

Figure 1. Fraser Index vs. Ginarte Park Index

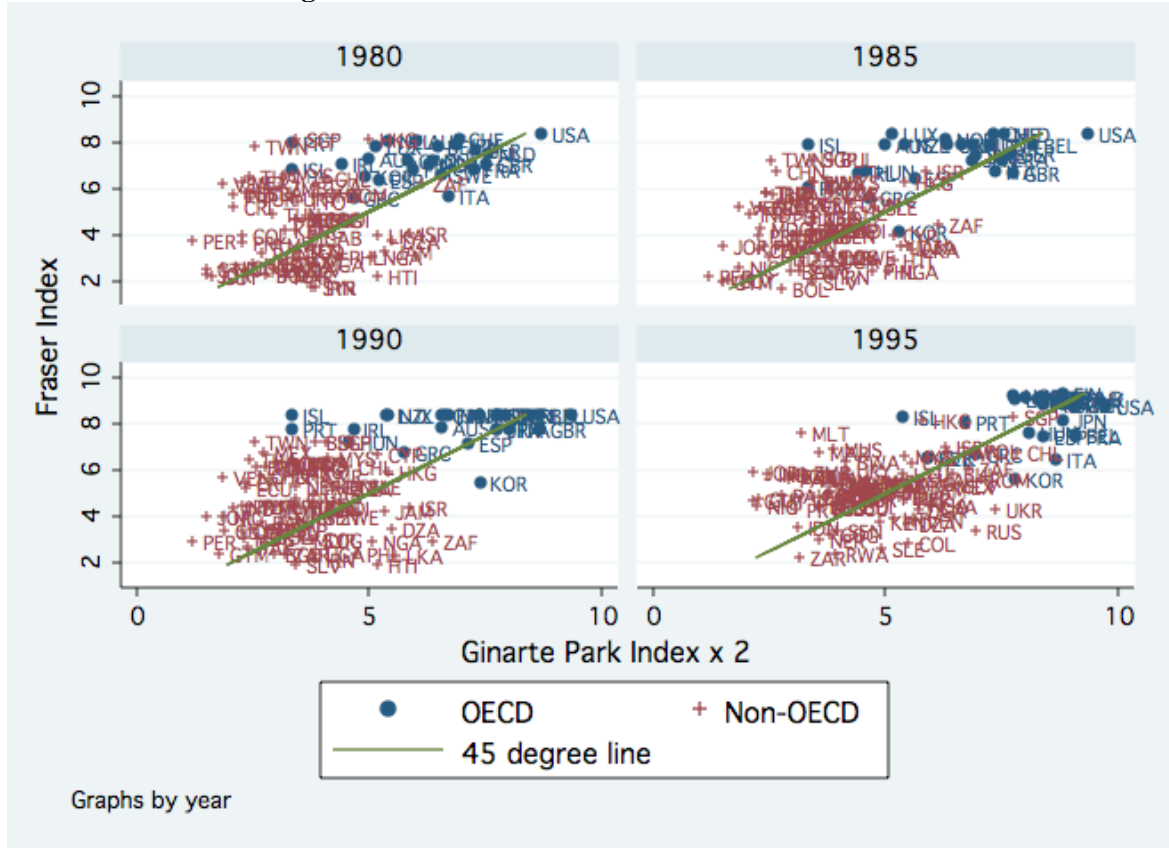
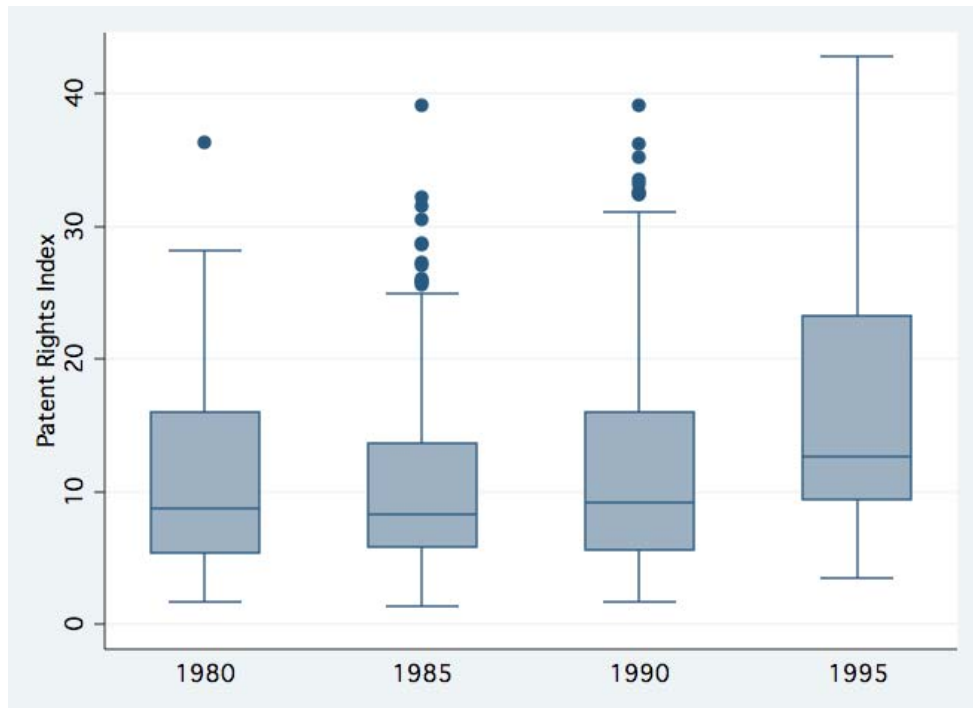
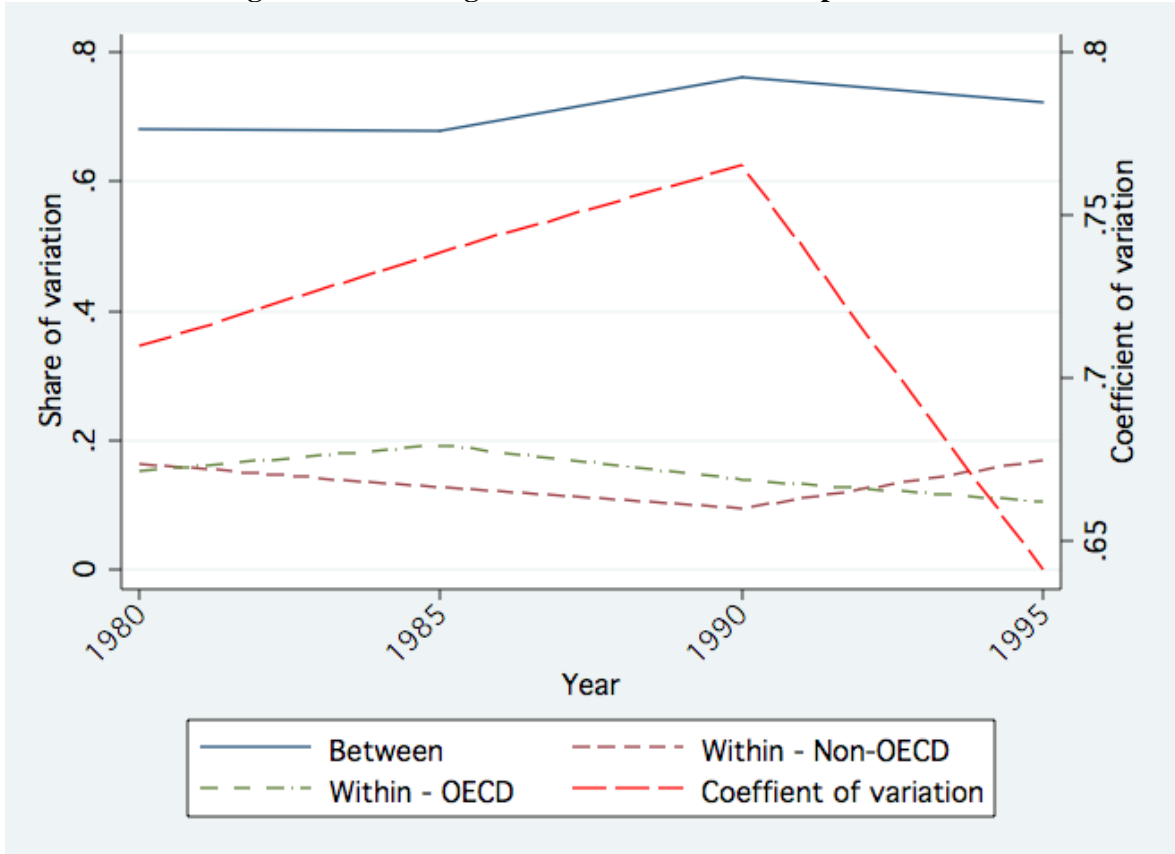


Figure 2. Box plot of patent rights index



**Figure 3. Patent rights index: Variance decomposition**



**Figure 4. Patent intensity, by industry**

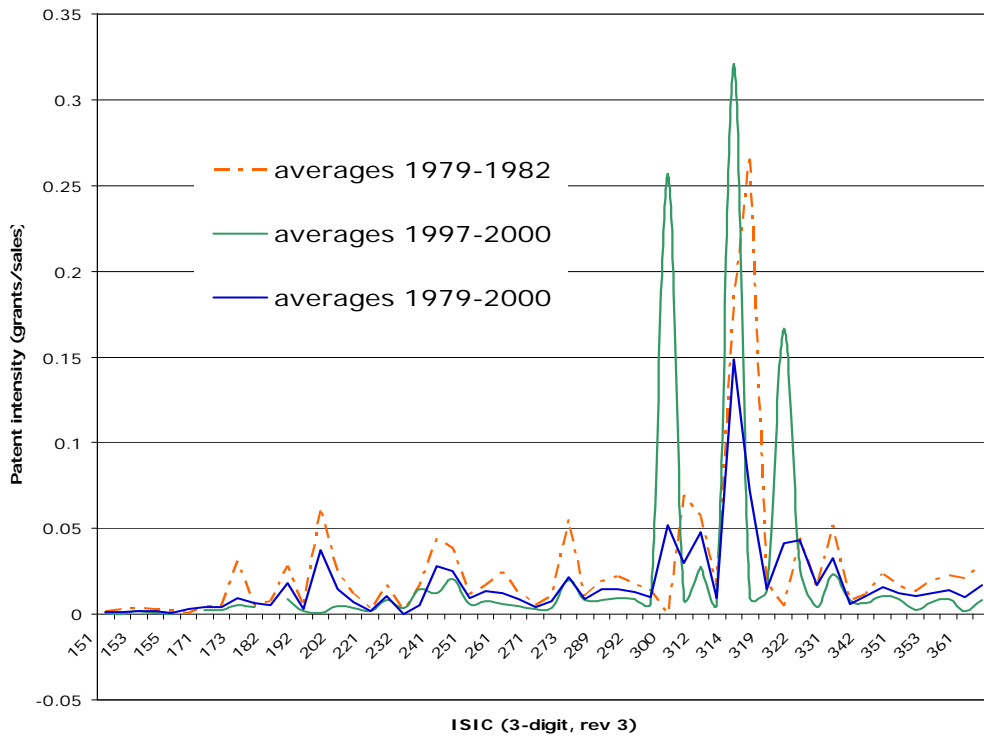
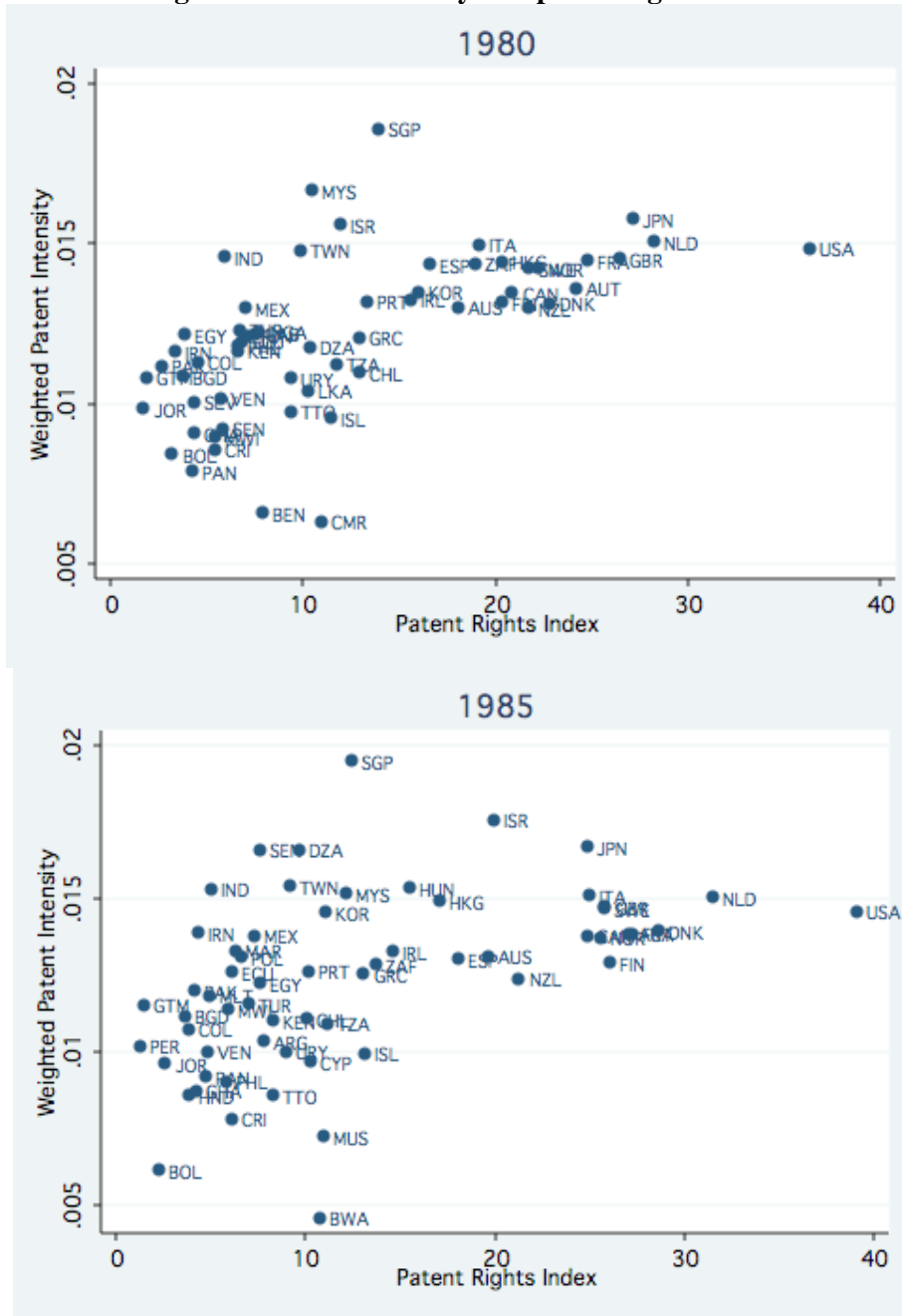
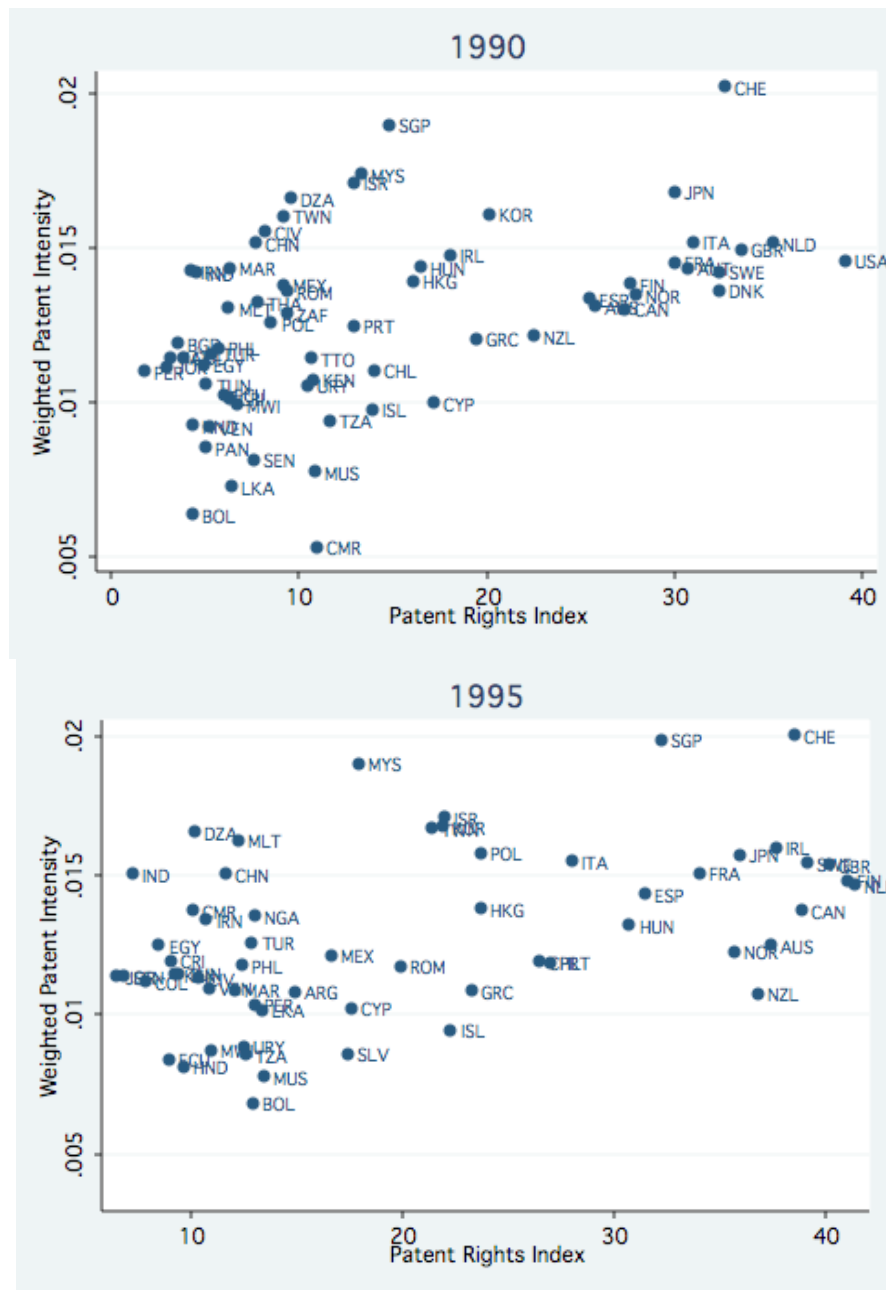


Figure 5: Patent intensity and patent rights index





Notes:

1. Horizontal axis is country patent rights index for the year indicated.
2. Vertical axis is country's weighted average of industry patent intensity, weighted by the industry's share of the country's total value added.
3. Marker is country code.



**Table 3. Growth of industry value added**

VARIABLES	(1) 1981-1985	(2) 1986-1990	(3) 1991-1995	(4) 1996-2000
Initial value added	-0.0154*** (0.00436)	-0.0512*** (0.00677)	-0.0290** (0.0138)	-0.0132** (0.00622)
Patent rights x patent intensity	0.0141** (0.00644)	0.0114* (0.00659)	0.0397*** (0.0121)	0.0221** (0.00969)
Observations	3006	3235	3288	2840
R-squared	0.530	0.574	0.359	0.527

Robust standard errors in parentheses

All regressions included country and industry fixed effects.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 4. Growth of industry value added, alternative patent rights index**

VARIABLES	(1) 1981-1985	(2) 1986-1990	(3) 1991-1995	(4) 1996-2000
Initial value added	-0.0155*** (0.00437)	-0.0512*** (0.00679)	-0.0292** (0.0138)	-0.0132** (0.00622)
Patent rights x patent intensity	0.0835** (0.0358)	0.0540 (0.0360)	0.263*** (0.0711)	0.144** (0.0702)
Observations	3006	3235	3288	2840
R-squared	0.530	0.574	0.359	0.527

Robust standard errors in parentheses

All regressions included country and industry fixed effects.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 5. Growth of industry value added, Fraser index**

VARIABLES	(1) 1981-1985	(2) 1986-1990	(3) 1991-1995	(4) 1996-2000
Initial value added	-0.0156*** (0.00436)	-0.0512*** (0.00680)	-0.0290** (0.0139)	-0.0135** (0.00620)
Patent rights x patent intensity	0.0804** (0.0349)	0.0454 (0.0362)	0.224** (0.0882)	0.197** (0.0940)
Observations	3006	3235	3288	2840
R-squared	0.530	0.574	0.359	0.527

Robust standard errors in parentheses

All regressions included country and industry fixed effects.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 6. Growth of industry value added, GP index**

VARIABLES	(1) 1981-1985	(2) 1986-1990	(3) 1991-1995	(4) 1996-2000
Initial value added	-0.0151*** (0.00435)	-0.0511*** (0.00675)	-0.0289** (0.0137)	-0.0127** (0.00623)
Patent rights x patent intensity	0.0823 (0.0568)	0.0871 (0.0638)	0.367*** (0.0831)	0.132 (0.0850)
Observations	3006	3235	3288	2840
R-squared	0.530	0.574	0.359	0.527

Robust standard errors in parentheses

All regressions included country and industry fixed effects.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 7. Growth of industry value added, 1979-82 patent intensity**

VARIABLES	(1) 1981-1985	(2) 1986-1990	(3) 1991-1995	(4) 1996-2000
Initial value added	-0.0149*** (0.00431)	-0.0510*** (0.00672)	-0.0282** (0.0137)	-0.0128** (0.00618)
Patent rights x patent intensity	0.00339 (0.00356)	0.00314 (0.00303)	0.0129*** (0.00482)	0.00922** (0.00423)
Observations	3006	3235	3288	2840
R-squared	0.530	0.574	0.358	0.527

Robust standard errors in parentheses

All regressions included country and industry fixed effects.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 8. Growth of industry value added, patent intensity calculated by applications**

VARIABLES	(1) 1981-1985	(2) 1986-1990	(3) 1991-1995	(4) 1996-2000
Initial value added	-0.0155*** (0.00441)	-0.0513*** (0.00681)	-0.0296** (0.0139)	-0.0135** (0.00624)
Patent rights x patent intensity	0.0167** (0.00747)	0.0118 (0.00808)	0.0544*** (0.0146)	0.0258** (0.0108)
Observations	3006	3235	3288	2840
R-squared	0.530	0.574	0.359	0.527

Robust standard errors in parentheses

All regressions included country and industry fixed effects.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 9. Growth of industry value added, R&D intensity**

VARIABLES	(1) 1981-1985	(2) 1986-1990	(3) 1991-1995	(4) 1996-2000
Initial value added	-0.0160*** (0.00450)	-0.0516*** (0.00688)	-0.0303** (0.0141)	-0.0138** (0.00626)
Patent rights x R&D intensity	0.0178** (0.00823)	0.0140 (0.00954)	0.0577*** (0.0163)	0.0255** (0.0111)
Observations	3006	3235	3288	2840
R-squared	0.530	0.574	0.360	0.527

Robust standard errors in parentheses

All regressions included country and industry fixed effects.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 10. Growth of industry value added, total factor productivity**

VARIABLES	(1) 1981-1985	(2) 1986-1990	(3) 1991-1995	(4) 1996-2000
Change in log of capital services	0.0587 (0.0510)	0.190*** (0.0582)	0.247*** (0.0739)	0.276*** (0.0804)
Change in log of labor	0.900*** (0.0544)	0.792*** (0.102)	0.745*** (0.137)	0.923*** (0.0614)
Patent rights x patent intensity	0.0102** (0.00475)	-0.00725 (0.00550)	-0.00106 (0.00832)	0.0402** (0.0171)
Observations	1652	1910	1694	1471
R-squared	0.821	0.652	0.322	0.792

Delta=0.1, gamma=0.05

Robust standard errors in parentheses

All regressions included country and industry fixed effects.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 11. Growth of industry value added, financial development**

VARIABLES	(1) 1981-1985	(2) 1986-1990	(3) 1991-1995	(4) 1996-2000
Initial value added	-0.0138*** (0.00479)	-0.0326*** (0.00933)	-0.0261 (0.0204)	-0.00401 (0.00551)
Patent rights x patent intensity	0.0243*** (0.00579)	-0.00388 (0.00736)	0.0207* (0.0122)	0.0283*** (0.00863)
Financial devt x patent intensity	-0.671*** (0.210)	-0.0113 (0.285)	0.822* (0.488)	-0.101 (0.199)
Observations	1538	2173	2227	2408
R-squared	0.714	0.509	0.376	0.506

Robust standard errors in parentheses

All regressions included country and industry fixed effects.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 12. Growth of industry valued added, trade openness**

VARIABLES	(1) 1981-1985	(2) 1986-1990	(3) 1991-1995	(4) 1996-2000
Initial value added	-0.0153*** (0.00438)	-0.0512*** (0.00678)	-0.0290** (0.0138)	-0.0137** (0.00623)
Patent rights x patent intensity	0.0167* (0.00926)	0.00231 (0.00870)	0.0367*** (0.0102)	0.0354*** (0.00978)
Trade openness x patent intensity	-0.0656 (0.186)	0.397* (0.238)	0.243 (0.507)	-1.333*** (0.483)
Observations	3006	3235	3288	2840
R-squared	0.530	0.574	0.359	0.528

Robust standard errors in parentheses

All regressions included country and industry fixed effects.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 13. Growth of industry value added, human capital**

VARIABLES	(1) 1981-1985	(2) 1986-1990	(3) 1991-1995	(4) 1996-2000
Initial value added	-0.0121*** (0.00438)	-0.0495*** (0.00692)	-0.0254*** (0.00917)	-0.0157** (0.00707)
Patent rights x patent intensity	0.0243** (0.0112)	0.00730 (0.00993)	0.0263 (0.0168)	0.0252** (0.0109)
Human capital x patent intensity	-0.0853 (0.0697)	0.0250 (0.0747)	0.0777 (0.171)	-0.0323 (0.125)
Observations	2850	3114	2994	2578
R-squared	0.538	0.535	0.380	0.522

Robust standard errors in parentheses

All regressions included country and industry fixed effects.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## Appendix

**Table A.1. Patent intensity, by industry**

Industry (ISIC3 rev 3)	1979-2000 average
Food and beverages (15)	0.0014
Tobacco (16)	0.0029
Textiles (17)	0.0058
Apparel (18)	0.0059
Leather (19)	0.0107
Wood products (20)	0.0258
Paper products (21)	0.0073
Printing	0.0065
Coke and petroleum products (23)	0.0027
Basic chemicals (241)	0.0279
Other chemicals (242) (incl. pharmaceuticals)	0.0249
Rubber and plastics (25)	0.0113
Other non-metal (26)	0.0108
Basic metals (27)	0.0111
Fabricated metals (28)	0.0116
Other machinery (29)	0.0125
Office, accounting, computing machinery (30)	0.0516
Electric motors, generators, transformers (311)	0.0300
Electricity distribn and control apparatus (312)	0.0477
Insulated wire and cable (313)	0.0096
Accumulators, cells and batteries (314)	0.1485
Electric lamps and lighting equipment (315)	0.0725
Electronic valves, tubes (321)	0.0415
TV and radio transmitters (322)	0.0430
TV and radio receivers (323)	0.0169
Medical appliances (331)	0.0329
Motor vehicles (34)	0.0107
Other transport equipment (35)	0.0125
Furniture and other manufactures (36)	0.0134

Note: For industries with low ratios of patents to sales, we aggregated the 3-digit industries to the 2-digit level. We exhibited more of the 3-digit industries with high ratios of patents to sales and/or of particular interest, e.g., 242 includes pharmaceuticals.