0001	0,00	0,05	0
7312	Media representation	0,0000	0,01	0,76	0
	Architecture				
7111	Architectural activities	0,0006	0,00	0,37	0
	Crafts				
3212	Manufacture of jewellery and related articles	0,0000	0,00	0,00	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,01	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,01	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0000	0,00	0,05	0
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0003	0,01	0,60	0
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0000	0,00	0,02	0
6202	Computer consultancy activities	0,0000	0,00	0,01	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,02	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0004	0,01	0,65	0
5814	Publishing of journals and periodicals	0,0000	0,00	0,18	0
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0000	0,00	0,00	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,00	0
8552	Cultural education	0,0000	0,00	0,00	0
9001	Performing arts	0,0000	0,00	0,10	0
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	0,00	0,14	0
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.26: Three Star Analysis Results of Creative Industries for TR-83 Region, 2015

NACE. Rev.2	TR83- Samsun, Tokat, Çorum, Amasya	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0005	0,01	0,21	0
7312	Media representation	0,0000	0,00	0,06	0
	Architecture				
7111	Architectural activities	0,0001	0,00	0,07	0
	Crafts				
3212	Manufacture of jewellery and related articles	0,0002	0,01	0,27	
	Design: Product, Graphic and Fashion Design				0
7410	Specialised design activities	0,0000	0,01	0,18	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,00	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,02**	0,67	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0004	**0,03**	0,76	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,02	0
6201	Computer programming activities	0,0005	0,01	0,28	0
6202	Computer consultancy activities	0,0001	0,00	0,11	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,03	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0005	**0,03**	0,89	1
5814	Publishing of journals and periodicals	0,0000	0,00	0,12	0
5819	Other publishing activities	0,0000	0,01	0,21	0
7430	Translation and interpretation activities	0,0000	0,00	0,00	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,11	0
8552	Cultural education	0,0001	**0,08**	**2,27**	2
9001	Performing arts	0,0000	0,00	0,12	0
9002	Support activities to performing arts	0,0000	0,00	0,09	0
9003	Artistic creation	0,0000	**0,01**	0,40	1
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.27: Three Star Analysis Results of Creative Industries for TR-90 Region, 2015

NACE. Rev.2	TR90- Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,04	0
7311	Advertising agencies	0,0004	0,01	0,15	0
7312	Media representation	0,0000	0,00	0,12	0
	Architecture				
7111	Architectural activities	0,0005	**0,01**	0,30	1
	Crafts				
3212	Manufacture of jewellery and related articles	0,0002	0,01	0,23	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,13	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,06	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,02**	0,50	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0003	**0,02**	0,64	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	**0,02**	0,53	1
6201	Computer programming activities	0,0002	0,00	0,11	0
6202	Computer consultancy activities	0,0000	0,00	0,04	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,01	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0006	**0,04**	**1,05**	2
5814	Publishing of journals and periodicals	0,0001	**0,02**	0,45	1
5819	Other publishing activities	0,0000	**0,02**	0,64	1
7430	Translation and interpretation activities	0,0000	0,01	0,21	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,04	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,00	0
8552	Cultural education	0,0000	**0,02**	0,42	1
9001	Performing arts	0,0000	0,00	0,06	0
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	0,01	0,15	0
9004	*Operation of arts facilities*	0,0000	0,00	0,04	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.28: TRA1 Region, 2015

NACE. Rev.2	TRA1- Erzurum, Erzincan, Bayburt	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0002	0,00	0,08	0
7312	Media representation	0,0000	**0,01**	**1,04**	2
	Architecture				
7111	Architectural activities	0,0004	0,00	0,24	0
	Crafts				
3212	Manufacture of jewellery and related articles	0,0001	0,00	0,12	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,03	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,00	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0002	**0,02**	**1,58**	2
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0002	0,00	0,30	0
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0002	0,00	0,09	0
6202	Computer consultancy activities	0,0000	0,00	0,05	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,01	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0003	0,01	0,55	0
5814	Publishing of journals and periodicals	0,0000	0,00	0,21	0
5819	Other publishing activities	0,0000	0,00	0,16	0
7430	Translation and interpretation activities	0,0000	0,00	0,00	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,05	0
8552	Cultural education	0,0000	0,00	0,14	0
9001	Performing arts	0,0000	0,00	0,00	0
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	0,00	0,33	0
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.29: Three Star Analysis Results of Creative Industries for TR-A2 Region, 2015

NACE. Rev.2	TRA2- Ağrı, Kars, Iğdır, Ardahan	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0001	0,00	0,03	0
7312	Media representation	0,0000	0,00	0,00	0
	Architecture				
7111	Architectural activities	0,0003	0,00	0,20	0
	Crafts				
3212	Manufacture of jewellery and related articles	0,0001	0,00	0,09	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,08	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,00	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	y	y	y	-
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	0,0000	0,00	0,00	0
7420	Photographic activities	0,0001	0,00	0,18	0
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0000	0,00	0,02	0
6202	Computer consultancy activities	0,0000	0,00	0,03	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,03	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0003	0,01	0,42	0
5814	Publishing of journals and periodicals	0,0000	0,00	0,03	0
5819	Other publishing activities	0,0000	0,00	0,08	0
7430	Translation and interpretation activities	0,0000	0,00	0,03	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,00	0
8552	Cultural education	0,0000	0,00	0,00	0
9001	Performing arts	0,0000	0,00	0,04	0
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	0,00	0,00	0
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.30: Three Star Analysis Results of Creative Industries for TR-B1 Region, 2015

NACE. Rev.2	TRB1- Ağrı, Kars, Iğdır, Ardahan	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0005	0,00	0,20	0
7312	Media representation	0,0000	0,00	0,11	0
	Architecture				
7111	Architectural activities	**0,0014**	**0,02**	0,93	2
	Crafts				
3212	Manufacture of jewellery and related articles	0,0000	0,00	0,05	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0001	0,01	0,28	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,07	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,08	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	0,01	0,44	0
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0003	**0,01**	0,57	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0001	0,00	0,07	0
6202	Computer consultancy activities	0,0001	0,00	0,16	0
	Publishing				
5811	Book publishing	0,0001	0,01	0,29	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0004	**0,01**	0,59	1
5814	Publishing of journals and periodicals	0,0001	0,01	0,51	0
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0000	0,00	0,06	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,06	0
8552	Cultural education	0,0000	0,01	0,33	0
9001	Performing arts	0,0000	0,00	0,00	0
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	0,01	0,28	0
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.31: Three Star Analysis Results of Creative Industries for TR-B2 Region, 2015

NACE. Rev.2	TRB2- Van, Muş, Bitlis, Hakkari	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0002	0,00	0,07	0
7312	Media representation	0,0000	0,00	0,22	0
	Architecture				
7111	Architectural activities	0,0001	0,00	0,04	0
	Crafts				
3212	Manufacture of jewellery and related articles	0,0004	0,01	0,49	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0001	0,00	0,19	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,01	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,01**	0,55	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0003	**0,01**	0,52	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,18	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0001	0,00	0,05	0
6202	Computer consultancy activities	0,0001	0,00	0,09	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,08	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0003	0,01	0,49	0
5814	Publishing of journals and periodicals	0,0000	0,00	0,01	0
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0000	0,00	0,00	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,03	0
8552	Cultural education	0,0000	0,00	0,12	0
9001	Performing arts	0,0000	0,00	0,01	0
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	**0,02**	0,82	1
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.32: Three Star Analysis Results of Creative Industries for TR-C1 Region, 2015

NACE. Rev.2	TRBC1- Gaziantep, Adıyaman, Kilis	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0005	0,01	0,21	0
7312	Media representation	0,0000	0,01	0,22	0
	Architecture				
7111	Architectural activities	**0,0015**	**0,03**	0,97	2
	Crafts				
3212	Manufacture of jewellery and related articles	0,0001	0,00	0,12	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0001	0,01	0,20	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,09	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	0,01	0,40	0
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0003	**0,02**	0,61	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	**0,02**	0,58	1
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0002	0,00	0,11	0
6202	Computer consultancy activities	0,0003	**0,01**	0,41	1
	Publishing				
5811	Book publishing	0,0000	0,00	0,01	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0005	**0,02**	0,86	1
5814	Publishing of journals and periodicals	0,0001	0,01	0,33	0
5819	Other publishing activities	0,0000	0,01	0,29	0
7430	Translation and interpretation activities	0,0000	**0,01**	0,50	1
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	**0,03**	**1,20**	2
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,02	0
8552	Cultural education	0,0000	0,00	0,00	0
9001	Performing arts	0,0001	0,01	0,23	0
9002	Support activities to performing arts	0,0000	0,00	0,01	0
9003	Artistic creation	0,0000	0,01	0,28	0
9004	*Operation of arts facilities*	0,0000	0,00	0,04	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.33: Three Star Analysis Results of Creative Industries for TR-C2 Region, 2015

NACE. Rev.2	TRBC2- Şanlıurfa, Diyarbakır	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,01	0
7311	Advertising agencies	0,0002	0,00	0,08	0
7312	Media representation	0,0000	0,00	0,00	0
	Architecture				
7111	Architectural activities	0,0008	**0,02**	0,55	1
	Crafts				0
3212	Manufacture of jewellery and related articles	0,0007	**0,02**	0,84	1
	Design: Product, Graphic and Fashion Design				0
7410	Specialised design activities	0,0001	**0,01**	0,46	1
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0001	0,00	0,11	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,06	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,02**	0,63	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0003	**0,02**	0,61	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	**0,01**	0,39	1
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0000	0,00	0,03	0
6202	Computer consultancy activities	0,0000	0,00	0,03	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,12	0
5812	Publishing of directories and mailing lists	0,0000	**0,21**	**7,28**	2
5813	Publishing of newspapers	0,0003	**0,02**	0,55	1
5814	Publishing of journals and periodicals	0,0000	0,01	0,24	0
5819	Other publishing activities	0,0000	**0,02**	0,56	1
7430	Translation and interpretation activities	0,0000	0,00	0,00	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,05	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0001	**0,03**	**1,06**	2
8552	Cultural education	0,0000	0,00	0,00	0
9001	Performing arts	0,0000	0,00	0,13	0
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	0,00	0,05	0
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.34: Three Star Analysis Results of Creative Industries for TR-C3 Region, 2015

NACE. Rev.2	TRBC3- Mardin, Batman, Şırnak, Siirt	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,02	0
7311	Advertising agencies	0,0003	0,00	0,11	0
7312	Media representation	0,0000	0,00	0,17	0
	Architecture				
7111	Architectural activities	0,0005	0,01	0,36	0
	Crafts				0
3212	Manufacture of jewellery and related articles	0,0005	0,01	0,58	0
	Design: Product, Graphic and Fashion Design				0
7410	Specialised design activities	0,0000	0,00	0,10	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,01	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,01	0,41	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0000	0,00	0,28	0
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0002	0,01	0,39	0
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0000	0,00	0,01	0
6202	Computer consultancy activities	0,0005	0,01	0,54	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,01	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0004	0,01	0,63	0
5814	Publishing of journals and periodicals	0,0001	0,01	0,50	0
5819	Other publishing activities	0,0000	0,00	0,31	0
7430	Translation and interpretation activities	0,0000	0,00	0,33	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,09	0
8552	Cultural education	0,0000	0,00	0,13	0
9001	Performing arts	0,0000	0,00	0,02	0
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	0,00	0,10	0
9004	*Operation of arts facilities*	0,0000	0,00	0,04	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.35: Three Star Analysis Results of Creative Industries for TR-10 Region, 2010

NACE. Rev.2	TR10-İstanbul	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0003	**0,90**	**5,16**	2
7311	Advertising agencies	**0,0084**	**0,61**	**3,51**	3
7312	Media representation	0,0002	**0,81**	**4,62**	2
	Architecture				
7111	Architectural activities	**0,0018**	**0,27**	**1,53**	3
	Crafts				
3212	Manufacture of jewellery and related articles	**0,0032**	**0,68**	**3,88**	3
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0008	**0,72**	**4,14**	2
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0010	**0,93**	**5,33**	2
5912	Motion picture, video and television programme post-production activities	0,0001	**0,96**	**5,49**	2
5913	Motion picture, video and television programme distribution activities	0,0001	**1,00**	**5,71**	2
5914	Motion picture projection activities	0,0003	**0,40**	**2,28**	2
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0009	**0,32**	**1,83**	2
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	**0,92**	**5,26**	2
5829	Other software publishing	0,0002	**0,69**	**3,93**	2
6201	Computer programming activities	**0,0022**	**0,40**	**2,27**	3
6202	Computer consultancy activities	**0,0026**	**0,68**	**3,91**	3
	Publishing				
5811	Book publishing	0,0005	**0,51**	**2,91**	2
5812	Publishing of directories and mailing lists	0,0000	**0,96**	**5,49**	2
5813	Publishing of newspapers	0,0012	**0,54**	**3,10**	2
5814	Publishing of journals and periodicals	0,0002	**0,72**	**4,14**	2
5819	Other publishing activities	0,0000	**0,74**	**4,25**	2
7430	Translation and interpretation activities	0,0003	**0,51**	**2,93**	2
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	**0,57**	**3,28**	2
9102	Museums activities	0,0000	**0,80**	**4,57**	2
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0002	**0,87**	**4,98**	2
8552	Cultural education	0,0004	**0,72**	**4,14**	2
9001	Performing arts	0,0004	**0,60**	**3,43**	2
9002	Support activities to performing arts	0,0006	**0,90**	**5,18**	2
9003	Artistic creation	0,0000	**0,42**	**2,38**	2
9004	*Operation of arts facilities*	0,0001	**0,78**	**4,47**	2

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.36: Three Star Analysis Results of Creative Industries for TR-21 Region, 2010

NACE. Rev.2	TR21- Tekirdağ, Edirne, Kırklareli	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0002	0,00	0,08	0
7312	Media representation	0,0000	0,00	0,00	0
	Architecture				
7111	Architectural activities	0,0005	**0,01**	0,45	1
	Crafts				
3212	Manufacture of jewellery and related articles	0,0000	0,00	0,04	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,00	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,00	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,02**	0,60	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0006	**0,03**	**1,19**	2
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0001	**0,07**	**2,71**	2
6201	Computer programming activities	0,0001	0,00	0,07	0
6202	Computer consultancy activities	0,0000	0,00	0,01	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,00	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0001	**0,01**	0,33	1
5814	Publishing of journals and periodicals	0,0000	**0,01**	0,37	1
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0000	0,00	0,15	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,00	0
8552	Cultural education	0,0000	0,00	0,03	0
9001	Performing arts	0,0000	0,00	0,11	0
9002	Support activities to performing arts	0,0000	0,00	0,07	0
9003	Artistic creation	0,0001	**0,16**	**6,09**	2
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.37: Three Star Analysis Results of Creative Industries for TR-22 Region, 2010

NACE. Rev.2	TR22- Balıkesir, Çanakkale	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0003	0,00	0,11	0
7312	Media representation	0,0000	0,00	0,10	0
	Architecture				
7111	Architectural activities	0,0007	**0,01**	0,58	1
	Crafts				
3212	Manufacture of jewellery and related articles	0,0000	0,00	0,01	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,02	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,00	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,02**	0,67	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0004	**0,02**	0,72	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0001	0,00	0,06	0
6202	Computer consultancy activities	0,0001	0,00	0,14	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,00	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0001	0,01	0,21	0
5814	Publishing of journals and periodicals	0,0000	0,00	0,09	0
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0000	0,00	0,00	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	**0,06**	**2,37**	2
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,00	0
8552	Cultural education	0,0000	0,00	0,00	0
9001	Performing arts	0,0001	**0,01**	0,48	1
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	0,00	0,20	0
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.38: Three Star Analysis Results of Creative Industries for TR-32 Region, 2010

NACE. Rev.2	TR32- Aydın, Denizli, Muğla	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0004	0,01	0,15	0
7312	Media representation	0,0000	0,00	0,06	0
	Architecture				
7111	Architectural activities	0,0009	**0,03**	0,74	1
	Crafts				
3212	Manufacture of jewellery and related articles	0,0004	**0,02**	0,44	1
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0004	**0,08**	**1,89**	2
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,01	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,02**	0,55	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0005	**0,05**	**1,12**	2
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,02	0
6201	Computer programming activities	0,0003	**0,01**	0,32	1
6202	Computer consultancy activities	0,0001	0,01	0,15	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,00	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0001	**0,01**	0,19	1
5814	Publishing of journals and periodicals	0,0000	**0,03**	0,66	1
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0000	0,01	0,14	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,00	0
8552	Cultural education	0,0000	**0,01**	0,21	1
9001	Performing arts	0,0002	**0,07**	**1,63**	2
9002	Support activities to performing arts	0,0000	0,00	0,02	0
9003	Artistic creation	0,0000	**0,01**	0,22	1
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.39: Three Star Analysis Results of Creative Industries for TR-33 Region, 2010

NACE. Rev.2	TR33- Manisa, Afyon, Kütahya, Uşak	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,05	0
7311	Advertising agencies	0,0002	0,00	0,07	0
7312	Media representation	0,0000	0,00	0,00	0
	Architecture				
7111	Architectural activities	0,0006	**0,02**	0,50	1
	Crafts				
3212	Manufacture of jewellery and related articles	0,0000	0,00	0,05	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,03	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,00	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0000	0,01	0,18	0
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0002	**0,02**	0,50	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0002	0,01	0,16	0
6202	Computer consultancy activities	0,0000	0,00	0,07	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,02	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0002	**0,02**	0,47	1
5814	Publishing of journals and periodicals	0,0000	0,00	0,07	0
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0000	0,00	0,00	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,00	0
8552	Cultural education	0,0000	0,00	0,03	0
9001	Performing arts	0,0000	**0,02**	0,40	1
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	0,00	0,06	0
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.40: Three Star Analysis Results of Creative Industries for TR-41 Region, 2010

NACE. Rev.2	TR41- Bursa, Eskişehir, Bilecik	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,01	0,12	0
7311	Advertising agencies	**0,0013**	**0,03**	0,53	2
7312	Media representation	0,0001	**0,11**	**2,12**	2
	Architecture				
7111	Architectural activities	0,0012	**0,05**	**1,07**	2
	Crafts				
3212	Manufacture of jewellery and related articles	0,0001	0,00	0,08	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0004	**0,09**	**1,81**	2
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,01	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,05**	0,91	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0003	**0,03**	0,55	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0001	**0,13**	**2,66**	2
6201	Computer programming activities	**0,0013**	**0,07**	**1,34**	3
6202	Computer consultancy activities	0,0009	**0,07**	**1,32**	2
	Publishing				
5811	Book publishing	0,0001	**0,01**	0,29	1
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0002	**0,02**	0,45	1
5814	Publishing of journals and periodicals	0,0000	0,00	0,06	0
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0000	**0,01**	0,21	1
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,01	0,15	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	**0,06**	**1,12**	2
8552	Cultural education	0,0000	0,00	0,07	0
9001	Performing arts	0,0001	**0,03**	0,65	1
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	**0,11**	**2,26**	2
9004	*Operation of arts facilities*	0,0000	**0,01**	0,20	1

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data
y: Veri yok

Appendix Table 2.41: Three Star Analysis Results of Creative Industries for TR-42 Region, 2010

NACE. Rev.2	TR42- Kocaeli, Sakarya, Düzce, Bolu, Yalova	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,01	0
7311	Advertising agencies	**0,0020**	**0,04**	0,82	2
7312	Media representation	0,0000	0,01	0,11	0
	Architecture				
7111	Architectural activities	0,0010	**0,04**	0,86	1
	Crafts				
3212	Manufacture of jewellery and related articles	0,0000	0,00	0,01	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,00	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,00	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,04**	0,86	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0005	**0,05**	0,99	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	**0,05**	**1,06**	2
6201	Computer programming activities	0,0012	**0,06**	**1,25**	2
6202	Computer consultancy activities	0,0001	0,01	0,13	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,05	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0003	**0,03**	0,70	1
5814	Publishing of journals and periodicals	0,0000	0,01	0,14	0
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0001	**0,03**	0,67	1
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0001	**0,43**	**9,17**	2
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	**0,01**	0,19	1
8552	Cultural education	0,0000	**0,02**	0,39	1
9001	Performing arts	0,0000	**0,01**	0,24	1
9002	Support activities to performing arts	0,0000	0,00	0,11	0
9003	Artistic creation	0,0000	0,01	0,16	0
9004	*Operation of arts facilities*	0,0000	0,00	0,07	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.42: Three Star Analysis Results of Creative Industries for TR-51 Region, 2010

NACE. Rev.2	TR51- Ankara	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0001	**0,07**	**1,09**	2
7311	Advertising agencies	**0,0039**	**0,10**	**1,63**	3
7312	Media representation	0,0000	0,00	0,00	0
	Architecture				
7111	Architectural activities	**0,0049**	**0,27**	**4,23**	3
	Crafts				
3212	Manufacture of jewellery and related articles	0,0000	0,00	0,02	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0001	**0,02**	0,26	1
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0002	**0,06**	0,95	1
5912	Motion picture, video and television programme post-production activities	0,0000	**0,01**	0,17	1
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,05	0
5914	Motion picture projection activities	0,0003	**0,14**	**2,17**	2
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0006	**0,08**	**1,28**	2
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	**0,05**	0,85	1
5829	Other software publishing	0,0000	**0,05**	0,79	1
6201	Computer programming activities	**0,0033**	**0,22**	**3,41**	3
6202	Computer consultancy activities	**0,0020**	**0,19**	**3,03**	3
	Publishing				
5811	Book publishing	0,0011	**0,41**	**6,49**	2
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0004	**0,07**	**1,06**	2
5814	Publishing of journals and periodicals	0,0001	**0,06**	0,91	1
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0004	**0,22**	**3,51**	2
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	**0,07**	**1,17**	2
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	**0,04**	0,66	1
8552	Cultural education	0,0000	**0,02**	0,37	1
9001	Performing arts	0,0000	**0,02**	0,29	1
9002	Support activities to performing arts	0,0000	**0,02**	0,26	1
9003	Artistic creation	0,0000	**0,13**	**2,09**	2
9004	*Operation of arts facilities*	0,0000	**0,04**	0,69	1

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.43: Three Star Analysis Results of Creative Industries for TR-52 Region, 2010

NACE. Rev.2	TR52- Konya, Karaman	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0001	0,00	0,06	0
7312	Media representation	0,0000	0,00	0,00	0
	Architecture				
7111	Architectural activities	**0,0016**	**0,05**	**1,37**	3
	Crafts				
3212	Manufacture of jewellery and related articles	0,0000	0,00	0,02	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,01	0,18	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,01	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,02**	0,51	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0006	**0,04**	**1,31**	2
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,03	0
6201	Computer programming activities	0,0002	0,01	0,20	0
6202	Computer consultancy activities	0,0000	0,00	0,01	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,00	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0003	**0,03**	0,78	1
5814	Publishing of journals and periodicals	0,0000	0,00	0,02	0
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0000	0,00	0,07	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,04	0
8552	Cultural education	0,0000	0,00	0,01	0
9001	Performing arts	0,0000	0,00	0,13	0
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	0,01	0,22	0
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.44: Three Star Analysis Results of Creative Industries for TR-61 Region, 2010

NACE. Rev.2	TR61- Antalya, Isparta, Burdur	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	**0,01**	0,30	1
7311	Advertising agencies	**0,0021**	**0,04**	0,88	2
7312	Media representation	0,0000	**0,01**	0,29	1
	Architecture				
7111	Architectural activities	**0,0015**	**0,06**	**1,30**	3
	Crafts				
3212	Manufacture of jewellery and related articles	**0,0028**	**0,15**	**3,34**	3
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0001	**0,03**	0,67	1
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,00	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0000	0,00	0,00	0
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0008	**0,07**	**1,56**	2
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0002	**0,01**	0,23	1
6202	Computer consultancy activities	0,0000	0,00	0,04	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,00	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0001	**0,01**	0,34	1
5814	Publishing of journals and periodicals	0,0001	**0,07**	**1,66**	2
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0001	**0,03**	0,73	1
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,09	0
8552	Cultural education	0,0000	0,01	0,12	0
9001	Performing arts	0,0005	**0,20**	**4,58**	2
9002	Support activities to performing arts	0,0001	**0,04**	0,96	1
9003	Artistic creation	0,0000	**0,02**	0,57	1
9004	*Operation of arts facilities*	0,0000	0,00	0,08	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.45: Three Star Analysis Results of Creative Industries for TR-62 Region, 2010

NACE. Rev.2	TR62- Adana, Mersin	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,03	0
7311	Advertising agencies	**0,0019**	**0,04**	0,80	2
7312	Media representation	0,0000	0,00	0,07	0
	Architecture				
7111	Architectural activities	0,0010	**0,05**	0,88	1
	Crafts				
3212	Manufacture of jewellery and related articles	0,0004	**0,03**	0,48	1
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0001	**0,02**	0,33	1
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,02	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,04**	0,68	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0003	**0,03**	0,52	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0007	**0,04**	0,76	1
6202	Computer consultancy activities	0,0001	0,00	0,08	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,00	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0003	**0,04**	0,68	1
5814	Publishing of journals and periodicals	0,0000	**0,02**	0,36	1
5819	Other publishing activities	0,0000	**0,02**	0,29	1
7430	Translation and interpretation activities	0,0000	**0,01**	0,25	1
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,00	0
8552	Cultural education	0,0000	0,00	0,09	0
9001	Performing arts	0,0000	0,01	0,15	0
9002	Support activities to performing arts	0,0000	0,00	0,02	0
9003	Artistic creation	0,0000	**0,01**	0,29	1
9004	*Operation of arts facilities*	0,0000	**0,02**	0,29	1

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.46: Three Star Analysis Results of Creative Industries for TR-63 Region, 2010

NACE. Rev.2	TR63- Adana, Mersin	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0.0000	0.00	0.00	0
7311	Advertising agencies	0.0004	0.01	0.17	0
7312	Media representation	0.0000	0.00	0.00	0
	Architecture				
7111	Architectural activities	0.0002	0.01	0.15	0
	Crafts				
3212	Manufacture of jewellery and related articles	0.0000	0.00	0.03	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0.0001	**0.01**	0.28	1
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0.0000	0.00	0.00	0
5912	Motion picture, video and television programme post-production activities	0.0000	0.00	0.00	0
5913	Motion picture, video and television programme distribution activities	0.0000	0.00	0.00	0
5914	Motion picture projection activities	0.0000	**0.01**	0.24	1
6010	Radio broadcasting	0.0000	0.00	0.00	0
6020	Television programming and broadcasting activities	0.0000	0.00	0.00	0
7420	Photographic activities	0.0004	**0.03**	0.88	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0.0000	0.00	0.00	0
5829	Other software publishing	0.0000	0.00	0.00	0
6201	Computer programming activities	0.0001	0.00	0.11	0
6202	Computer consultancy activities	0.0000	0.00	0.04	0
	Publishing				
5811	Book publishing	0.0000	0.00	0.00	0
5812	Publishing of directories and mailing lists	0.0000	0.00	0.00	0
5813	Publishing of newspapers	0.0001	**0.01**	0.31	1
5814	Publishing of journals and periodicals	0.0000	0.00	0.12	0
5819	Other publishing activities	0.0000	0.00	0.00	0
7430	Translation and interpretation activities	0.0000	0.00	0.04	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0.0000	0.00	0.00	0
9102	Museums activities	0.0000	0.00	0.00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0.0000	0.00	0.03	0
8552	Cultural education	0.0000	0.00	0.00	0
9001	Performing arts	0.0000	0.00	0.07	0
9002	Support activities to performing arts	0.0000	0.00	0.00	0
9003	Artistic creation	0.0000	**0.04**	0.99	1
9004	*Operation of arts facilities*	0.0000	0.00	0.00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.47: Three Star Analysis Results of Creative Industries for TR-71 Region, 2010

NACE. Rev.2	TR71- Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0002	0,00	0,08	0
7312	Media representation	0,0000	0,01	0,31	0
	Architecture				
7111	Architectural activities	0,0001	0,00	0,10	0
	Crafts				
3212	Manufacture of jewellery and related articles	0,0001	0,00	0,15	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0001	**0,01**	0,49	1
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,00	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0000	0,00	0,22	0
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0002	0,01	0,41	0
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0002	0,01	0,25	0
6202	Computer consultancy activities	0,0000	0,00	0,00	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,00	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0003	**0,02**	0,78	1
5814	Publishing of journals and periodicals	0,0000	0,00	0,18	0
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0000	0,00	0,23	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,00	0
8552	Cultural education	0,0000	0,00	0,07	0
9001	Performing arts	0,0000	0,00	0,06	0
9002	Support activities to performing arts	0,0000	0,00	0,02	0
9003	Artistic creation	0,0000	0,00	0,00	0
9004	*Operation of arts facilities*	0,0000	0,00	0,08	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.48: Three Star Analysis Results of Creative Industries for TR-72 Region, 2010

NACE. Rev.2	TR71- Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0005	0,01	0,23	0
7312	Media representation	0,0000	0,00	0,09	0
	Architecture				
7111	Architectural activities	0,0004	**0,01**	0,33	1
	Crafts				
3212	Manufacture of jewellery and related articles	0,0001	0,00	0,12	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,02	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,00	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,02**	0,62	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0004	**0,02**	0,76	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0006	**0,02**	0,64	1
6202	Computer consultancy activities	0,0000	0,00	0,00	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,00	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0003	**0,02**	0,74	1
5814	Publishing of journals and periodicals	0,0000	0,00	0,00	0
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0000	0,00	0,04	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,00	0
8552	Cultural education	0,0000	0,00	0,06	0
9001	Performing arts	0,0000	0,01	0,20	0
9002	Support activities to performing arts	0,0000	0,00	0,04	0
9003	Artistic creation	0,0000	0,00	0,18	0
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.49: Three Star Analysis Results of Creative Industries for TR-81 Region, 2010

NACE. Rev.2	TR81- Zonguldak, Karabük, Bartın	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0002	0,00	0,10	0
7312	Media representation	0,0000	0,00	0,00	0
	Architecture				
7111	Architectural activities	0,0002	0,00	0,19	0
	Crafts				
3212	Manufacture of jewellery and related articles	0,0000	0,00	0,00	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,00	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,01	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	0,01	0,39	0
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0000	0,00	0,00	0
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0004	0,01	0,37	0
6202	Computer consultancy activities	0,0000	0,00	0,00	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,00	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0002	0,01	0,46	0
5814	Publishing of journals and periodicals	0,0001	**0,02**	**1,16**	2
5819	Other publishing activities	0,0000	**0,09**	**5,43**	2
7430	Translation and interpretation activities	0,0008	**0,12**	**7,13**	2
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,00	0
8552	Cultural education	0,0000	0,00	0,00	0
9001	Performing arts	0,0000	0,00	0,02	0
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	0,01	0,44	0
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.50: Three Star Analysis Results of Creative Industries for TR-82 Region, 2010

NACE. Rev.2	TR81- Zonguldak, Karabük, Bartın	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0000	0,00	0,02	0
7312	Media representation	0,0000	0,00	0,10	0
	Architecture				
7111	Architectural activities	0,0005	0,01	0,40	0
	Crafts				
3212	Manufacture of jewellery and related articles	0,0000	0,00	0,00	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,00	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,00	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0000	0,00	0,05	0
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0003	0,01	0,58	0
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0001	0,00	0,06	0
6202	Computer consultancy activities	0,0003	0,01	0,40	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,00	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0001	0,00	0,17	0
5814	Publishing of journals and periodicals	0,0000	0,00	0,00	0
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0000	0,00	0,00	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,00	0
8552	Cultural education	0,0000	0,00	0,03	0
9001	Performing arts	0,0000	0,00	0,00	0
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	0,00	0,00	0
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.51: Three Star Analysis Results of Creative Industries for TR-83 Region, 2010

NACE. Rev.2	TR83 - Samsun, Tokat, Çorum, Amasya	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,07	0
7311	Advertising agencies	0,0005	**0,01**	0,21	1
7312	Media representation	0,0000	**0,05**	**1,15**	2
	Architecture				
7111	Architectural activities	0,0002	**0,01**	0,22	1
	Crafts				
3212	Manufacture of jewellery and related articles	0,0002	**0,01**	0,23	1
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,00	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,00	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,03**	0,63	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0002	**0,02**	0,48	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0003	**0,01**	0,31	1
6202	Computer consultancy activities	0,0000	0,00	0,02	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,00	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0003	**0,04**	0,88	1
5814	Publishing of journals and periodicals	0,0000	0,00	0,02	0
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0000	0,00	0,05	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,00	0
8552	Cultural education	0,0001	**0,02**	0,54	1
9001	Performing arts	0,0000	0,00	0,06	0
9002	Support activities to performing arts	0,0000	0,00	0,01	0
9003	Artistic creation	0,0000	**0,01**	0,30	1
9004	*Operation of arts facilities*	0,0000	**0,01**	0,33	1

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.52: Three Star Analysis Results of Creative Industries for TR-90 Region, 2010

NACE. Rev.2	TR90 - Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0003	0,01	0,13	0
7312	Media representation	0,0000	0,00	0,03	0
	Architecture				
7111	Architectural activities	0,0006	**0,02**	0,52	1
	Crafts				
3212	Manufacture of jewellery and related articles	0,0004	**0,02**	0,45	1
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,00	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,01	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,03**	0,60	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0003	**0,03**	0,57	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0009	**0,04**	0,88	1
6202	Computer consultancy activities	0,0000	0,00	0,01	0
	Publishing				
5811	Book publishing	0,0001	**0,02**	0,34	1
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0002	**0,03**	0,64	1
5814	Publishing of journals and periodicals	0,0000	0,00	0,00	0
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0000	0,00	0,03	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,00	0
8552	Cultural education	0,0000	**0,01**	0,25	1
9001	Performing arts	0,0000	0,00	0,04	0
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	0,00	0,05	0
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.53: Three Star Analysis Results of Creative Industries for TR-A1 Region, 2010

NACE. Rev.2	TRA1- Erzurum, Erzincan, Bayburt	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0002	0,00	0,09	0
7312	Media representation	0,0000	0,00	0,00	0
	Architecture				
7111	Architectural activities	0,0000	0,00	0,03	0
	Crafts				
3212	Manufacture of jewellery and related articles	**0,0015**	**0,03**	**1,86**	3
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,00	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,00	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,01**	0,86	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0003	**0,01**	0,64	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0006	**0,01**	0,60	1
6202	Computer consultancy activities	0,0001	0,00	0,14	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,03	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0003	**0,01**	0,70	1
5814	Publishing of journals and periodicals	0,0000	0,00	0,19	0
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0000	0,00	0,00	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,00	0
8552	Cultural education	0,0000	0,00	0,00	0
9001	Performing arts	0,0000	0,00	0,03	0
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	0,00	0,16	0
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.54: Three Star Analysis Results of Creative Industries for TR-A2 Region, 2010

NACE. Rev.2	TRA2- Ağrı, Kars, Iğdır, Ardahan	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0000	0,00	0,00	0
7312	Media representation	0,0000	0,00	0,00	0
	Architecture				
7111	Architectural activities	0,0001	0,00	0,09	0
	Crafts				
3212	Manufacture of jewellery and related articles	0,0000	0,00	0,00	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,00	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,00	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0000	0,00	0,05	0
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0003	**0,01**	0,70	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0001	0,00	0,06	0
6202	Computer consultancy activities	0,0000	0,00	0,00	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,00	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0000	0,00	0,07	0
5814	Publishing of journals and periodicals	0,0000	0,00	0,00	0
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0000	0,00	0,00	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,00	0
8552	Cultural education	0,0000	0,00	0,00	0
9001	Performing arts	0,0000	0,00	0,00	0
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	0,00	0,00	0
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.55: Three Star Analysis Results of Creative Industries for TR-B1 Region, 2010

NACE. Rev.2	TRB1- Malatya, Elazığ, Bingöl, Tunceli	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0001	0,00	0,05	0
7312	Media representation	0,0000	0,00	0,00	0
	Architecture				
7111	Architectural activities	0,0003	0,00	0,23	0
	Crafts				
3212	Manufacture of jewellery and related articles	0,0001	0,00	0,13	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,00	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,00	0
5912	Motion picture, video and television programme post-production activities	0,0000	**0,03**	**1,40**	2
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,01**	0,57	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0005	**0,02**	0,95	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0001	0,00	0,13	0
6202	Computer consultancy activities	0,0000	0,00	0,01	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,00	0
5812	Publishing of directories and mailing lists	0,0000	**0,04**	**1,90**	2
5813	Publishing of newspapers	0,0001	0,01	0,24	0
5814	Publishing of journals and periodicals	0,0001	**0,02**	0,90	1
5819	Other publishing activities	0,0000	**0,13**	**6,00**	2
7430	Translation and interpretation activities	0,0000	0,00	0,04	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,12	0
8552	Cultural education	0,0004	**0,09**	**4,04**	2
9001	Performing arts	0,0000	0,00	0,00	0
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	0,00	0,12	0
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.56: Three Star Analysis Results of Creative Industries for TR-B2 Region, 2010

NACE. Rev.2	TRB2- Van, Muş, Bitlis, Hakkari	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0000	0,00	0,01	0
7312	Media representation	0,0000	0,00	0,00	0
	Architecture				
7111	Architectural activities	0,0002	0,00	0,15	0
	Crafts				
3212	Manufacture of jewellery and related articles	0,0000	0,00	0,00	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,00	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,00	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0000	0,01	0,31	0
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0002	**0,01**	0,50	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,00	0
6201	Computer programming activities	0,0007	**0,01**	0,76	1
6202	Computer consultancy activities	0,0000	0,00	0,00	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,00	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0001	0,00	0,16	0
5814	Publishing of journals and periodicals	0,0000	0,00	0,00	0
5819	Other publishing activities	0,0000	**0,02**	0,82	1
7430	Translation and interpretation activities	0,0000	0,00	0,00	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,00	0
8552	Cultural education	0,0000	0,00	0,00	0
9001	Performing arts	0,0000	0,00	0,04	0
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	0,00	0,00	0
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.57: Three Star Analysis Results of Creative Industries for TR-C1 Region, 2010

NACE. Rev.2	TRC1- Gaziantep, Adıyaman, Kilis	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0.0000	0.00	0.00	0
7311	Advertising agencies	0.0007	0.01	0.29	0
7312	Media representation	0.0000	0.00	0.00	0
	Architecture				
7111	Architectural activities	0.0004	**0.01**	0.32	1
	Crafts				
3212	Manufacture of jewellery and related articles	0.0000	0.00	0.00	0
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0.0000	0.00	0.02	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0.0000	0.00	0.00	0
5912	Motion picture, video and television programme post-production activities	0.0000	0.00	0.00	0
5913	Motion picture, video and television programme distribution activities	0.0000	0.00	0.00	0
5914	Motion picture projection activities	0.0001	**0.01**	0.39	1
6010	Radio broadcasting	0.0000	0.00	0.00	0
6020	Television programming and broadcasting activities	0.0000	0.00	0.00	0
7420	Photographic activities	0.0003	**0.02**	0.58	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0.0000	**0.03**	0.99	1
5829	Other software publishing	0.0000	0.00	0.00	0
6201	Computer programming activities	0.0006	**0.02**	0.63	1
6202	Computer consultancy activities	0.0000	0.00	0.00	0
	Publishing				
5811	Book publishing	0.0000	0.00	0.05	0
5812	Publishing of directories and mailing lists	0.0000	0.00	0.00	0
5813	Publishing of newspapers	0.0002	**0.02**	0.61	1
5814	Publishing of journals and periodicals	0.0000	0.00	0.11	0
5819	Other publishing activities	0.0000	0.01	0.28	0
7430	Translation and interpretation activities	0.0000	0.01	0.21	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0.0000	0.00	0.00	0
9102	Museums activities	0.0000	**0.06**	**2.20**	2
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0.0000	0.00	0.00	0
8552	Cultural education	0.0000	0.00	0.05	0
9001	Performing arts	0.0000	0.00	0.15	0
9002	Support activities to performing arts	0.0000	0.00	0.00	0
9003	Artistic creation	0.0000	0.00	0.18	0
9004	*Operation of arts facilities*	0.0000	0.00	0.00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.58: Three Star Analysis Results of Creative Industries for TR-C2 Region, 2010

NACE. Rev.2	TRC2- Şanlıurfa, Diyarbakır	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,03	0
7311	Advertising agencies	0,0005	0,00	0,19	0
7312	Media representation	0,0000	0,00	0,00	0
	Architecture				
7111	Architectural activities	0,0004	0,01	0,31	0
	Crafts				
3212	Manufacture of jewellery and related articles	0,0003	**0,01**	0,37	1
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,01	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,10	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0001	**0,01**	0,49	1
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0002	**0,01**	0,47	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,04	0
6201	Computer programming activities	0,0005	**0,01**	0,49	1
6202	Computer consultancy activities	0,0000	0,00	0,00	0
	Publishing				
5811	Book publishing	0,0000	0,01	0,21	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0001	0,01	0,22	0
5814	Publishing of journals and periodicals	0,0000	0,00	0,00	0
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0000	0,00	0,02	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,00	0
8552	Cultural education	0,0000	0,00	0,00	0
9001	Performing arts	0,0000	0,00	0,02	0
9002	Support activities to performing arts	0,0001	**0,02**	0,68	1
9003	Artistic creation	0,0000	0,00	0,00	0
9004	*Operation of arts facilities*	0,0000	0,00	0,00	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

Appendix Table 2.59: Three Star Analysis Results of Creative Industries for TR-C3 Region, 2010

NACE. Rev.2	TRC3- Mardin, Batman, Şırnak, Siirt	Dominance	Size	Specialisation	# of Stars
	Advertising and Marketing				
7021	Public relations and communication activities	0,0000	0,00	0,00	0
7311	Advertising agencies	0,0003	0,00	0,12	0
7312	Media representation	0,0000	0,00	0,00	0
	Architecture				
7111	Architectural activities	0,0003	0,00	0,25	0
	Crafts				
3212	Manufacture of jewellery and related articles	0,0005	**0,01**	0,63	1
	Design: Product, Graphic and Fashion Design				
7410	Specialised design activities	0,0000	0,00	0,01	0
	Film, TV, Video, Radio and Photography				
5911	Motion picture, video and television programme production activities	0,0000	0,00	0,00	0
5912	Motion picture, video and television programme post-production activities	0,0000	0,00	0,00	0
5913	Motion picture, video and television programme distribution activities	0,0000	0,00	0,00	0
5914	Motion picture projection activities	0,0000	0,00	0,25	0
6010	Radio broadcasting	y	y	y	-
6020	Television programming and broadcasting activities	y	y	y	-
7420	Photographic activities	0,0003	**0,01**	0,54	1
	Information Technologies, Software and Computer Services				
5821	Publishing computer games	0,0000	0,00	0,00	0
5829	Other software publishing	0,0000	0,00	0,13	0
6201	Computer programming activities	0,0000	0,00	0,01	0
6202	Computer consultancy activities	0,0000	0,00	0,00	0
	Publishing				
5811	Book publishing	0,0000	0,00	0,00	0
5812	Publishing of directories and mailing lists	0,0000	0,00	0,00	0
5813	Publishing of newspapers	0,0000	0,00	0,08	0
5814	Publishing of journals and periodicals	0,0000	0,00	0,00	0
5819	Other publishing activities	0,0000	0,00	0,00	0
7430	Translation and interpretation activities	0,0000	0,00	0,05	0
	Museums, Galleries and Libraries				
9101	Library and archives activities	0,0000	0,00	0,00	0
9102	Museums activities	0,0000	0,00	0,00	0
	Music, Performing and Visual arts				
5920	Sound recording and music publishing activities	0,0000	0,00	0,00	0
8552	Cultural education	0,0000	0,00	0,11	0
9001	Performing arts	0,0000	0,00	0,05	0
9002	Support activities to performing arts	0,0000	0,00	0,00	0
9003	Artistic creation	0,0000	0,00	0,00	0
9004	*Operation of arts facilities*	0,0000	0,00	0,10	0

Source: Calculated by authors by using TURKSTAT's "Annual Industry and Service Statistics 2009-2015" Micro Dataset and Labour Statistics.
Note:
Values with coloured fonts are those that exceed the critical value.
y: No data

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