

		<p>(Total country patent application in sector <i>i</i> / Total country patent application)] (Altuğ and Şahin, 2017)</p> <p>+ “<i>Technological specialization index of general purpose technologies – 30 IPC sectors</i>” (Capello and Lenzi, 2013)</p>
<u>HUMAN CAPITAL</u>	Education	<p>+ “<i>Percentage of people completed tertiary education (ages from 25 to 64)</i>” (Sternberg and Arndt, 2001; Crescenzi et al., 2007; Gonçalves and Almeida, 2009; Capello and Lenzi, 2013; Hauser et al., 2018; Capello and Lenzi, 2019; Gömleksiz and Özşahin, 2019; Börü et al., 2020; Kutgi and Işık Maden, 2020; Mewes and Broekel, 2020)</p> <p>+ “<i>Percentage of people completed post-secondary education (Masters and PhD degree – ages of 15+)</i>” (Akpınar et al., 2015; Kutgi and</p>

		<p>Işık Maden, 2020; Ganau and Grandinetti, 2021)</p> <p>+ “<i>Literacy rates</i>” (Çelebioğlu, 2010)</p> <p>+ “<i>Number of bachelor students</i>” (Ott and Rondé, 2019)</p> <p>+ “<i>Ratio of university graduates and academic staff</i>” (Gezici et al., 2017; Gezici et al., 2021)</p> <p>+ “<i>Percentage of people who participated Life-long learning</i>” (Oerlemans et al., 2001; Crescenzi et al., 2007; Ganau and Grandinetti, 2021)</p>
	<p>Employment</p>	<p>+ “Share of regional population with higher education (within the group of workers aged 25+)” (Cabrer-Borras and Serrano-Domingo, 2007; Crescenzi et al., 2007; Kutgi and Işık Maden, 2020; Grillitsch et al., 2021)</p> <p>+ “<i>Share of science and technology employment</i>” (Furman et al., 2002; Capello and</p>

		<p>Lenzi, 2013; Miguelez and Moreno, 2018; Capello and Lenzi, 2019)</p> <p>+ “<i>Share of inventors</i>” (Capello and Lenzi, 2013)</p>
	Products	<p>+ “percentage of people with tertiary education, attractiveness of the university system i.e. students’ net migration rate, lifelong learning i.e. percentage of adults 25-64 who attend educational and/or professional courses over total population 25- 64)” (Ascani et al., 2020)</p>
<u>R&D</u>	Input (Expense)	<p>+ “<i>Share of regional R&D expenditure on GDP</i>” (Sternberg and Arndt, 2001; Moreno et al., 2005; Crescenzi et al., 2007; Capello and Lenzi, 2013; Malik, 2019; Ascani et al., 2020)</p> <p>+ “<i>Share of R&D expenditures over gross added value</i>” (Cabrer-Borras and</p>

		<p>Serrano-Domingo, 2007)</p> <p>+ “Private sector, government, higher education R&D expenditures” (Furman et al., 2002; Hauser et al., 2018)</p> <p>+ “Per capita regional R&D expense” (Migueluez and Moreno, 2018)</p> <p>+ “<i>Patent applications per million inhabitants in the province</i>” (Albahari et al., 2018)</p>
	<p>Input (People - Employment)</p>	<p>+ “R&D employees – high & medium level technology, having tertiary degree in engineering or in the natural sciences” (Pinto and Guerreiro, 2010; Fritsch and Slavtchev, 2011; Çetin and Kalaycı, 2016; Tavassoli and Karlsson, 2021)</p> <p>+ “<i>Industrial R&D of a region</i> – percentage of employees in manufacturing and mining (‘engineer’, ‘chemist’,</p>

		‘physicist’, ‘mathematician’ or ‘other natural scientist’) working and acting in R&D activities per total employees - the share of workers occupied in R&D” (Hornych and Schwartz, 2009; Araújo and Garcia, 2019)
	Input (People – Science/Graduate)	+ “ <i>University research capacity – PhD research staff at Master’s and doctorate courses</i> ” (Gonçalves and Almeida, 2009)
	Output	+ “ <i>Scientific publications per capita or share of regional R&D expense</i> ” (Lenger, 2008; Ott and Rondé, 2019; Börü et al., 2020) + “ <i>(product) most-cited publications, public-private co-publications, and international scientific co-publications</i> ” (Ganau and Grandinetti, 2021) + “ <i>Scientific projects ARDEB</i> ” (Kutgi and Işık Maden, 2020)

	Products	+ “ <i>University R&D</i> - RDU_prof (Number of university professors with full dedication per 10,000 inhabitants) + RDU_stu (Number of students in master’s, doctoral or post-doctoral programmes per 10,000 inhabitants)” (Araújo and Garcia, 2019)
<u>LOCAL STRUCTURE/SETTING</u>	Economy	+ “ <i>Regional GDP</i> ” (Crescenzi et al., 2007) + “ <i>GDP per capita</i> ” (Alkay and Hewings, 2012; Albahari et al., 2018; Ganau and Grandinetti, 2021) + “ <i>Share of gross capital formation in GDP</i> ” (Börü et al., 2020)
	Socio-economy	+ “ <i>SEGE index numbers</i> ” (Gönül and Erkut, 2019)
	Population	+ “ <i>Density</i> ” (Moreno et al., 2005; Fritsch and Slavtchev, 2011; Yıldırım et al., 2020; Mewes and Broekel, 2020; Grillitsch et al., 2021)

		<p>+ “<i>Regional size heterogeneity</i>” (Ganau and Grandinetti, 2021)</p> <p>+ “<i>Age – People aged 15-24 as % of total population</i>” (Crescenzi et al., 2007)</p> <p>+ “<i>Growth – labor input</i>” (Börü et al., 2020)</p>
	<p>Production and Labor</p>	<p>+ “<i>Manufacturing – firm size</i>” (Fritsch and Slavtchev, 2011; Gezici et al. 2021); share of manufacturing employment [*Employees in manufacturing divided by total number of employees * 100] (Sternberg and Arndt, 2001; Miguelez and Moreno, 2018; Hauser et al., 2018; *Mewes and Broekel, 2020; Grillitsch et al., 2021)</p> <p>+ “<i>Unemployment rate</i>” [*Unemployed persons divided by economically active population * 100] (Crescenzi et al., 2007; Gömleksiz and</p>

		Özşahin, 2019; Ascani et al., 2020; *Mewes and Broekel, 2020; Ganau and Grandinetti, 2021)
	Openness (Entrepreneurship, Competition and innovation)	+ “ <i>New firms, start-ups</i> ” (Gezici et al. 2021) + “ <i>Establishments per worker</i> ” (Grillitsch et al., 2021) + “ <i>ICT enterprise share</i> ” (Kutgi and Işık Maden, 2020) + “ <i>Share of regional employment in high-tech technology sectors and knowledge- intensive services</i> ” (Gezici et al., 2021; Grillitsch et al., 2021) + “Share of exports and exports per capita” (Akpınar et al., 2015; Sakarya and İbişoğlu, 2015)
<u>EXTERNALITIES</u>	Specialization/Diversification	+ “Krugman index of specialization” (Crescenzi et al., 2007; Araújo and Garcia, 2019) + “Other indexes” (Hornych and Schwartz, 2009; Gonçalves and Almeida, 2009;

		Ersoy and Taylor, 2012; Ascani et al., 2020)
	Agglomeration	+ “ <i>Size – number of hospitals</i> ” (Gonçalves and Almeida, 2009) + “ <i>Population density of micro-regions and urban areas</i> ” (Capello and Lenzi, 2013; Hauser et al., 2018; Araújo and Garcia, 2019) + “ <i>Employment density per sq kms</i> ” (Ganau and Grandinetti, 2021) + “ <i>Total regional GDP/ Population density</i> ” (Crescenzi et al., 2007)
	Urbanization	+ “ <i>Number of universities</i> ” (Alkay and Hewings, 2012) + “ <i>Shares of industrial and service sector employment</i> ” (Fritsch and Slavtchev, 2011; Alkay and Hewings, 2012) + “ <i>Employment density - the number of workers is divided by the square territorial area of the micro</i>

		region” (Gonçalves and Almeida, 2009)
<u>SPACES/INSTITUTIONS</u>	Production	+ “ <i>Organized Industrial Districts or Zones - OIDs or OIZs</i> ” (Gezici et al., 2017) + “ <i>SMEs</i> ” (Ganau and Grandinetti, 2021) + “ <i>Public and higher education laboratories</i> ” (Ersoy and Taylor, 2012)
	Research and Technology	+ “ <i>Universities</i> ” (Oerlemans et al., 2001; Lenger, 2008; Çelebioğlu, 2010; Capello and Lenzi, 2013) + “ <i>Research and Development Centers (RDC) and departments</i> ” (Alkay and Hewings, 2012; Capello and Lenzi, 2013; Thakur and Malecki, 2015; Kutgi and Işık Maden, 2020) + “ <i>Technology Development Zones (TDZ)</i> ” (Lenger, 2008; Kutgi and Işık Maden, 2020) + “ <i>Technology Development</i>

		<p><i>Centers</i>” (Lenger, 2008)</p> <p>+ “<i>Techno-parks (performance index)</i>” (Gezici et al., 2021)</p> <p>+ “<i>Design Centers (DC)</i>” (Kutgi and Işık Maden, 2020)</p>
	Bridging	<p>+ “<i>Innovation centres, business associations and private consultants</i>” (Oerlemans et al., 2001)</p> <p>+ “<i>TUBITAK, KOSGEB</i>” (Lenger, 2008)</p> <p>+ “NGOs” (Ersoy and Taylor, 2012)</p>
<u>CONTROLS</u>	Population	+ Regional or province populations
	Employment/Sectors	<p>+ “<i>Eurostat classification based on technology and knowledge intensity</i>” (Çelik et al., 2019)</p> <p>+ “OECD classification based on high- and medium-high-technology manufacturing and knowledge intensive service sectors” (Ersoy and Taylor, 2012;</p>

		<p>Akpınar et al., 2015; Gezici et al., 2017; Miguelez and Moreno, 2018; Ganau and Grandinetti, 2021; Tavassoli and Karlsson, 2021; Lopes et al., 2021)</p> <p>+ “<i>Pavitt sector dummy</i> - supplier dominated, scale-intensive, specialized supplier, science based sector” (Oerlemans et al., 2001; Çetin and Kalaycı, 2016)</p> <p>+ “<i>Sectoral propensity to patent</i> –the share of employment in ten most patenting sectors” (Gonçalves and Almeida, 2009)</p>
	Work place	<p>+ Total work place</p> <p>+ Sectoral work place</p>

Appendix B

TPTO Registration Data Details

ID	ECONOMIC ACTIVITY	NACE Rev.2 (full i.e. division, group and class)	NACE Rev.2 (division only)
1	Manufacture of batteries and accumulators	27.20	27
2	Manufacture of basic metals	24	24
3	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	16	16
4	Printing and service activities related to printing	18.10	18
5	Manufacture of fasteners and screw machine products	25.94	25
6	Manufacture of other general-purpose machinery n.e.c.	28.29	28
7	Manufacture of other special-purpose machinery n.e.c.	28.99	28
8	Other manufacturing n.e.c.	32.99	32
9	Computer programming, consultancy and related activities	62.0	62
10	Manufacture of computers and peripheral equipment	26.20	26
11	Manufacture of paints, varnishes and similar coatings, printing ink and mastics	20.30	20
12	Manufacture of steam generators, except central heating hot water boilers	25.30	25

13	Manufacture of office machinery and equipment (except computers and peripheral equipment)	28.23	28
14	Manufacture of glass and glass products	23.10	23
15	Manufacture of leather and related products	15	15
16	Manufacture of other electrical equipment	27.90	27
17	Manufacture of other fabricated metal products n.e.c.	25.99	25
18	Other manufacturing	32	32
19	Manufacture of other chemical products	20.5	20
20	Manufacture of other non-metallic mineral products n.e.c.	23.99	23
21	Manufacture of other taps and valves	28.14	28
22	Manufacture of other transport equipment	30	30
23	Manufacture of other special-purpose machinery	28.9	28
24	Manufacture of electricity distribution and control apparatus	27.12	27
25	Manufacture of electric motors, generators, transformers and electricity distribution and control apparatus	27.10	27
26	Manufacture of electric lighting equipment	27.40	27

27	Manufacture of electronic components	26.11	26
28	Manufacture of loaded electronic boards	26.12	26
29	Manufacture of domestic appliances	27.5	27
30	Manufacture of ovens, furnaces and furnace burners	28.21	28
31	Manufacture of other general-purpose machinery	28.2	28
32	Manufacture of wearing apparel	14	14
33	Manufacture of food products	10	10
34	Manufacture of pesticides and other agrochemical products	20.2	20
35	Construction of utility projects	42.2	42
36	Manufacture of irradiation, electro-medical and electrotherapeutic equipment	26.6	26
37	Manufacture of wiring devices	27.33	27
38	Manufacture of other electronic and electric wires and cables	27.32	27
39	Manufacture of lifting and handling equipment	28.22	28
40	Manufacture of rubber and plastic products	22	22
41	Manufacture of rubber products	22.1	22
42	Manufacture of paper and paper products	17	17

43	Manufacture of machinery for paper and paperboard production	28.95	28
44	Manufacture of clay building materials	23.3	23
45	Manufacture of coke and refined petroleum products	19	19
46	Manufacture of watches and clocks	26.52	26
47	Manufacture of machinery for mining, quarrying and construction	28.92	28
48	Manufacture of magnetic and optical media	26.8	26
49	Manufacture of metal forming machinery and machine tools	28.4	28
50	Manufacture of tanks, reservoirs and containers of metal	25.2	25
51	Manufacture of structural metal products	25.1	25
52	Forging, pressing, stamping and roll-forming of metal; powder metallurgy	25.5	25
53	Treatment and coating of metals; machining	25.6	25
54	Manufacture of furniture	31	31
55	Manufacture of engines and turbines, except aircraft, vehicle and cycle engines	28.11	28
56	Manufacture of parts and accessories for motor vehicles	29.3	29
57	Manufacture of motor vehicles	29.1	29
58	Processing of nuclear fuel	24.46	24

59	Manufacture of optical instruments and photographic equipment	26.7	26
60	Manufacture of perfumes and toilet preparations	20.42	20
61	Manufacture of explosives	20.51	20
62	Manufacture of plastic products	22.2	22
63	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations	20.4	20
64	Manufacture of ceramic sanitary fixtures	23.42	23
65	Manufacture of weapons and ammunition	25.4	25
66	Manufacture of non-domestic cooling and ventilation equipment	28.25	28
67	Construction of water projects	42.91	42
68	Manufacture of man-made fibers	20.6	20
69	Manufacture of dairy products	10.5	10
70	Manufacture of agricultural and forestry machinery	28.3	28
71	Manufacture of textiles	13	13
72	Manufacture of machinery for textile, apparel and leather production	28.94	28
73	Manufacture of basic pharmaceutical products and pharmaceutical preparations	21	21

74	Manufacture of basic chemicals, fertilizers and nitrogen compounds, plastics and synthetic rubber in primary forms	20.1	20
75	Manufacture of consumer electronics	26.4	26
76	Manufacture of tobacco products	12	12
77	Manufacture of medical and dental instruments and supplies	32.5	32
78	Manufacture of cutlery, tools and general hardware	25.7	25
79	Manufacture of cement, lime and plaster	23.5	23
80	Manufacture of instruments and appliances for measuring, testing and navigation; watches and clocks	26.5	26
81	Manufacture of instruments and appliances for measuring, testing and navigation	26.51	26
82	Specialized construction activities	43	43
83	Manufacture of communication equipment	26.3	26
84	Manufacture of beverages	11	11

Appendix C

NACE IPC Concordance Table (WIPO, TPTO)

NA CE Rev. 2	Economic activity	IPC Codes
10	Manufacture of Food Products	A01H, A01J, A21D, A23B, A23C, A23D, A23F, A23G, A23J, A23K, A23L 1-35, A23P, C12J, C13B, C13F, C13J, C13K
11	Manufacture of Beverages	A23L 2, C12C, C12F, C12G, C12H
12	Manufacture of Tobacco Products	A24B, A24D, A24F
13	Manufacture of Textiles	D04D, D04H, D06C, D06J, D06M, D06N, D06P, D06Q
14	Manufacture of Wearing Apparel	A41B, A41C, A41D, A41F
15	Manufacture of Leather and Related Products	A43B, A43C, B68B, B68C
16	Manufacture of Wood and of Products of Wood and Cork, Except Furniture; Manufacture of	B27D, B27H, B27M, B27N

	Articles of Straw and Plaiting Materials	
17	Manufacture of Paper and Paper Products	B42F, D21C, D21H, D21J
18	Printing and Service Activities Related to Printing	B41M, B42D, B44F
19	Manufacture of Coke and Refined Petroleum Products	C10G, C10L
20	Manufacture of Chemicals and Chemical Products	A01N-P, A61K 8, A61Q, A61D, B01J, B09B-C, B27K, C01B-C-D-F-G, C02F, C05B-C-D-F-G, C06B-C-D, C07B-C-F-G, C08B-F-G-H-J-K-L, C09B-C-D-F-G-H-J-K, C10B-C-H-J-K-M-N, C11B-C-D, C12S, C14C, C23F-G, C25B, C40B, D01C-F, D06L, F17C-D, F25J, F42B-D, G21F
21	Manufacture of Basic Pharmaceutical Products and Pharmaceutical Preparations	A61K 6-135, A61P, C07D-H-J-K, C12N-P-Q
22	Manufacture of Rubber and Plastic Products	B29B-C-D, B60C, B67D, C08C
23	Manufacture of Other Non-Metallic Mineral Products	B28B-C, B32B, C03B-C, C04B, E03D

24	Manufacture of Basic Metals	B21C, B22D, C21B-C-D, C22B-C-F, C25C-F, G21H
25	Manufacture of Fabricated Metal Products, Except Machinery and Equipment	A01L, A44B, A47H, B21G, B22F, B63G, C23D, C25D, E05B-C-D-F, E06B, F16B-T; F17B, F22B-G, F24J, F27D, F41A-B-C-F-G-H-J, F42C, G21B-C-D-J
26	Manufacture of Computer, Electronic and Optical Products	A61N, B81B-C, B82B-Y, C30B, F15C, G01B-C-D-F-H-J-K-L-M-N-Q-R-S-V-W, G02B-C-F, G03B-C-H, G04B-C-D-F-G-R, G05B-F, G06C-D-E-F-G-J-N-T, G08B-C, G09C, G11C, G12B, G21K, H01C-F-G-J-L-Q-S, H03B-C-D-F-G-H-J-K-L-M, H04B-H-J-K-L-M-N-Q-R-S-W, H05G-H-K
27	Manufacture of Electrical Equipment	A21B, A45D, A47G-J-L, B01B, B60M, B61L, D06F, E06C, F21H-K-L-M-P-Q-S-V-W-Y, F24B-C-D, F25D, G08G, G10K, H01B-H-K-M-P-R-T, H02B-G-H-J-K-M-N-P-S, H05B-C
28	Manufacture of Machinery and Equipment n.e.c.	A01B-C-D-F-G-K-M, A21C, A22B-C, A23N, A24C, A41H, A42C, A43D, A47K, A62C, B01D-F, B02B-C, B03B-C-D, B04C, B05B-C-D, B06B, B07B-C, B08B, B21B-D-F-H-J-K-L, B22C, B23B-C-D-F-G-H-K-P-Q, B24B-C-D, B25B-C-D-F-G-H-J, B26B-D-F, B27B-C-F-G-J-L, B28D, B30B, B31B-C-D-F, B33Y, B41B-C-D-F-G-J-K-L-N, B42B-C, B43M, B44B-C, B60S, B61B, B65F 1-9, B65G-H, B66B-C-F, B67B-C, B68F, C10F, C12L, C13D-G-H, C14B,

		C23C, D01B-D-G-H, D02G-H-J, D03C-D-J, D04B-C, D05B-C, D06B-G-H, D21B-D-F-G, E01C-D-F-H, E02C-D-F, E05G, E21B-C-D-F, F01B-C-D-K-M-N-P, F02C-G-K, F03B-C-D-G, F04B-C-D-F, F15B-D, F16C-D-F-G-H-K-M-N-P, F22D, F23B-C-D-G-H-J-K-L-M-N-R, F24F-H, F25B, F26B, F27B, F28B-C-D-F-G, G01G, G03G, G05D-G, G06K-M, G07B-C-D-F-G, G09D-G, G10L, G11B, H05F
29	Manufacture of Motor Vehicles, Trailers and Semi-trailers	B60B-D-G-H-J-K-L-N-P-Q-R-T-W, B62D, F01L, F02B-D-F-M-N-P, F16J, G01P
30	Manufacture of Other Transport Equipment	B60F-V, B61C-D-F-G-H-J-K, B62C-H-J-K-L-M, B63B-C-H-J, B64B-C-D-F-G, B65F 3, E01B, F03H
31	Manufacture of Furniture	A47B-C-D-F
32	Other Manufacturing	A41G, A42B, A44C, A45C-F, A46B-D, A61B-C-D-F-G-H-J-L-M, A62B, A63B-C-D-G-H-J-K, B01L, B04B, B43K-L, B44D, B62B, B65D, B68G, C06F, C12M, D07B, F16L, F23Q, G01T, G03D-F, G09B-F, G10B-C-D-F-G-H, G21G
42	Civil Engineering	E02B, E03B-C
43	Specialised Construction Activities	E03F, E04B-C-D-F-G-H

62	Computer Programming, Consultancy and Related Activities	G06Q
----	--	------

Appendix D

OECD Taxonomy of Economic Activities Based on Technological Intensity (2016)

Group	Economic activity	NACE Rev.2 Division
High-tech	“Manufacture of basic pharmaceutical products and pharmaceutical preparations; Manufacture of computer, electronic and optical products; Manufacture of air and spacecraft and related machinery”	21 26 30 (but only 30.30)
Medium-high tech	“Manufacture of chemicals and chemical products; Manufacture of weapons and ammunition; Manufacture of electrical equipment; Manufacture of machinery and equipment n.e.c.; Manufacture of motor vehicles, trailers and semi-trailers; Manufacture of other transport equipment excluding building of	20 27 28 29 30 (except 30.30)

	ships and boats and excluding manufacture of air and spacecraft and related machinery; Manufacture of medical and dental instruments and supplies”	
Knowledge intensive activities (total)	“Mining support service activities; Manufacture of coke and refined petroleum products; Manufacture of basic pharmaceutical products and pharmaceutical preparations; Manufacture of computer, electronic and optical products; Air transport; Publishing activities; Motion picture, video and television programme production and pharmaceutical preparations; Programming and broadcasting activities; Telecommunications; Computer programming, consultancy and related	9 19 21 26 51 58 59 60 61 62 63 64 65 66 69 70

	activities; Information	71
	service activities;	72
	Financial service	73
	activities, except	74
	insurance and pension	75
	funding; Insurance,	76
	reinsurance and pension	77
	funding, except	78
	compulsory social	79
	security; Activities	84
	auxiliary to financial	85
	services and insurance	86
	activities; Legal and	90
	accounting activities;	91
	Activities of head	94
	offices, management	99
	consultancy activities;	
	Architectural and	
	engineering activities,	
	technical testing and	
	analysis; Scientific	
	research and	
	development;	
	Advertising and market	
	research; Other	
	professional, scientific	
	and technical activities;	
	Veterinary activities;	
	Employment activities;	
	Travel agency, tour	

	<p>operator reservation service and related activities; Public administration and defence, compulsory social security; Education; Human health activities; Creative, arts and entertainment activities; Libraries, archives, museums and other cultural activities; Activities of membership organisations; Activities of extraterritorial organisations and bodies”</p>	
--	--	--

Appendix E

Eurostat classification on high-tech, medium-high tech economic activities of the manufacturing industry and knowledge-based services according to technological intensity

Group	Economic activity	NACE Rev.2 Division
High-tech	“Manufacture of basic pharmaceutical products and pharmaceutical preparations, computer, electronic and optical products, air and spacecraft and related machinery”	21 26
Medium-high tech	“Manufacture of chemicals and chemical products, weapons and ammunition, electrical equipment, machinery and equipment n.e.c., motor vehicles, trailers and semi-trailers, other transport equipment excluding building of ships and boats and excluding manufacture of air and spacecraft and related machinery, medical and dental instruments and supplies”	20 27 28 29 30

Medium-low tech	“Reproduction of recorded media, manufacture of coke and refined petroleum products, rubber and plastic products, other non-metallic mineral products, basic metals, fabricated metal products, except machinery and equipment excluding Manufacture of weapons and ammunition, building of ships and boats, repair and installation of machinery and equipment”	19 22 23 24 25 33
Knowledge intensive services	“Water transport, Air transport, Publishing activities, Motion picture, video and television programme production, sound recording and music publish activities, Programming and broadcasting activities, Telecommunications, computer programming, consultancy and related activities, Information service activities (section J), Financial and insurance activities (section K), Legal	50 51 58-63 64-66 69-75 78 80 84-93

	<p>and accounting activities, Activities of head offices, management consultancy activities, Architectural and engineering activities, technical testing and analysis, Scientific research and development, Advertising and market research, Other professional, scientific and technical activities, Veterinary activities (section M), Employment activities, Security and investigation activities, Public administration and defense, compulsory social security (section O), Education (section P), Human health and social work activities (section Q), Arts, entertainment and recreation (section R)”</p>	
--	---	--

Appendix F

Dependent variable information, distribution by provinces

PROVINCE	TOTREG19
İstanbul	1898
Ankara	399
Bursa	265
İzmir	182
Kocaeli	158
Konya	108
Manisa	89
Tekirdağ	71
Sakarya	67
Gaziantep	61
Kayseri	52
Antalya	48
Denizli	27
Eskişehir	27
Adana	21
Mersin	20
Kütahya	19
Muğla	17
Aydın	16
Rize	16
Samsun	14
Sivas	13
Hatay	11
Nevşehir	11
Kahramanmaraş	8

Trabzon	8
Balıkesir	7
Çorum	7
Isparta	7
Afyonkarahisar	6
Çanakkale	6
Düzce	6
Kırklareli	6
Van	6
Aksaray	5
Burdur	5
Edirne	5
Giresun	5
Tokat	5
Elazığ	4
Erzurum	4
Kastamonu	4
Malatya	4
Osmaniye	4
Uşak	4
Bilecik	3
Çankırı	3
Karabük	3
Karaman	3
Yalova	3
Yozgat	3
Amasya	2
Batman	2
Bingöl	2

Bolu	2
Diyarbakır	2
Kırıkkale	2
Kilis	2
Sinop	2
Şanlıurfa	2
Zonguldak	2
Adıyaman	1
Gümüşhane	1
Tunceli	1
Ağrı	0
Ardahan	0
Artvin	0
Bartın	0
Bayburt	0
Bitlis	0
Erzincan	0
Hakkari	0
Iğdır	0
Kars	0
Kırşehir	0
Mardin	0
Muş	0
Niğde	0
Ordu	0
Siirt	0
Şırnak	0

CURRICULUM VITAE

PERSONAL INFORMATION

Surname, Name: Variş, Sila Ceren

EDUCATION

Degree	Institution	Year of Graduation
MS	METU Regional Planning	2016
BS	METU City and Regional Planning	2013
High School	Kılıçoğlu Anatolian High School, Eskişehir	2008

WORK EXPERIENCE

Year	Place	Enrollment
2018-Present	KDPU Dept. of City and Regional Planning	Research Assistant
2016-2018	METU Dept. of City and Regional Planning	Research Assistant

FOREIGN LANGUAGES

Advanced English

PUBLICATIONS

1. Husár, M., Ondrejčka, V., and Variş, S. C. (2017, October). Smart cities and the idea of smartness in urban development—a critical review. In *IOP conference series: materials science and engineering* (Vol. 245, No. 8, p. 082008). IOP Publishing.
2. Husár, M., Variş, S. C., and Ondrejčka, V. (2017, December). Analysis of The Planning Education in the Light of the Contemporary Trends in Planning. In *IOP Conference Series: Earth and Environmental Science* (Vol. 95, No. 5, p. 052005). IOP Publishing.
3. Matoga, A., Doyle, A., Avellini, E., and Variş, S. C. (2017). 3.4 The Anyone–Anywhere Space (s)? Analyzing Diversity in Public Spaces. *ISR-Forschungsbericht*, 44, 171-178.