

List of Figures

1.1.	Patent applications at the EPO 1977-2005	6
1.2.	Patent applications at the EPO 1977-2005 by country	7
1.3.	EPO patent application density 2003-2004	9
1.4.	Number of EPO patent applications with foreign co-inventors	11
3.1.	Lorenz curve of an unweighted Gini coefficient	137
3.2.	Lorenz curve of a weighted Gini coefficient	138
3.3.	The Lorenz curve of a locational (and spatial) Gini coefficient	139
3.4.	Spatial distribution: patent application density of European regions by country	142
3.5.	Spatial distribution: patent application density of European regions by country	143
3.6.	Spatial distribution: patent application density of European regions by country	144
3.7.	Patent density (per million inhabitants) by region 1985-1986	146
3.8.	Patent density (per million inhabitants) by region 2003-2004	147
3.9.	High-tech EPO patent density (per million inhabitants) by region 1985-1986	148
3.10.	High-tech EPO patent density (per million inhabitants) by region 2003-2004	149
3.11.	Share of European regions with $n > 0$ patent applications by TF	155
3.12.	Share of European regions with $n > 1$ inventor IDs by TF	157
3.13.	Share of European regions with $RTA > 1$ by TF	159
3.14.	Change of regions w/ $RTA > 1$ by TF: 1988-1990 vs. 2002-2004	160
3.15.	European regions w/ $RTA > 1$ of regions w/ $n > 0$ patent applications	161
3.16.	Locational Gini: regional disparity of EPO patenting by TF (1)	162
3.17.	Locational Gini: regional disparity of EPO patenting by TF (1)	163
3.18.	Locational Gini: regional disparity of EPO patenting by TF (2)	166
3.19.	Locational Gini: regional disparity of EPO patenting by TF (2)	167
3.20.	Locational Gini: regional disparity of EPO patenting by TF (3)	168
3.21.	Locational Gini: regional disparity of EPO patenting by TF (3)	169
3.22.	Spatial Gini: regional disparity of EPO patent applications by TF	171
3.23.	Spatial Gini: regional disparity of EPO patent applications by TF	172
3.24.	Locational Gini: regional disparity of EPO patent applications (all IPC) (a)	174
3.25.	Locational Gini: regional disparity of EPO patent applications (all IPC) (b)	175
3.26.	Change (%) of locational Gini: regional disparities by TF (819 TL3)	177
3.27.	Change (%) of locational Gini: regional disparities by TF in EU-15 and NMS	178
3.28.	Change (%) of spatial Gini: development of regional disparities by TF	179
3.29.	Structure of research clusters by TF and RCI class, 1990-1994	186
3.30.	Structure of research clusters by TF and RCI class, 2000-2004	187
3.31.	Change of research clusters by TF and RCI class, 2000-2004 vs. 1990-1994	189

3.32.	Change of research clusters by TF with $RCI > 16$	191
3.33.	Change number and structure of research clusters by TF	196
3.34.	Change of research clusters (RCI) in ERA by TF	201
3.35.	Co-agglomeration of TF cluster (RCI), 2000-2004	212
3.36.	Density function of clusters with $RCI > 81$, 1990-1994 and 2000-2004 . . .	217
3.37.	Density function of clusters with $RCI > 81$, 1990-1994 and 2000-2004 . . .	218
4.1.	Inter-regional knowledge pipelines and co-patenting network linkages	223
4.2.	Aggregation, zones and concentration measures	227
4.3.	Inter-regional co-patenting network linkages	240
4.4.	Number of EPO patents with foreign co-inventors by country (1)	244
4.5.	Number of EPO patents with foreign co-inventors by country (2)	245
4.6.	Structure of European co-patenting networks, 1990-1994	253
4.7.	Structure of European co-patenting networks, 2000-2004	254
4.8.	Changing structure of inter-regional network linkages	259
4.9.	Change (number) of co-patenting linkages between NMS and EU-15	264
4.10.	Change (%) of co-patenting linkages between NMS and EU-15	265
4.11.	European co-inventor network: TF10 Basic chemicals, 1990-1994	266
4.12.	European co-inventor network: TF10 Basic chemicals, 2000-2004	267
4.13.	European co-inventor network: TF13 Pharmaceuticals, 1990-1994	268
4.14.	European co-inventor network: TF13 Pharmaceuticals, 2000-2004	269
4.15.	European co-inventor network: TF38 Measuring instruments, 1990-1994 . .	270
4.16.	European co-inventor network: TF38 Measuring instruments, 2000-2004 . .	271
4.17.	European co-inventor network: TF41 Watches & clocks, 1990-1994	272
4.18.	European co-inventor network: TF41 Watches & clocks, 2000-2004	273
4.19.	European co-inventor network: TF42 Motor vehicles, 1990-1994	274
4.20.	European co-inventor network: TF42 Motor vehicles, 2000-2004	275
4.21.	Geographical coincidence of TF: degree centrality	281
5.1.	GDP per capita (PPP) year 1995	294
5.2.	GDP per capita (PPP) year 2006	295
5.3.	Growth Rates of GDP per capita (PPP) 1995-2006	297
5.4.	Boxplot: GDP per capita (PPP) level vs. growth rate	299
5.5.	Kernel density: density function of income distribution TL3 regions by group	300
5.6.	Development of regional disparities in GDP/capita (PPP) by group	305
5.7.	Locational Gini coefficients of GDP per capita (PPP) (a)	306
5.8.	Locational Gini coefficients of GDP per capita (PPP) (b)	307
5.9.	Income inequality decomposition: EU-23, CH, NO	310
5.10.	Income inequality decomposition: EU-14 group	311
5.11.	Income inequality decomposition: NMS group	312
5.12.	Scatterplot GDP/capita level (1995) vs. growth rate (1995-2006), EU-15 . .	313
5.13.	Scatterplot GDP/capita level (1995) vs. growth rate (1995-2006), NMS . .	314
5.14.	Scatterplot GDP/capita level (1995) vs. growth rate (1995-2006), EU-25 . .	314
A.1.	EPO Patent Applications: Share by Region and Quantile	xxiv
A.2.	High-tech EPO Patent Applications: Share by Region and Quantile	xxv
A.3.	Aviation Technology: EPO Patent Application Density by Region	xxvi

A.4. Computer & Office Machines: EPO Patent Application Density by Region	xxvii
A.5. Communication Technology: EPO Patent Application Density by Region	xxviii
A.6. Microorgan. & Genetics: EPO Patent Application Density by Region	xxix
A.7. Laser Technology: EPO Patent Application Density by Region	xxx
A.8. Semiconductors: EPO Patent Application Density by Region	xxxix
A.9. Share of European regions with $n > 9$ patent applications by TF	xxxii
A.10. Share of European regions with $n > 9$ inventor IDs by TF	xxxiii
A.11. Share of European regions w/ $RTA > 1$ of regions w/ $n > 0$ patent applications	xxxiv
A.12. Austria: Locational Gini of EPO Patent Applications by TF (a)	xxxv
A.13. Austria: Locational Gini of EPO Patent Applications by TF (b)	xxxvi
A.14. Belgium: Locational Gini of EPO Patent Applications by TF (a)	xxxvii
A.15. Belgium: Locational Gini of EPO Patent Applications by TF (b)	xxxviii
A.16. Switzerland: Locational Gini of EPO Patent Applications by TF (a)	xxxix
A.17. Switzerland: Locational Gini of EPO Patent Applications by TF (b)	xl
A.18. Germany: Locational Gini of EPO Patent Applications by TF (a)	xli
A.19. Germany: Locational Gini of EPO Patent Applications by TF (b)	xlvi
A.20. France: Locational Gini of EPO Patent Applications by TF (a)	xliii
A.21. France: Locational Gini of EPO Patent Applications by TF (b)	xliv
A.22. Italy: Locational Gini of EPO Patent Applications by TF (a)	xlvi
A.23. Italy: Locational Gini of EPO Patent Applications by TF (b)	xlvi
A.24. Netherlands: Locational Gini of EPO Patent Applications by TF (a)	xlvi
A.25. Netherlands: Locational Gini of EPO Patent Applications by TF (b)	xlvi
A.26. Sweden: Locational Gini of EPO Patent Applications by TF (a)	xlix
A.27. Sweden: Locational Gini of EPO Patent Applications by TF (b)	l
A.28. United Kingdom: Locational Gini of EPO Patent Applications by TF (a)	li
A.29. United Kingdom: Locational Gini of EPO Patent Applications by TF (b)	lii
A.30. Change of research clusters (RCI) in ERA by TF (2)	liii
A.31. Co-agglomeration of TF cluster (RCI), 1990-1994	liv
A.32. Technological diversity, co-agglomeration and clustering in capital regions	lv
A.33. Technological diversity, co-agglomeration and clustering in metro regions	lvi
A.34. Technological diversity, co-agglomeration and clustering in urban regions	lvii
A.35. Technological diversity, co-agglomeration and clustering in intermediate regions	lviii
A.36. Technological diversity, co-agglomeration and clustering in rural regions	lix
A.37. Data selection method for inter-regional co-inventorship network analysis	lx
A.38. Share of EPO patents with foreign co-inventors by country (1)	lxi
A.39. Share of EPO patents with foreign co-inventors by country (2)	lxii
A.40. Foreign co-inventorship structure by country	lxiii
A.41. Foreign co-inventorship structure by country (cont'd)	lxiv
A.42. Number of European co-patenting network linkages, 1990-1994	lxv
A.43. Number of European co-patenting network linkages, 2000-2004	lxvi
A.44. Geographical coincidence of TF: betweenness centrality	lxvii
A.45. Geographical coincidence of TF: eigenvector centrality	lxviii
A.46. Income inequality decomposition: EU-15 vs. NMS	lxix
A.47. GDP per capita (2000) and Regional Typology	lxx
A.48. Patenting Activity in Europe 1995	lxxi

