B. Appendix: Tables

Table B.1. Overview of studies: patents, innovations, productivity, employment, GDP

Author/Year	Country	MAR	Jacobs	Porter	Spatial Unit	Depend. Var.
Jaffe (1989)†	USA	n.a.	n.a.	n.a.	29 states	innov./patent
Jaffe *et al.* (1993)‡	USA	n.a.	n.a.	n.a.	states	innov./patent
Acs *et al.* (1997)†	USA	n.a.	n.a.	n.a.	125 MSA, states	innov. (USSBA)
Audretsch and Feldman (1996)†	USA	(-)	n.a.	n.a.	state	innov. (SBIDB)
Caniëls (1997)	Europe	+	n.a.	n.a.	NUTS1/2	innov./patent
Paci and Usai (1999)	Italy	+	n.a.	+	LMA	innov./patent
Audretsch and Feldman (1999)	USA	-	+	+	MSA/CMSA	innov. (SBIDB)
Combes (2000a)	France	-	+	o	LMA	innov./patent
Bottazzi and Peri (2000)†	Europe	n.a.	n.a.	n.a.	86 NUTS1 regions	innov./patent
Autant-Bernard and Massard (2000)	France	n.a.	n.a.	n.a.	NUTS3	publications
Acs *et al.* (2002)†	USA	n.a.	n.a.	n.a.	MSA	innov./patent
Massard and Riou (2002)	France	-	n.a.	-	departments	innov./patent
Andersson and Ejermo (2002)†	Sweden	n.a.	n.a.	n.a.	81 regions	innov./patent
Bottazzi and Peri (2003)†	Europe	n.a.	n.a.	n.a.	86 NUTS1 regions	innov./patent
Fischer and Varga (2003)†	Austria	n.a.	n.a.	n.a.	72 political districts	innov./patent
Moreno *et al.* (2003)†	Europe	+	n.a.	n.a.	138 NUTS1/2	innov./patent
Cabrer-Borras and Serrano-Domingo (2004)	Spain	-	n.a.	o	ZIP code	innov./patent
Acs and Armington (2004)†	USA	n.a.	n.a	n.a.	MSA/4 US	innov./patent
Moreno *et al.* (2004)†	Europe	+	n.a.	n.a.	175 NUTS1/2	specialization
Bilbao-Osorio and Rodríguez-Pose (2004)†	Europe	+	n.a.	n.a.	103 NUTS1/2	innov./patent
Greunz (2004)	Europe	+	n.a.	+	153 NUTS2	innov./patent
van der Panne (2004)	Netherlands	+	o	-	98 regions	new products
Greunz (2005)	Europe	+	n.a.	+	NUTS2	innov./patent
Boschma and Weterings (2005)	Netherlands	o	n.a.	-	NUTS3	innov./patent
Andersson and Ejermo (2005)	Sweden	n.a.	+	+	LMA	innov./patent
Fischer *et al.* (2005)	Europe	n.a.	n.a.	n.a.	188 NUTS1/2	innov./patent
Moreno *et al.* (2005c)†	Europe	+	n.a.	n.a.	175 NUTS1/2	innov./patent
Fritsch and Slavtchev (2007a)	Germany	+	-	n.a.	327 German Kreise	DPMA patents
OhUallachain and Leslie (2007)	USA	+	(+)	n.a.	50 states	innov./patent
Maggioni *et al.* (2007)	Europe	-	n.a.	n.a.	109 NUTS 1/2	innov./patent
Crescenzi *et al.* (2007b)	Europe, USA	(+)	+	n.a.	266 MSA, 96 NUTS	innov./patent
Arancegui *et al.* (2008)	Spain	-	+	n.a.	20 Basque counties	innov./patent
Usai (2008)†	OECD	n.a.	(+)	n.a.	61-271 regions	innov./patent
Hoekman *et al.* (2008)	Europe	n.a.	n.a.	n.a.	1319 NUTS3	innov./patent
Hauser *et al.* (2008)†	Europe	n.a.	n.a.	n.a.	49/51 NUTS1	innov./patent
Andersson and Gråsjö (2009)†	Sweden	n.a.	n.a.	n.a.	municipalities	innov./patent
Glaeser *et al.* (1992)	USA	-	+	+	SMA, 170 cities	employment
Bradley and Gans (1998)	Australia	n.a.	n.a.	-	cities	employment
Sjöholm (1998)	Indonesia	o	o	+	districts/provinces	productivity
Partridge and Rickman (1999)	USA	+	n.a.	+	states	productivity
Staber (2001)	Germany	+	n.a.	-	10km distance	other
Rosenthal and Strange (2001)	USA	+	n.a.	n.a.	ZIP, county, state	productivity
Dekle (2002)	Japan	-	o	o	prefectures	empl./ prod.
Batisse (2002)	China	-	o	+	provinces	other
Rosenthal and Strange (2003)	USA	+	o	-	ZIP regions	empl./ other
King *et al.* (2003)	USA	-	+	o	states	employment
Eckey *et al.* (2004)	Germany	n.a.	n.a.	n.a.	180LLS	output
Viladecans-Marsal (2004)	Spain	+	+	n.a.	cities	empl.
Atzema and van Oort (2004)	Netherlands	+	+	+	municipalities	other
Boix and Trullén (2004)	Spain	+	+	n.a.	cities	empl.
van der Panne (2004)	Netherlands	+	-	o	provinces	productivity
Mukkala (2004)	Finland	+	n.a.	n.a.	NUTS4	productivity
Malpezzi *et al.* (2004)	USA	n.a.	n.a.	+	SMA	others
Combes *et al.* (2004)	France	n.a.	o	+	MSA	others
Acs and Armington (2004)	USA	-	o	n.a.	LMA	employment
Autant-Bernard and Massard (2007)a	France	n.a.	n.a.	n.a.	plants	sales
Blien and Suedekum (2005)	Germany	+	n.a.	+	438 NUTS3	employment
Crescenzi and Rodríguez-Pose (2006)a	Europe	n.a.	n.a.	n.a.	NUTS1/2	GDP
Sonobe and Otsuka (2006)	Taiwan	o	n.a.	o	township	employment

Source: own illustration. *Notes:* Table highlights selected studies and is not exhaustive; effects: positive effect (+), negative effect (-), not significant (o); not analyzed (n.a.); †: MAR, Jacobs or Porter not focus of KPF estimation; ‡: patent citation analysis.

Table B.2. SQL database structure

FILE 1: **EP_APPLT_ REG (EPO applicant)**	FILE 2: **EP_INVT_REG (EPO inventorship)**
2.126.580 hits	4.897.220 hits
Applt_id (applicant ID)	Invt_id (inventor ID)
Appln_nr (patent application nr.)	Appln_nr (patent application nr.)
Reg_code (NUTS3 region code)	Reg_code (NUTS3 region code)
Address	Address
Ctry_code (country code)	Ctry_code (country code)
Reg_share (share ≤ 1)	Reg_share (share ≤ 1)
Applt_share (applicant share ≤ 1)	Invt_share (inventor share ≤ 1)
FILE 3: **EP_PRIO_IPC (YEAR, IPC)**	FILE 4: **RegPAT_REGIONS** (Concordance)
9.521.012 hits	Ctry_code (Country)
Appln_nr (patent application nr.)	Up_level_code (NUTS2 level code)
Appn_year (filing year)	Up_level_label (macro level region's name)
Prio_year (priority year of first filing)	Reg_code (NUTS3 level code)
IPC (IPC classes)	Reg_label (micro level region's name)
FILE 5: **IPC Concordance**	
IPC fields vs. 43 technology fields	
IPC fields vs. 6 high-technology fields	

Source: own illustration based on OECD RegPAT (January 2009). *Notes:* The relational database covers 819 OECD TL3 regions. Inventor counting is based on full counting method. IDs are counted several times if inventor IDs correspond to several technology fields.

Table B.3. RegPAT and the NUTS3/TL3 classification

Ctry.	**Label**	**Micro-Region (NUTS3)**	**Micro-Region (TL3)**	**Meso-Region (NUTS2)**	**Macro-Region (NUTS1)**	**Inventor address**
AT	Austria	35 NUTS3	35 TL3	9 NUTS2	3 NUTS1	43.084
BE	Belgium	43 NUTS3	11 TL3	11 NUTS2	3 NUTS1	48.362
CH	Switzerland	26 NUTS3	26 TL3	7 NUTS2	7 NUTS1	105.939
CY	Cyprus	1 NUTS3	1 TL3	1 NUTS2	1 NUTS1	168
CZ	Czech Republic	14 NUTS3	14 TL3	8 NUTS2	8 NUTS1	2.956
DE	Germany	439 NUTS3	97 TL3	41 NUTS2	16 NUTS1	940.797
DK	Denmark	15 NUTS3	15 TL3	1 NUTS2	1 NUTS1	32.851
EE	Estonia	5 NUTS3	5 TL3	1 NUTS2	1 NUTS1	323
ES	Spain	52 NUTS3	52 TL3	19 NUTS2	7 NUTS1	25.689
FI	Finland	20 NUTS3	20 TL3	5 NUTS2	4 NUTS1	47.212
FR	France	100 NUTS3	100 TL3	26 NUTS2	9 NUTS1	302.475
GR	Greece	51 NUTS3	13 TL3	13 NUTS2	4 NUTS1	2061
HU	Hungary	20 NUTS3	20 TL3	7 NUTS2	3 NUTS1	12.719
IE	Ireland	8 NUTS3	8 TL3	2 NUTS2	2 NUTS1	8.021
IT	Italy	103 NUTS3	103 TL3	21 NUTS2	5 NUTS1	125.173
LT	Lithuania	10 NUTS3	10 TL3	1 NUTS2	10 NUTS1	309
LU	Luxembourg	1 NUTS3	1 TL3	1 NUTS2	1 NUTS1	2.923
LV	Latvia	6 NUTS3	6 TL3	1 NUTS2	6 NUTS1	360
MT	Malta	2 NUTS3	1 TL3	1 NUTS2	2 NUTS1	106
NL	Netherlands	40 NUTS3	12 TL3	12 NUTS2	4 NUTS1	95.286
NO	Norway	19 NUTS3	19 TL3	7 NUTS2	7 NUTS1	15.691
PL	Poland	45 NUTS3	45 TL3	16 NUTS2	6 NUTS1	3.809
PT	Portugal	30 NUTS3	30 TL3	7 NUTS2	3 NUTS1	1.433
SE	Sweden	21 NUTS3	21 TL3	8 NUTS2	8 NUTS1	86.369
SI	Slovenia	12 NUTS3	12 TL3	1 NUTS2	12 NUTS1	1.939
SK	Slovak Republic	8 NUTS3	8 TL3	4 NUTS2	4 NUTS1	731
UK	United Kingdom	133 NUTS3	133 TL3	37 NUTS2	12 NUTS1	237.390
$\sum$	27 NUTS0	1259 NUTS3	819 TL3	268 NUTS2	149 NUTS1	2.144.176

Source: own illustration based on OECD RegPAT (January 2009). *Notes:* The relational database covers 819 OECD TL3 micro regions. For Belgium, Greece and the Netherlands, the OECD TL3 corresponds to the EUROSTAT NUTS2 level. For Germany, 97 "Raumordnungsregionen" are used (OECD, 2003).

Table B.4. IPC - technology field concordance

No.	Field Name (Technology)	IPC Subclasses
TF1	Food, beverages	A01H, A21D, A23B, A23C, A23D, A23F, A23G, A23J, A23K, A23L, A23P, C12C, C12F, C12G, C12H, C12J, C13F, C13J, C13K
TF2	Tobacco products	A24B, A24D, A24F
TF3	Textiles	D04D, D04G, D04H, D06C, D06J, D06M, D06N, D06P, D06Q
TF4	Wearing apparel	A41B, A41C, A41D, A41F
TF5	Leather articles	A43B, A43C, B68B, B68C
TF6	Wood products	B27D, B27H, B27M, B27N, E04G
TF7	Paper	B41M, B42D, B42F, B44F, D21C, D21H, D21J
TF9	Petroleum products, nuclear fuel	C10G, C10L, G01V
TF10	Basic chemical	B01J, B09B, B09C, B29B, C01B, C01C, C01D, C01F, C01G, C02F, C05B, C05C, C05D, C05F, C05G, C07B, C07C, C07F, C07G, C08B, C08C, C08F, C08G, C08J, C08K, C08L, C09B, C09C, C09D, C09K, C10B, C10C, C10H, C10J, C10K, C12S, C25B, F17C, F17D, F25J, G21F
TF11	Pesticides & agro-chemical prod.	A01N
TF12	Paints, varnishes	B27K
TF13	Pharmaceuticals	A61K, A61P, C07D, C07H, C07J, C07K, C12N, C12P, C12Q
TF14	Soaps & detergents	C09F, C11D, D06L
TF15	Other chemicals	A62D, C06B, C06C, C06D, C08H, C09G, C09H, C09J, C10M, C11B, C11C, C14C, C23F, C23G, D01C, F42B, F42D, G03C
TF16	Man-made fibres	D01F
TF17	Rubber and plastics products	A45C, B29C, B29D, B60C, B65D, B67D, E02B, F16L, H02G
TF18	Non-metallic mineral products	B24D, B28B, B28C, B32B, C03B, C03C, C04B, E04B, E04C, E04D, E04F, G21B
TF19	Basic metals	B21C, B21G, B22D, C21B, C21C, C21D, C22B, C22C, C22F, C25C, C25F, C30B, D07B, E03F, E04H, F27D, H01B
TF20	Fabricated metal products	A01L, A44B, A47H, A47K, B21K, B21L, B22F, B25B, B25C, B25F, B25G, B25H, B26B, B27G, B44C, B65F, B82B, C23D, C25D, E01D, E01F, E02C, E03B, E03C, E03D, E05B, E05C, E05D, E05F, E05G, E06B, F01K, F15D, F16B, F16P, F16S, F16T, F17B, F22B, F22G, F24J, G21H
TF21	Energy machinery	B23F, F01B, F01C, F01D, F03B, F03C, F03D, F03G, F04B, F04C, F04D, F15B, F16C, F16D, F16F, F16H, F16K, F16M, F23R
TF22	Non-specific purpose machinery	A62C, B01D, B04C, B05B, B61B, B65G, B66B, B66C, B66D, B66F, C10F, C12L, F16G, F22D, F23B, F23C, F23D, F23G, F23H, F23J, F23K, F23L, F23M, F24F, F24H, F25B, F27B, F28B, F28C, F28D, F28F, F28G, G01G, H05F
TF23	Agricultural & forestry mach.	A01B, A01C, A01D, A01F, A01G, A01J, A01K, A01M, B27L
TF24	Machine-tools	B21D, B21F, B21H, B21J, B23B, B23C, B23D, B23G, B23H, B23K, B23P, B23Q, B24B, B24C, B25D, B25J, B26F, B27B, B27C, B27F, B27J, B28D, B30B, E21C
TF25	Special purpose machinery	A21C, A22B, A22C, A23N, A24C, A41H, A42C, A43D, B01F, B02B, B02C, B03B, B03C, B03D, B05C, B05D, B06B, B07B, B07C, B08B, B21B, B22C, B26D, B31B, B31C, B31D, B31F, B41B, B41C, B41D, B41F, B41G, B41L, B41N, B42B, B42C, B44B, B65B, B65C, B65H, B67B, B67C, B68F, C13C, C13D, C13G, C13H, C14B, C23C, D01B, D01D, D01G, D01H, D02G, D02H, D02J, D03C, D03D, D03J, D04B, D04C, D05B, D05C, D06B, D06G, D06H, D21B, D21D, D21F, D21G, E01C, E02D, E02F, E21B, E21D, E21F, F04F, F16N, F26B, H05H
TF26	Weapons and ammunition	B63G, F41A, F41B, F41C, F41F, F41G, F41H, F41J, F42C, G21J
TF27	Domestic appliances	A21B, A45D, A47G, A47J, A47L, B01B, D06F, E06C, F23N, F24B, F24C, F24D, F25C, F25D, H05B
TF28	Office machinery and computers	B41J, B41K, B43M, G02F, G03G, G05F, G06C, G06D, G06E, G06F, G06G, G06J, G06K, G06M, G06N, G06T, G07B, G07C, G07D, G07F, G07G, G09D, G09G, G10L, G11B, H03K, H03L
TF29	Electric motors, generators	H02K, H02N, H02P
TF30	Electric distribution, control, wire, cable	H01H, H01R, H02B
TF31	Accumulators, battery	H01M
TF32	Lighting equipment	F21H, F21K, F21L, F21M, F21S, F21V, H01K
TF33	Other electrical equipment	B60M, B61L, F21P, F21Q, G08B, G08G, G10K, G21C, G21D, H01T, H02H, H02M, H05C
TF34	Electronic components	B81B, B81C, G11C, H01C, H01F, H01G, H01J, H01L
TF35	Signal transmission, telecomms	G09B, G09C, H01P, H01Q, H01S, H02J, H03B, H03C, H03D, H03F, H03G, H03H, H03M, H04B, H04J, H04K, H04L, H04M, H04Q, H05K
TF36	TV & radio receivers, audiovisual electronics	G03H, H03J, H04H, H04N, H04R, H04S
TF37	Medical equipment	A61B, A61C, A61D, A61F, A61G, A61H, A61J, A61L, A61M, A61N, A62B, B01L, B04B, C12M, G01T, G21G, G21K, H05G
TF38	Measuring instruments	F15C, G01B, G01C, G01D, G01F, G01H, G01J, G01M, G01N, G01R, G01S, G01W, G12B
TF39	Industrial process control equip.	G01K, G01L, G05B, G08C
TF40	Optical instruments	G02B, G02C, G03B, G03D, G03F, G09F
TF41	Watches, clocks	G04B, G04C, G04D, G04F, G04G
TF42	Motor vehicles	B60B, B60D, B60G, B60H, B60J, B60K, B60L, B60N, B60P, B60Q, B60R, B60S, B60T, B62D, E01H, F01L, F01M, F01N, F01P, F02B, F02D, F02F, F02G, F02M, F02N, F02P, F16J, G01P, G05D, G05G
TF43	Other transport equipment	B60F, B60V, B61C, B61D, B61F, B61G, B61H, B61J, B61K, B62C, B62H, B62J, B62K, B62L, B62M, B63B, B63C, B63H, B63J, B64B, B64C, B64D, B64F, B64G, E01B, F02C, F02K, F03H
TF44	Furniture, consumer goods	A41G, A42B, A44C, A45B, A45F, A46B, A46D, A47B, A47C, A47D, A47F, A63B, A63C, A63D, A63F, A63G, A63H, A63J, A63K, B43K, B43L, B44D, B62B, B68G, C06F, F23Q, G10B, G10C, G10D, G10F, G10G, G10H
HT1	Aviation	B64B, B64C, B64D, B64F, B64G
HT2	Computers and automated business equipment	B41J, G06C, G06D, G06E, G06F, G06G, G06J, G06K, G06M, G06N, G06T , G11C
HT3	Lasers	H01S
HT4	Semiconductors	H01L
HT5	Communication technology	H04B, H04H, H04J, H04K, H04L, H04M, H04N, H04Q, H04R, H04S
HT6	Micro-organism and genetic engineering	C12M, C12N, C12P, C12Q

Source: own illustration based on Schmoch *et al.* (2003) and EUROSTAT (2009).

Table B.5. Distance weights and spatial lags

Distance concept	**conceptualization**	**neighboring effects**
Polygon contiguity distance	units that share edges and/or corners of polygons	first-, second-, third-, nth-order neighborhood (row-standardization)
Fixed distance bands	specified critical distance in miles, kilometers, travel time (minutes); first-, second-, nth-order distance band	units inside the distance band are recognized (row-standardization); threshold distance guarantees at least one neighbor
k-nearest neighbors	k is a predefined number of neighbors	every unit has k neighboring units with the same (unweighted) influence (row-standardization)
Inverse distance	distance decay effects (miles, kilometers, travel time)	every unit is recognized to effect all other units; influence decreases with distance

Source: illustration based on Anselin and Florax (1995), Anselin (2006), Anselin (2007) and Andersson and Gråsjö (2009). *Notes:* The table summarizes the basic classifications of distance matrices but is not necessarily exhaustive.

Table B.6. Research clusters by TF and country with $RCI > 1$, 1990-1994

Technology Field	AT	BE	CH	CY	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IE	IT	LT	LU	LV	MT	NL	NO	PL	PT	SE	SI	SK	UK	∑	∑
TF1_Food_beverages	3%	3%	8%	0%	0%	**22%**	5%	0%	0%	2%	18%	0%	1%	0%	7%	0%	0%	0%	0%	5%	1%	0%	0%	1%	0%	0%	**22%**	100%	232
TF2_Tobacco_prod	3%	2%	11%	0%	0%	**25%**	1%	0%	4%	0%	9%	1%	0%	1%	8%	0%	0%	0%	0%	3%	0%	0%	0%	2%	0%	0%	**31%**	100%	101
TF3_Textiles	4%	4%	8%	0%	1%	**29%**	4%	0%	1%	2%	11%	0%	0%	0%	10%	0%	1%	0%	0%	1%	0%	1%	0%	1%	1%	0%	**24%**	100%	169
TF4_Wearing_apparel	5%	2%	9%	0%	0%	**21%**	5%	0%	1%	1%	15%	0%	0%	1%	11%	0%	0%	0%	0%	4%	1%	0%	0%	7%	0%	0%	17%	100%	149
TF5_Leather_articles	11%	0%	6%	0%	0%	**28%**	2%	0%	2%	0%	14%	0%	1%	0%	20%	0%	0%	0%	0%	2%	1%	0%	0%	3%	0%	0%	10%	100%	125
TF6_Wood_prod	7%	2%	5%	0%	0%	**27%**	5%	0%	2%	3%	15%	0%	0%	1%	7%	0%	0%	0%	0%	4%	1%	0%	0%	6%	0%	0%	12%	100%	214
TF7_Paper	5%	2%	9%	0%	0%	**22%**	3%	0%	1%	6%	11%	0%	1%	1%	4%	0%	0%	0%	0%	3%	1%	0%	1%	5%	1%	0%	**26%**	100%	197
TF9_Petrol_prod_nucl_fuel	5%	2%	4%	0%	1%	**25%**	3%	0%	0%	2%	17%	1%	0%	1%	6%	0%	1%	0%	0%	3%	5%	1%	0%	2%	0%	0%	**23%**	100%	176
TF10_Basic_chemical	3%	3%	13%	0%	0%	**27%**	2%	0%	0%	2%	11%	0%	1%	0%	6%	0%	0%	0%	0%	5%	2%	0%	0%	1%	0%	0%	**25%**	100%	190
TF11_Pesticide_agrochem prod	2%	4%	9%	0%	0%	18%	3%	0%	1%	2%	15%	1%	1%	0%	3%	0%	0%	0%	0%	3%	0%	1%	0%	1%	0%	0%	**37%**	100%	123
TF12_Paints_varnishes	3%	1%	3%	0%	1%	**36%**	6%	0%	1%	7%	11%	0%	0%	0%	5%	0%	0%	0%	0%	5%	0%	0%	0%	9%	0%	0%	11%	100%	88
TF13_Pharmaceuticals	4%	3%	10%	0%	0%	20%	2%	0%	1%	1%	11%	0%	2%	1%	7%	0%	0%	0%	0%	5%	1%	1%	0%	2%	0%	0%	**30%**	100%	169
TF14_Soaps_detergents	2%	8%	6%	0%	0%	**21%**	5%	0%	1%	0%	11%	0%	0%	0%	8%	0%	1%	0%	0%	3%	0%	0%	0%	1%	0%	0%	**33%**	100%	107
TF15_Other_chemicals	3%	4%	12%	0%	0%	**27%**	2%	0%	1%	1%	14%	0%	1%	1%	2%	0%	0%	0%	1%	2%	1%	0%	0%	3%	0%	0%	**27%**	100%	187
TF16_Man_made_fibre	6%	2%	6%	0%	0%	**30%**	2%	0%	0%	4%	9%	0%	0%	0%	13%	0%	1%	0%	0%	4%	0%	2%	0%	0%	0%	0%	**21%**	100%	115
TF17_Rubber_plastic_prod	6%	2%	9%	0%	0%	**25%**	3%	0%	0%	2%	13%	0%	0%	0%	8%	0%	0%	0%	0%	3%	2%	0%	0%	3%	0%	0%	**23%**	100%	287
TF18_Non-metal_mineral_prod	7%	3%	10%	0%	0%	**27%**	3%	0%	0%	3%	12%	0%	0%	0%	6%	0%	0%	0%	0%	3%	1%	0%	0%	3%	0%	0%	**22%**	100%	263
TF19_Basic_metals	7%	3%	10%	0%	0%	**24%**	2%	0%	0%	2%	14%	0%	0%	0%	5%	0%	0%	0%	0%	2%	2%	0%	0%	5%	0%	0%	**22%**	100%	257
TF20_Fabric_metal_prod	7%	1%	9%	0%	0%	**26%**	3%	0%	0%	2%	14%	0%	0%	0%	10%	0%	0%	0%	0%	2%	0%	0%	0%	6%	0%	0%	19%	100%	270
TF21_Energy_machinery	4%	0%	9%	0%	0%	**30%**	4%	0%	0%	1%	15%	0%	0%	0%	8%	0%	0%	0%	0%	1%	1%	0%	0%	4%	0%	0%	**22%**	100%	226
TF22_Nonspec_machinery	6%	2%	9%	0%	0%	**28%**	3%	0%	0%	3%	12%	0%	0%	0%	8%	0%	0%	0%	0%	3%	1%	0%	0%	5%	0%	0%	19%	100%	269
TF23_Agricul_forestry_machinery	6%	2%	6%	0%	0%	**22%**	5%	0%	1%	2%	17%	0%	1%	2%	5%	0%	0%	0%	0%	5%	4%	0%	0%	5%	0%	0%	17%	100%	255
TF24_Machine_tools	8%	0%	11%	0%	0%	**29%**	2%	0%	0%	2%	10%	0%	0%	0%	12%	0%	0%	0%	0%	1%	0%	0%	0%	5%	0%	0%	20%	100%	240
TF25_Spec_purp_machinery	7%	3%	10%	0%	0%	**28%**	3%	0%	0%	3%	9%	0%	0%	0%	11%	0%	0%	0%	0%	3%	1%	0%	0%	5%	0%	0%	17%	100%	253
TF26_Weapons_ammunition	5%	1%	8%	0%	0%	**22%**	1%	0%	1%	2%	20%	0%	0%	1%	5%	0%	0%	0%	0%	2%	5%	0%	0%	6%	0%	1%	**22%**	100%	184
TF27_Domestic_appliances	6%	1%	10%	0%	0%	**26%**	3%	0%	2%	1%	15%	0%	0%	0%	13%	0%	0%	0%	0%	3%	0%	0%	0%	3%	0%	0%	17%	100%	245
TF28_Office_mach_computers	2%	2%	12%	0%	0%	**25%**	1%	0%	0%	2%	10%	0%	0%	1%	5%	0%	0%	0%	0%	3%	1%	0%	0%	2%	2%	0%	**32%**	100%	182
TF29_Electric_motors_generators	7%	1%	12%	0%	0%	**33%**	3%	0%	1%	2%	11%	0%	0%	0%	10%	0%	0%	1%	0%	1%	1%	0%	0%	2%	0%	0%	18%	100%	196
TF30_Elec_distr_contr_wire_cable	3%	2%	13%	0%	0%	**33%**	1%	0%	0%	1%	18%	0%	0%	1%	6%	0%	0%	0%	1%	1%	0%	0%	0%	3%	2%	0%	15%	100%	181
TF31_Accumulators_battery	5%	2%	10%	0%	0%	**28%**	4%	0%	0%	1%	12%	1%	1%	0%	9%	0%	1%	0%	0%	2%	2%	0%	0%	3%	0%	0%	20%	100%	162
TF32_Lighting_equipment	5%	3%	7%	0%	1%	**28%**	2%	0%	1%	1%	16%	0%	1%	0%	10%	0%	0%	0%	0%	2%	2%	0%	0%	3%	0%	0%	18%	100%	173
TF33_Other_electr_equip	6%	1%	9%	0%	0%	**27%**	1%	0%	0%	1%	16%	0%	0%	0%	6%	0%	0%	0%	0%	2%	0%	0%	0%	5%	1%	0%	**23%**	100%	211
TF34_Electr_components	6%	1%	12%	0%	0%	**30%**	1%	0%	0%	1%	14%	0%	1%	0%	6%	0%	0%	0%	0%	1%	0%	0%	0%	3%	0%	0%	**25%**	100%	154
TF35_Signal_transm_telecom	3%	3%	13%	0%	0%	**26%**	2%	0%	1%	3%	10%	0%	0%	1%	3%	0%	0%	0%	0%	3%	0%	0%	0%	3%	1%	0%	**28%**	100%	179
TF36_TV_radio_receiv_audio	4%	3%	12%	0%	0%	**25%**	3%	0%	0%	3%	12%	0%	0%	0%	6%	0%	0%	0%	0%	2%	1%	1%	0%	1%	1%	0%	**29%**	100%	156
TF37_Med_equipment	2%	2%	10%	0%	0%	**22%**	2%	0%	0%	1%	12%	0%	0%	1%	7%	0%	0%	0%	0%	4%	1%	0%	0%	3%	0%	0%	**31%**	100%	250
TF38_Measuring_instruments	2%	2%	11%	0%	0%	**27%**	3%	0%	0%	1%	10%	0%	0%	0%	4%	0%	0%	0%	0%	4%	1%	0%	0%	4%	1%	0%	**30%**	100%	227
TF39_Ind_proc_contr_equip	2%	1%	9%	0%	0%	**30%**	2%	0%	0%	1%	13%	0%	0%	0%	8%	0%	0%	0%	0%	2%	2%	0%	0%	2%	0%	0%	**25%**	100%	203
TF40_Opti_instruments	4%	2%	13%	0%	0%	**27%**	2%	0%	0%	1%	12%	0%	1%	1%	6%	0%	0%	0%	1%	2%	2%	0%	0%	2%	0%	0%	**28%**	100%	189
TF41_Watches_clocks	6%	3%	**21%**	0%	0%	**26%**	0%	0%	1%	1%	12%	0%	0%	0%	11%	0%	0%	0%	0%	2%	0%	0%	0%	2%	0%	0%	15%	100%	95
TF42_Motor_vehicles	4%	1%	9%	0%	0%	**33%**	2%	0%	0%	1%	17%	0%	0%	0%	6%	0%	1%	0%	0%	2%	0%	0%	0%	4%	0%	0%	**21%**	100%	198
TF43_Other_transp_equip	8%	0%	8%	0%	0%	**24%**	2%	0%	0%	3%	13%	0%	0%	0%	9%	0%	0%	0%	0%	3%	5%	0%	0%	4%	0%	0%	**21%**	100%	253
TF44_Furniture_consum_good	7%	1%	10%	0%	0%	**23%**	4%	0%	1%	2%	14%	0%	0%	1%	11%	0%	0%	0%	0%	3%	2%	0%	0%	3%	0%	0%	18%	100%	259
SUM_hightech	3%	3%	11%	0%	0%	**26%**	2%	0%	0%	2%	9%	0%	0%	1%	5%	0%	0%	0%	0%	4%	1%	0%	0%	2%	1%	0%	**31%**	100%	192
HT2_Computer_office_mach	2%	2%	9%	0%	0%	**22%**	1%	0%	0%	3%	13%	0%	1%	2%	7%	0%	0%	0%	0%	4%	1%	0%	0%	3%	2%	0%	**32%**	100%	184
HT1_Aviation	3%	1%	3%	1%	0%	**26%**	2%	0%	0%	1%	**21%**	0%	0%	0%	5%	0%	0%	0%	0%	1%	2%	0%	1%	3%	0%	0%	**29%**	100%	146
HT3_Laser	4%	1%	15%	0%	0%	**22%**	3%	0%	0%	0%	13%	0%	0%	1%	8%	0%	0%	0%	0%	3%	0%	2%	0%	3%	0%	0%	**28%**	100%	120
HT4_Semiconductors	4%	1%	13%	0%	0%	**33%**	1%	0%	0%	1%	10%	0%	0%	1%	9%	0%	0%	0%	0%	1%	1%	0%	0%	1%	0%	0%	**22%**	100%	134
HT5_Communication	2%	3%	14%	0%	0%	**24%**	3%	0%	1%	4%	11%	0%	0%	0%	3%	0%	0%	0%	0%	3%	0%	0%	0%	3%	0%	0%	**31%**	100%	147
HT6_Microorgan_Genetics	3%	4%	8%	0%	1%	17%	4%	0%	2%	2%	10%	1%	1%	1%	4%	0%	0%	0%	0%	4%	2%	0%	0%	2%	1%	1%	**33%**	100%	181
∑ cluster regions	453	190	915	1	8	2458	242	0	47	175	1247	5	24	40	705	0	15	1	5	267	116	14	3	317	24	3	2188	9463	9463
share cluster regions	5%	2%	10%	0%	0%	26%	3%	0%	0%	2%	13%	0%	0%	0%	7%	0%	0%	0%	0%	3%	1%	0%	0%	3%	0%	0%	23%	100%	

Source: own calculations. *Notes:* Calculations based upon OECD RegPAT (2009) extractions and application of ISI-SPRU-OST concordance.

Table B.7. Research clusters by TF and country with $RCI > 16$, 1990-1994

Technology Field	AT	BE	CH	CY	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IE	IT	LT	LU	LV	MT	NL	NO	PL	PT	SE	SI	SK	UK	∑	∑
TF1_Food_beverages	3%	3%	14%	0%	0%	15%	10%	0%	0%	1%	15%	0%	1%	0%	5%	0%	0%	0%	0%	8%	2%	0%	0%	1%	0%	0%	**23%**	100%	105
TF2_Tobacco_prod	3%	2%	12%	0%	0%	**22%**	1%	0%	4%	0%	9%	1%	0%	1%	8%	0%	0%	0%	0%	2%	0%	0%	0%	2%	0%	0%	**33%**	100%	92
TF3_Textiles	3%	3%	8%	0%	0%	**30%**	6%	0%	0%	2%	13%	0%	0%	0%	10%	0%	1%	0%	0%	0%	0%	1%	0%	0%	1%	0%	**22%**	100%	100
TF4_Wearing_apparel	5%	2%	8%	0%	0%	18%	5%	0%	0%	2%	15%	0%	0%	2%	12%	0%	0%	0%	0%	3%	1%	0%	0%	7%	0%	0%	19%	100%	130
TF5_Leather_articles	16%	0%	10%	0%	0%	20%	2%	0%	1%	0%	16%	0%	0%	0%	**21%**	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	12%	100%	81
TF6_Wood_prod	10%	2%	5%	0%	0%	**27%**	5%	0%	2%	4%	12%	0%	0%	1%	6%	0%	1%	0%	0%	4%	2%	0%	0%	6%	0%	0%	12%	100%	137
TF7_Paper	6%	4%	13%	0%	0%	**29%**	3%	0%	1%	7%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	6%	1%	0%	**23%**	100%	102
TF9_Petrol_prod_nucl_fuel	5%	1%	5%	0%	0%	**23%**	3%	0%	0%	1%	14%	0%	0%	1%	6%	0%	0%	0%	0%	3%	9%	1%	0%	1%	0%	0%	**28%**	100%	101
TF10_Basic_chemical	3%	4%	17%	0%	0%	**30%**	3%	0%	0%	1%	10%	0%	0%	0%	4%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%	**23%**	100%	92
TF11_Pesticide_agrochem prod	3%	4%	10%	0%	0%	**28%**	6%	0%	0%	1%	9%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	**35%**	100%	69
TF12_Paints_varnishes	4%	1%	4%	0%	1%	**32%**	6%	0%	1%	8%	10%	0%	0%	0%	5%	0%	0%	0%	0%	5%	0%	0%	0%	9%	0%	0%	13%	100%	78
TF13_Pharmaceuticals	2%	5%	11%	0%	0%	**20%**	4%	0%	0%	0%	14%	0%	1%	0%	5%	0%	0%	0%	0%	3%	1%	0%	0%	3%	0%	0%	**29%**	100%	93
TF14_Soaps_detergents	0%	11%	5%	0%	0%	**23%**	6%	0%	2%	0%	16%	0%	0%	0%	5%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%	**30%**	100%	64
TF15_Other_chemicals	3%	6%	16%	0%	0%	**29%**	1%	0%	0%	0%	12%	0%	0%	1%	3%	0%	0%	0%	0%	2%	0%	0%	0%	1%	0%	0%	**26%**	100%	98
TF16_Man_made_fibre	9%	0%	8%	0%	0%	**27%**	1%	0%	0%	4%	9%	0%	0%	0%	11%	0%	1%	0%	0%	4%	0%	1%	0%	0%	0%	0%	**25%**	100%	79
TF17_Rubber_plastic_prod	6%	2%	18%	0%	0%	**36%**	2%	0%	0%	1%	11%	0%	0%	0%	4%	0%	1%	0%	0%	1%	0%	0%	0%	2%	0%	0%	14%	100%	140
TF18_Non-metal_mineral_prod	10%	2%	17%	0%	0%	**35%**	3%	0%	0%	2%	13%	0%	0%	0%	3%	0%	1%	0%	0%	1%	0%	0%	0%	2%	0%	0%	13%	100%	133
TF19_Basic_metals	9%	2%	15%	0%	0%	**30%**	3%	0%	0%	1%	17%	0%	0%	0%	2%	0%	1%	0%	0%	1%	0%	0%	0%	2%	0%	0%	15%	100%	123
TF20_Fabric_metal_prod	8%	0%	18%	0%	0%	**40%**	3%	0%	0%	1%	11%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	9%	100%	128
TF21_Energy_machinery	2%	0%	13%	0%	0%	**40%**	2%	0%	0%	1%	16%	0%	1%	0%	7%	0%	0%	0%	0%	1%	0%	0%	0%	2%	0%	0%	16%	100%	121
TF22_Nonspec_machinery	6%	1%	15%	0%	0%	**38%**	3%	0%	0%	2%	7%	0%	0%	0%	5%	0%	1%	0%	0%	4%	0%	0%	0%	6%	0%	0%	12%	100%	123
TF23_Agricul_forestry_machinery	5%	2%	6%	0%	0%	**26%**	8%	0%	1%	1%	13%	0%	0%	1%	8%	0%	0%	0%	0%	10%	2%	0%	0%	3%	0%	0%	16%	100%	118
TF24_Machine_tools	7%	0%	18%	0%	0%	**36%**	0%	0%	0%	1%	7%	0%	0%	0%	10%	0%	0%	0%	0%	1%	0%	0%	0%	6%	0%	0%	13%	100%	125
TF25_Spec_purp_machinery	4%	2%	**20%**	0%	0%	**38%**	2%	0%	0%	3%	6%	0%	0%	0%	13%	0%	0%	0%	0%	2%	0%	0%	0%	2%	0%	0%	7%	100%	123
TF26_Weapons_ammunition	7%	1%	9%	0%	0%	**21%**	0%	0%	1%	1%	20%	0%	0%	1%	4%	0%	0%	0%	0%	2%	2%	0%	0%	7%	0%	1%	**24%**	100%	116
TF27_Domestic_appliances	5%	0%	19%	0%	0%	**35%**	3%	0%	0%	0%	12%	0%	0%	0%	11%	0%	0%	0%	0%	3%	0%	0%	0%	2%	0%	0%	11%	100%	113
TF28_Office_mach_computers	2%	1%	16%	0%	0%	**27%**	0%	0%	0%	0%	10%	0%	0%	1%	3%	0%	0%	0%	0%	2%	1%	0%	0%	1%	2%	0%	**35%**	100%	104
TF29_Electric_motors_generators	6%	0%	16%	0%	0%	**33%**	2%	0%	1%	1%	12%	0%	0%	0%	10%	0%	0%	0%	0%	1%	0%	0%	0%	3%	0%	0%	16%	100%	112
TF30_Elec_distr_contr_wire_cable	2%	3%	18%	0%	0%	**37%**	0%	0%	0%	1%	17%	0%	0%	1%	6%	0%	0%	0%	0%	2%	1%	0%	0%	3%	1%	0%	9%	100%	108
TF31_Accumulators_battery	6%	2%	13%	0%	0%	**25%**	5%	0%	0%	0%	14%	1%	0%	0%	9%	0%	0%	0%	0%	1%	1%	0%	0%	1%	0%	0%	**22%**	100%	100
TF32_Lighting_equipment	5%	2%	10%	0%	2%	**29%**	3%	0%	1%	0%	13%	0%	2%	0%	8%	0%	0%	0%	0%	2%	1%	0%	0%	2%	0%	0%	**21%**	100%	112
TF33_Other_electr_equip	6%	0%	15%	0%	0%	**32%**	0%	0%	0%	1%	16%	0%	0%	0%	4%	0%	0%	0%	0%	3%	0%	1%	0%	4%	1%	0%	18%	100%	103
TF34_Electr_components	4%	0%	18%	0%	0%	**38%**	0%	0%	0%	0%	11%	0%	1%	0%	7%	0%	0%	0%	0%	1%	0%	0%	0%	1%	0%	0%	18%	100%	82
TF35_Signal_transm_telecom	1%	3%	13%	0%	0%	**30%**	1%	0%	0%	5%	15%	0%	0%	0%	3%	0%	0%	0%	0%	3%	0%	0%	0%	1%	0%	0%	**25%**	100%	79
TF36_TV_radio_receiv_audio	4%	1%	11%	0%	0%	**21%**	4%	0%	0%	4%	13%	0%	0%	0%	4%	0%	0%	0%	0%	2%	0%	0%	0%	1%	0%	0%	**36%**	100%	85
TF37_Med_equipment	2%	1%	16%	0%	0%	**26%**	3%	0%	0%	2%	8%	0%	0%	1%	3%	0%	0%	0%	0%	3%	2%	0%	0%	4%	0%	0%	**29%**	100%	129
TF38_Measuring_instruments	2%	1%	16%	0%	0%	**32%**	3%	0%	0%	2%	9%	0%	0%	0%	1%	0%	0%	0%	0%	1%	1%	0%	0%	2%	1%	0%	**31%**	100%	117
TF39_Ind_proc_contr_equip	4%	0%	12%	0%	0%	**35%**	2%	0%	0%	1%	12%	0%	0%	0%	3%	0%	1%	0%	0%	4%	0%	0%	0%	2%	0%	0%	**25%**	100%	114
TF40_Opti_instruments	3%	2%	**22%**	0%	0%	**24%**	4%	0%	0%	0%	11%	0%	0%	0%	4%	0%	0%	0%	0%	1%	2%	0%	0%	1%	0%	0%	**28%**	100%	111
TF41_Watches_clocks	8%	2%	**31%**	0%	0%	**23%**	0%	0%	0%	0%	12%	0%	0%	0%	11%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	11%	100%	65
TF42_Motor_vehicles	5%	0%	8%	0%	0%	**53%**	1%	0%	0%	1%	16%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	11%	100%	88
TF43_Other_transp_equip	7%	0%	8%	0%	0%	**28%**	2%	0%	0%	2%	17%	0%	0%	0%	5%	0%	0%	0%	0%	1%	8%	0%	0%	3%	1%	0%	**20%**	100%	132
TF44_Furniture_consum_good	8%	1%	20%	0%	0%	**25%**	5%	0%	1%	2%	12%	0%	0%	1%	9%	0%	0%	0%	0%	0%	2%	0%	0%	2%	0%	0%	13%	100%	126
SUM_hightech	1%	5%	11%	0%	0%	**22%**	4%	0%	0%	4%	13%	0%	0%	0%	3%	0%	0%	0%	0%	3%	0%	0%	0%	2%	0%	0%	**31%**	100%	99
HT2_Computer_office_mach	1%	1%	11%	0%	0%	**21%**	0%	0%	0%	1%	12%	0%	0%	1%	6%	0%	0%	0%	0%	3%	0%	0%	0%	2%	3%	0%	**37%**	100%	94
HT1_Aviation	3%	0%	4%	0%	0%	**23%**	2%	0%	0%	0%	**23%**	0%	0%	0%	5%	0%	0%	0%	0%	0%	2%	0%	0%	3%	0%	0%	**34%**	100%	93
HT3_Laser	3%	1%	17%	0%	0%	19%	0%	0%	0%	0%	16%	0%	0%	0%	10%	0%	0%	0%	0%	1%	0%	1%	0%	1%	0%	0%	**30%**	100%	70
HT4_Semiconductors	4%	1%	16%	0%	0%	**39%**	0%	0%	0%	0%	13%	0%	0%	0%	7%	0%	0%	0%	0%	1%	0%	0%	0%	1%	0%	0%	17%	100%	70
HT5_Communication	1%	3%	12%	0%	0%	**24%**	1%	0%	0%	5%	14%	0%	0%	0%	1%	0%	0%	0%	0%	4%	0%	0%	0%	1%	0%	0%	**33%**	100%	76
HT6_Microorgan_Genetics	4%	4%	7%	0%	0%	19%	4%	0%	0%	2%	9%	0%	1%	0%	2%	0%	0%	0%	0%	6%	2%	0%	0%	3%	0%	0%	**38%**	100%	101
∑ cluster regions	251	92	683	0	3	1497	144	0	16	77	643	2	7	13	310	0	8	0	3	114	44	5	0	138	11	1	1092	5154	5154
share cluster regions	5%	2%	13%	0%	0%	29%	3%	0%	0%	1%	12%	0%	0%	0%	6%	0%	0%	0%	0%	2%	1%	0%	0%	3%	0%	0%	21%	100%	

Source: own calculations. *Notes:* Calculations based upon OECD RegPAT (2009) extractions and application of ISI-SPRU-OST concordance.

Table B.8. Changing number of research clusters by TF and country with $RCI > 1$, 2000-2004 vs. 1990-1994

Technology Field	AT	BE	CH	CY	CZ	DE	DK	EE	ES	FI	FR	GR	HU	IE	IT	LT	LU	LV	MT	NL	NO	PL	PT	SE	SI	SK	UK	∑
TF1_Food_beverages	-2	3	3	0	0	-10	-1	0	7	1	-9	1	0	0	5	0	0	1	-1	1	5	1	1	1	-1	-1	-16	-11
TF2_Tobacco_prod	-1	-1	-3	0	0	-4	1	0	0	0	-2	-1	2	0	1	0	0	0	0	0	0	1	0	1	0	0	-15	-21
TF3_Textiles	4	3	9	0	-1	-5	0	0	0	2	15	0	0	1	11	0	0	0	0	2	0	-1	3	3	3	0	-7	42
TF4_Wearing_apparel	2	2	-2	0	0	16	-2	0	5	2	15	0	0	1	8	0	1	0	0	-2	3	0	1	-3	0	0	18	65
TF5_Leather_articles	1	2	1	0	1	-2	1	0	3	0	4	0	-1	1	19	0	0	0	1	0	2	2	0	4	0	0	14	53
TF6_Wood_prod	3	2	6	1	2	6	-3	0	5	0	-14	0	0	0	18	0	-1	0	0	-1	1	1	3	-5	8	0	5	37
TF7_Paper	2	2	6	0	1	3	-1	0	-2	3	-8	0	-1	-1	5	0	0	0	0	0	-1	1	-1	-2	4	0	-9	
TF9_Petrol_prod_nucl_fuel	-1	2	-2	0	0	-7	-1	0	2	3	-11	-1	2	-1	2	0	-1	1	0	2	-1	5	0	0	0	0	8	1
TF10_Basic_chemical	3	3	-1	0	1	2	0	0	0	0	2	0	0	0	4	0	1	0	0	0	0	0	0	2	1	0	-2	16
TF11_Pesticide_agrochem prod	1	-1	1	0	1	14	0	0	2	-1	-3	-1	0	0	8	0	0	0	0	2	0	0	0	1	0	0	-7	17
TF12_Paints_varnishes	6	3	4	0	-1	5	2	0	1	2	-2	1	0	0	0	0	1	0	0	-1	1	0	4	-6	5	0	-10	15
TF13_Pharmaceuticals	1	2	4	0	1	6	2	0	0	1	4	0	-1	0	0	0	0	1	0	0	-1	-1	0	0	4	1	-5	19
TF14_Soaps_detergents	1	-1	6	0	0	3	-1	0	0	0	-1	0	0	0	4	0	-1	0	0	2	0	0	0	-1	0	0	5	16
TF15_Other_chemicals	2	-1	0	0	0	4	1	0	-1	2	2	0	-2	-1	7	0	0	0	-1	2	1	0	1	0	0	0	-14	2
TF16_Man_made_fibre	0	6	0	1	0	-5	1	0	4	-3	8	0	0	0	3	0	0	0	0	2	5	2	0	0	0	0	4	28
TF17_Rubber_plastic_prod	0	3	-1	0	0	-2	0	0	3	-1	-1	0	0	-1	10	0	0	0	0	-1	-2	0	1	-1	0	0	-3	4
TF18_Non-metal_mineral_prod	6	1	-3	0	0	4	6	0	2	-1	-2	0	0	0	15	0	0	0	0	0	0	0	0	-1	6	0	-20	13
TF19_Basic_metals	4	2	1	0	0	4	1	1	1	1	-2	0	0	0	2	0	0	0	0	1	2	0	1	0	0	0	-19	0
TF20_Fabric_metal_prod	4	3	1	0	0	3	2	0	2	-1	-5	0	0	0	8	0	0	0	0	2	-1	0	0	-3	9	0	-12	12
TF21_Energy_machinery	4	3	2	0	0	10	3	0	1	-2	-12	0	-1	0	6	0	1	0	0	0	0	0	0	-3	0	0	-12	0
TF22_Nonspec_machinery	4	-1	0	0	0	3	3	0	1	1	-10	0	0	0	10	0	0	0	0	1	2	0	0	-6	2	0	-11	-1
TF23_Agricul_forestry_machinery	3	4	-4	0	0	-1	1	0	2	2	-13	1	-1	-3	14	0	0	0	0	-1	2	0	0	-4	2	1	12	17
TF24_Machine_tools	-1	0	0	0	0	10	0	0	2	2	0	0	0	0	2	0	-1	0	0	0	2	0	0	-1	0	0	-20	-5
TF25_Spec_purp_machinery	4	1	1	0	2	-2	2	0	1	3	-6	0	0	0	6	0	-1	0	0	1	1	0	0	-1	0	0	-5	7
TF26_Weapons_ammunition	5	3	2	0	4	4	4	0	-2	-1	-13	0	0	-1	4	0	0	0	0	-2	-5	1	0	0	1	0	-17	-13
TF27_Domestic_appliances	1	4	-4	0	0	-4	1	0	1	0	-4	0	0	-1	6	0	0	0	1	0	0	0	0	-1	5	0	3	8
TF28_Office_mach_computers	2	1	2	0	0	-1	3	0	1	1	0	0	1	1	-3	3	0	0	0	-4	0	0	0	2	-3	0	-9	-3
TF29_Electric_motors_generators	0	-1	-1	0	1	-4	0	0	-1	0	-1	0	0	0	-1	0	0	-1	0	2	0	0	0	0	3	1	-4	-7
TF30_Elec_distr_contr_wire_cable	4	-1	-1	0	1	10	3	0	3	4	-2	0	0	-1	6	0	1	0	-1	1	0	0	0	-3	5	0	-8	21
TF31_Accumulators_battery	0	1	4	0	1	17	0	0	3	0	2	-1	-1	0	-5	0	0	0	1	0	-1	1	0	-4	1	0	3	22
TF32_Lighting_equipment	3	0	7	0	0	8	3	0	-1	3	-9	1	-1	1	5	0	0	0	0	-2	0	1	0	-3	6	0	-3	19
TF33_Other_electr_equip	5	1	0	0	0	8	3	0	2	3	-6	0	0	2	7	0	0	0	0	-2	0	-1	0	-3	-1	0	-4	14
TF34_Electr_components	2	4	6	0	0	7	1	0	0	1	-5	0	0	2	3	0	0	0	0	1	2	1	0	2	0	0	-1	26
TF35_Signal_transm_telecom	3	-1	-3	0	0	-2	2	0	-1	1	-3	0	1	0	-2	0	0	0	0	-2	3	0	0	3	0	0	-9	-10
TF36_TV_radio_receiv_audio	-3	0	2	0	0	-4	2	0	0	1	-4	0	1	0	-5	0	0	0	0	1	2	0	0	2	-1	0	-10	-16
TF37_Med_equipment	4	2	1	0	0	5	4	0	0	1	-10	0	0	2	1	0	0	0	0	-2	0	-1	0	-1	0	0	-2	4
TF38_Measuring_instruments	2	4	-1	0	0	7	0	0	0	1	-4	0	0	0	1	0	1	0	0	-3	0	-1	0	-1	-1	0	-7	-2
TF39_Ind_proc_contr_equip	6	1	4	0	1	1	3	0	-1	2	-10	0	0	1	-2	0	0	0	1	-3	1	0	0	2	0	0	-15	-8
TF40_Opti_instruments	1	4	-1	0	0	5	1	0	0	1	-2	0	0	-1	1	0	0	0	0	1	-1	0	0	0	1	0	-4	6
TF41_Watches_clocks	-4	-1	0	0	0	1	4	0	1	1	0	0	0	0	-6	0	0	0	1	-1	0	0	0	-2	0	0	-3	-9
TF42_Motor_vehicles	3	1	-11	0	0	-1	-2	0	3	1	-3	0	0	0	-2	0	0	0	1	-2	0	0	0	-3	0	0	-18	-33
TF43_Other_transp_equip	-1	3	2	0	0	6	0	0	4	-3	3	1	0	0	0	0	0	0	0	0	-1	0	0	2	4	0	0	20
TF44_Furniture_consum_good	7	3	-1	0	0	-3	0	0	1	-2	-5	0	-1	-1	13	0	0	0	0	3	2	0	0	4	5	0	17	42
SUM_hightech	-1	1	1	0	0	2	2	0	0	2	-1	0	1	0	-5	0	0	0	0	-1	1	0	0	0	-1	0	-9	-8
HT2_Computer_office_mach	2	2	7	0	0	0	4	0	1	0	-6	0	0	-1	-5	0	1	0	0	-4	1	0	0	0	-4	0	-14	-16
HT1_Aviation	1	5	5	-1	1	12	2	0	5	0	-1	0	1	0	2	0	1	0	0	2	0	0	-1	1	0	0	8	43
HT3_Laser	2	1	-1	0	0	8	2	0	1	3	-3	0	0	1	4	0	0	0	0	-1	2	0	1	-2	0	0	9	27
HT4_Semiconductors	5	4	7	0	0	6	2	0	0	0	0	0	0	0	-1	0	0	0	0	1	0	0	0	1	0	0	5	30
HT5_Communication	0	0	-4	0	0	4	2	0	-1	1	-1	0	1	1	-1	0	0	0	0	2	3	0	0	4	1	0	-5	7
HT6_Microorgan_Genetics	-1	0	4	0	-1	17	0	1	0	0	2	-1	0	1	-4	0	0	1	0	0	-1	1	0	0	0	0	-13	6

Source: own calculations. *Notes:* Calculations based upon OECD RegPAT (2009) extractions and application of ISI-SPRU-OST concordance.

Table B.9. Betweenness centrality ranking of TOP10 regions (1-5)

technology field	TOP10 ranking of TL3 regions (betweenness centrality in descending order) positions 1-5									
	1		2		3		4		5	
TF1_Food_beverages	NL33	ZUID-HOLLAND	DE93	München	ITC45	Milano	CH011	Vaud	DE51	Rhein-Main
TF2_Tobacco_prod	DE5	Schleswig-Holstein Süd	DE6	Hamburg	UKJ32	Southampton	UKJ33	Hampshire CC	CH021	Bern
TF3_Textiles	DE51	Rhein-Main	DE68	Unterer Neckar	DE42	Düsseldorf	CH056	Graubünden	FR222	Oise
TF4_Wearing_apparel	DE84	Oberfranken-Ost	FR714	Isère	FR711	Ain	FR718	Haute-Savoie	FR101	Paris
TF5_Leather_articles	ITD34	Treviso	DE42	Düsseldorf	DE65	Westpfalz	DE41	Duisburg/Essen	DE72	Stuttgart
TF6_Wood_prod	DE58	Oberes Elbtal/Osterzgebirge	DE72	Stuttgart	DE96	Oberland	DE41	Duisburg/Essen	CH033	Aargau
TF7_Paper	FI181	Uusimaa	DE52	Starkenburg	DE51	Rhein-Main	DE86	Industrieregion Mittelfranken	FR714	Isère
TF9_Petrol_prod_nucl_fuel	NL32	NOORD-HOLLAND	NL23	FLEVOLAND	ITC45	Milano	UKD22	Cheshire CC	DE42	Düsseldorf
TF10_Basic_chemical	ITC45	Milano	DE51	Rhein-Main	DE42	Düsseldorf	FR716	Rhône	DE66	Rheinpfalz
TF11_Pesticide_agrochem_prod	FR716	Rhône	DE44	Köln	DE42	Düsseldorf	DE51	Rhein-Main	CH056	Graubünden
TF12_Paints_varnishes	DE41	Duisburg/Essen	DE40	Emscher-Lippe	DE66	Rheinpfalz	DE68	Unterer Neckar	DE70	Mittlerer Oberrhein
TF13_Pharmaceuticals	ITC45	Milano	DE51	Rhein-Main	FR101	Paris	DE93	München	CH056	Graubünden
TF14_Soaps_detergents	DE42	Düsseldorf	BE24	PROV. VLAAMS-BRABANT	NL33	ZUID-HOLLAND	UKD54	Wirral	ITE43	Roma
TF15_Other_chemicals	DE42	Düsseldorf	ITC45	Milano	FR716	Rhône	FR101	Paris	DE41	Duisburg/Essen
TF16_Man_made_fibre	FR716	Rhône	FR422	Haut-Rhin	DE51	Rhein-Main	FR421	Bas-Rhin	BE10	RÉGION DE BRUXELLES-
TF17_Rubber_plastic_prod	ITC45	Milano	DE51	Rhein-Main	DE42	Düsseldorf	DE93	München	CH011	Vaud
TF18_Non-metal_mineral_prod	DE51	Rhein-Main	ITC45	Milano	SE044	Skåne län	DE42	Düsseldorf	FR222	Oise
TF19_Basic_metals	DE42	Düsseldorf	ITC45	Milano	FR101	Paris	FR714	Isère	DE86	Industrieregion Mittelfranken
TF20_Fabric_metal_prod	DE93	München	DE42	Düsseldorf	FR103	Yvelines	ITC45	Milano	DE72	Stuttgart
TF21_Energy_machinery	DE72	Stuttgart	DE93	München	ITC11	Torino	DE70	Mittlerer Oberrhein	ITC45	Milano
TF22_Nonspec_machinery	DE72	Stuttgart	DE51	Rhein-Main	DE93	München	SE010	Stockholms län	ITC45	Milano
TF23_Agricul_forestry_machinery	FR101	Paris	DE93	München	FR612	Gironde	SE044	Skåne län	DE51	Rhein-Main
TF24_Machine_tools	DE93	München	DE72	Stuttgart	CH057	Thurgau	CH040	Zürich	ITC45	Milano
TF25_Spec_purp_machinery	DE42	Düsseldorf	ITC45	Milano	DE51	Rhein-Main	DE72	Stuttgart	FI181	Uusimaa
TF26_Weapons_ammunition	DE76	Schwarzwald-Baar-Heuberg	FR715	Loire	FR103	Yvelines	DE88	Augsburg	DE3	Schleswig-Holstein Mitte
TF27_Domestic_appliances	DE93	München	DE51	Rhein-Main	SE010	Stockholms län	ITC45	Milano	DE72	Stuttgart
TF28_Office_mach_computers	DE93	München	ITC45	Milano	FR101	Paris	FR714	Isère	UKH12	Cambridgeshire CC
TF29_Electric_motors_generators	DE72	Stuttgart	ITC45	Milano	DE93	München	SE025	Västmanlands län	DE70	Mittlerer Oberrhein
TF30_Elec_distr_contr_wire_cable	DE51	Rhein-Main	DE36	Bielefeld	DE72	Stuttgart	DE42	Düsseldorf	ITC45	Milano
TF31_Accumulators_battery	DE72	Stuttgart	ITC45	Milano	ITE21	Perugia	DE70	Mittlerer Oberrhein	UKJ33	Hampshire CC
TF32_Lighting_equipment	DE72	Stuttgart	DE93	München	CH031	Basel-Stadt	FR101	Paris	DE52	Starkenburg
TF33_Other_electr_equip	DE93	München	DE72	Stuttgart	FR623	Haute-Garonne	ITC45	Milano	FR103	Yvelines
TF34_Electr_components	ITC45	Milano	DE93	München	DE72	Stuttgart	DE58	Oberes Elbtal/Osterzgebirge	NL41	NOORD-BRABANT
TF35_Signal_transm_telecom	DE93	München	ITC45	Milano	SE010	Stockholms län	FI181	Uusimaa	DE72	Stuttgart
TF36_TV_radio_receiv_audio	DE93	München	FR101	Paris	FR523	Ille-et-Vilaine	ITC45	Milano	UKH12	Cambridgeshire CC
TF37_Med_equipment	DE51	Rhein-Main	FR101	Paris	ITE43	Roma	DE93	München	DE68	Unterer Neckar
TF38_Measuring_instruments	FR101	Paris	DE93	München	UKH12	Cambridgeshire CC	ITC45	Milano	SE010	Stockholms län
TF39_Ind_proc_contr_equip	DE72	Stuttgart	DE68	Unterer Neckar	DE42	Düsseldorf	DE93	München	ITC45	Milano
TF40_Opti_instruments	DE93	München	ITC45	Milano	SE010	Stockholms län	DE52	Starkenburg	UKJ33	Hampshire CC
TF41_Watches_clocks	DE71	Nordschwarzwald	FR431	Doubs	CH012	Valais	DE72	Stuttgart	DE51	Rhein-Main
TF42_Motor_vehicles	DE72	Stuttgart	ITC11	Torino	DE93	München	FR103	Yvelines	DE51	Rhein-Main
TF43_Other_transp_equip	DE93	München	ITC45	Milano	FR103	Yvelines	FR623	Haute-Garonne	CH057	Thurgau
TF44_Furniture_consum_good	UKI11	Inner London - West	ITC45	Milano	CH033	Aargau	DE75	Neckar-Alb	FR101	Paris

Source: own calculations and illustration. *Notes:* Betweenness centrality ranking of TL3 regions (descending order).

Table B.10. Betweenness centrality ranking of TOP10 regions (6-10)

technology field	TOP10 ranking of TL3 regions (betweenness centrality in descending order) positions 6-10									
	6		7		8		9		10	
TF1_Food_beverages	AT126	Wiener Umland/Nordteil	CH022	Freiburg	DE66	Rheinpfalz	FI181	Uusimaa	UKH22	Bedfordshire CC
TF2_Tobacco_prod	DE84	Oberfranken-Ost	CH022	Freiburg	SE044	Skåne län	DE14	Hamburg-Umland-Süd	NL32	NOORD-HOLLAND
TF3_Textiles	DE72	Stuttgart	DE44	Köln	ITC45	Milano	UKJ23	Surrey	BE10	RÉGION DE BRUXELLES-
TF4_Wearing_apparel	FR107	Val-de-Marne	DE51	Rhein-Main	DE88	Augsburg	DE75	Neckar-Alb	ES511	Barcelona
TF5_Leather_articles	DE68	Unterer Neckar	DE86	Industrieregion Mittelfranken	DE52	Starkenburg	DE43	Bochum/Hagen	ITD35	Venezia
TF6_Wood_prod	DE22	Braunschweig	CH040	Zürich	DE93	München	DE19	Hannover	DE14	Hamburg-Umland-Süd
TF7_Paper	FR103	Yvelines	DE93	München	DE46	Bonn	BE24	PROV. VLAAMS-BRABANT	FR716	Rhône
TF9_Petrol_prod_nucl_fuel	UKJ14	Oxfordshire	UKJ23	Surrey	BE24	PROV. VLAAMS-BRABANT	FR716	Rhône	FR232	Seine-Maritime
TF10_Basic_chemical	DE68	Unterer Neckar	DE44	Köln	BE24	PROV. VLAAMS-BRABANT	HU101	Budapest	DE52	Starkenburg
TF11_Pesticide_agrochem_prod	UKJ11	Berkshire	DE66	Rheinpfalz	ITC45	Milano	UKI23	Outer London - West and North West	FR101	Paris
TF12_Paints_varnishes	DE46	Bonn	DE5	Schleswig-Holstein Süd	FR623	Haute-Garonne	PT171	Grande Lisboa	AT312	Linz-Wels
TF13_Pharmaceuticals	SE010	Stockholms län	FR105	Hauts-de-Seine	ITE43	Roma	UKJ14	Oxfordshire	DE68	Unterer Neckar
TF14_Soaps_detergents	DE51	Rhein-Main	DE66	Rheinpfalz	BE10	RÉGION DE BRUXELLES-	UKC22	Tyneside	FR101	Paris
TF15_Other_chemicals	DE6	Hamburg	SE044	Skåne län	DE66	Rheinpfalz	NL33	ZUID-HOLLAND	BE21	PROV. ANTWERPEN
TF16_Man_made_fibre	BE24	PROV. VLAAMS-BRABANT	BE31	PROV. BRABANT WALLON	DE66	Rheinpfalz	ITC45	Milano	DE78	Hochrhein-Bodensee
TF17_Rubber_plastic_prod	CH021	Bern	FI181	Uusimaa	CH022	Freiburg	FR714	Isère	FR101	Paris
TF18_Non-metal_mineral_prod	FR103	Yvelines	DE93	München	CH021	Bern	DE52	Starkenburg	FR101	Paris
TF19_Basic_metals	DE41	Duisburg/Essen	CH057	Thurgau	DE52	Starkenburg	ITE43	Roma	AT312	Linz-Wels
TF20_Fabric_metal_prod	UKJ14	Oxfordshire	FR101	Paris	UKG13	Warwickshire	DE44	Köln	ITC11	Torino
TF21_Energy_machinery	FR103	Yvelines	DE51	Rhein-Main	DE67	Saar	SE0A2	Västra Götalands län	DE42	Düsseldorf
TF22_Nonspec_machinery	FI181	Uusimaa	DE42	Düsseldorf	AT130	Wien	UKJ23	Surrey	FR103	Yvelines
TF23_Agricul_forestry_machinery	DE62	Mittelrhein-Westerwald	DE35	Münster	FR301	Nord	FR104	Essonne	BE25	PROV. WEST-VLAANDEREN
TF24_Machine_tools	SE0A2	Västra Götalands län	UKH23	Hertfordshire	ITC11	Torino	DE51	Rhein-Main	FR511	Loire-Atlantique
TF25_Spec_purp_machinery	FR103	Yvelines	DE6	Hamburg	DE49	Mittelhessen	DE93	München	SE044	Skåne län
TF26_Weapons_ammunition	DE48	Nordhessen	CH040	Zürich	FR241	Cher	DE86	Industrieregion Mittelfranken	DE20	Südheide
TF27_Domestic_appliances	DE97	Südostoberbayern	DE42	Düsseldorf	FR103	Yvelines	UKH12	Cambridgeshire CC	DE70	Mittlerer Oberrhein
TF28_Office_mach_computers	SE010	Stockholms län	FI181	Uusimaa	UKJ33	Hampshire CC	UKI11	Inner London - West	FR823	Alpes-Maritimes
TF29_Electric_motors_generators	CH057	Thurgau	DE81	Würzburg	ITC11	Torino	ES300	Madrid	ITF11	L'Aquila
TF30_Elec_distr_contr_wire_cable	FR103	Yvelines	UKH33	Essex CC	DE86	Industrieregion Mittelfranken	CH033	Aargau	FR105	Hauts-de-Seine
TF31_Accumulators_battery	DE93	München	ES300	Madrid	UKJ14	Oxfordshire	DE45	Aachen	DE52	Starkenburg
TF32_Lighting_equipment	DE42	Düsseldorf	DE51	Rhein-Main	DE68	Unterer Neckar	UKJ33	Hampshire CC	DE78	Hochrhein-Bodensee
TF33_Other_electr_equip	FR714	Isère	DE42	Düsseldorf	UKJ33	Hampshire CC	SE025	Västmanlands län	DE30	Berlin
TF34_Electr_components	DE86	Industrieregion Mittelfranken	UKH12	Cambridgeshire CC	FR714	Isère	FR101	Paris	ITD55	Bologna
TF35_Signal_transm_telecom	FR105	Hauts-de-Seine	DE30	Berlin	FR101	Paris	UKJ33	Hampshire CC	UKH12	Cambridgeshire CC
TF36_TV_radio_receiv_audio	UKI23	Outer London - West and North West	FR714	Isère	NL32	NOORD-HOLLAND	UKJ23	Surrey	UKI11	Inner London - West
TF37_Med_equipment	ITC45	Milano	CH040	Zürich	FR716	Rhône	DE67	Saar	UKH12	Cambridgeshire CC
TF38_Measuring_instruments	DE51	Rhein-Main	DE68	Unterer Neckar	DE30	Berlin	FR105	Hauts-de-Seine	AT130	Wien
TF39_Ind_proc_contr_equip	FR107	Val-de-Marne	DE45	Aachen	DE66	Rheinpfalz	FI181	Uusimaa	CH021	Bern
TF40_Opti_instruments	NL33	ZUID-HOLLAND	DE73	Ostwürttemberg	UKH12	Cambridgeshire CC	NL41	NOORD-BRABANT	FR101	Paris
TF41_Watches_clocks	CH021	Bern	DE93	München	CH040	Zürich	DE79	Bodensee-Oberschwaben	CH032	Basel-Landschaft
TF42_Motor_vehicles	SE0A2	Västra Götalands län	DE70	Mittlerer Oberrhein	ITD55	Bologna	FR105	Hauts-de-Seine	ITC45	Milano
TF43_Other_transp_equip	CH040	Zürich	FR105	Hauts-de-Seine	DE51	Rhein-Main	DE30	Berlin	AT130	Wien
TF44_Furniture_consum_good	UKJ23	Surrey	AT130	Wien	FR718	Haute-Savoie	DE72	Stuttgart	ITD34	Treviso

Source: own calculations and illustration. *Notes:* Betweenness centrality ranking of TL3 regions (descending order).

Table B.11. Spatial maximum likelihood regression (ML-SAR) for EU-15

Model	(41) EU-15	(42) EU-15	(43) EU-15	(44) EU-15	(45) EU-15
dependent variable: $1/Tln(y_{i,2006}/y_{i,1995})$					
CTRYDUMMY	no	no	no	no	no
GDPLEVEL	-0,0062***	-0,0051***	-0,0064***	-0,0053***	-0,0066***
	(0,0017)	(0,0015)	(0,0017)	(0,0015)	(0,0017)
NATBORDER	-0,0002		-9,5096		0,0000
	(0,0007)		(0,0007)		(0,0007)
EUBORDER	-0,0009		-0,0008		-0,0007
	(0,0013)		(0,0013)		(0,0013)
INDUSTRY	-0,0047***	-0,0060***	-0,0049***	-0,0064***	-0,0045**
	(0,0017)	(0,0012)	(0,0018)	(0,0012)	(0,0018)
SERVICES	0,0018		0,0018		0,0027
	(0,0029)		(0,0029)		(0,0030)
CAPITAL	0,0041***		0,0045***		0,0045***
	(0,0014)		(0,0014)		(0,0015)
URBAN	0,0008		0,0005		0,0001
	(0,0009)		(0,0010)		(0,0010)
INTERMEDIAT	-0,0008		-0,0009		-0,0011
	(0,0008)		(0,0008)		(0,0008)
POPDENSITY		0,0004		0,0004	
		(0,0003)		(0,0003)	
HTEPOPAT	0,0003	0,0007**	0,0004	0,0008**	0,0006
	(0,0005)	(0,0003)	(0,0005)	(0,0003)	(0,0005)
NHTEPOPAT	0,0002		0,0002		0,0001
	(0,0004)		(0,0004)		(0,0004)
ρ	0,7765***	0,7915***	0,7922***	0,8064***	0,8012***
	(0,0401)	(0,0387)	(0,0419)	(0,0405)	(0,0440)
N	640	640	640	640	640
W-matrix	W250km	W250km	W300km	W300km	W350km
LR-test	221,4160***	244,8882***	201,5465***	224***	111,9282***
AIC	-4304,13	-4302,61	-4284,26	-4282,15	-4194,6400
log likelihood	2164,06	2157,31	2154,13	2147,08	2109,3200
R-squared	0,4586	0,4486	0,4358	0,4244	0,4171

Source: own estimations. *Notes:* Growth regressions for period 1995-2006 w/o CTRYDUMMY and spatial growth spillovers; standard errors in parentheses; SAR-Maximum Likelihood estimation with spatial lagged dependent variable (ρ); standard errors in parentheses; spatial lags are statistically significant due to omitted country dummy variables; constant not reported; significance levels of coefficients: *** significant at the 0.01 level; ** significant at the 0.05 level; * significant at the 0.10 level. Reference category for settlement type effects is RURAL. W-matrix is the geographic distance matrix used for spatial analysis. Further information on regression details are available upon request from the author.

Table B.12. Spatial maximum likelihood regression (ML-SAR) for NMS

Model	(51) NMS	(52) NMS	(53) NMS
dependent variable: $1/Tln(y_{i,2006}/y_{i,1995})$			
CTRYDUMMY	no	no	no
GDPLEVEL	-0,0189***	-0,0180***	-0,0196***
	(0,0038)	(0,0040)	(0,0042)
NATBORDER	-0,0020	-0,0017	-0,0019
	(0,0019)	(0,0020)	(0,0021)
EUBORDER	0,0008	-0,0008	-0,0020
	(0,0022)	(0,0023)	(0,0024)
INDUSTRY	0,0111**	0,0106**	0,0119**
	(0,0046)	(0,0047)	(0,0049)
SERVICES	0,0099	0,0080	0,0076
	(0,0064)	(0,0066)	(0,0069)
CAPITAL	0,0245***	0,0257***	0,0262***
	(0,0036)	(0,0037)	(0,0039)
URBAN	0,0142***	0,0133***	0,0134***
	(0,0037)	(0,0039)	(0,0041)
INTERMEDIAT	0,0030	0,0021	0,0014
	(0,0021)	(0,0022)	(0,0023)
HTEPOPAT	-0,0049	-0,0066	-0,0059
	(0,0043)	(0,0044)	(0,0046)
NHTEPOPAT	0,0048***	0,0051***	0,0053***
	(0,0018)	(0,0018)	(0,0019)
ρ	0,5683***	0,6372***	0,6216***
	(0,0794)	(0,0912)	(0,1095)
W-matrix	W150km	W200km	W250km
LR-test	39,4764***	34,4250***	26,9331***
AIC	-747,2560	-742,2050	-734,7130
log likelihood	385,6280	383,1020	379,3560
N	120	120	120
R-squared	0,6928	0,6748	0,6472

Source: own estimations. *Notes:* Growth regressions for period 1995-2006 w/o CTRYDUMMY and with spatial growth spillovers; standard errors in parentheses; SAR-Maximum Likelihood estimation with spatial lagged dependent variable (ρ); standard errors in parentheses; spatial lags are statistically significant due to omitted country dummy variables; constant not reported; significance levels of coefficients: *** significant at the 0.01 level; ** significant at the 0.05 level; * significant at the 0.10 level. Reference category for settlement type effects is RURAL. W-matrix is the geographic distance matrix used for spatial analysis. Further information on regression details are available upon request from the author.