

Online Appendix

Construction of the Patent Quality Index

This appendix provides further information on the construction of the patent quality index used in this study to capture the value of an invention (see also Ernst et al. (2014)). The methodology follows Hall et al. (2007) and Lanjouw and Schankerman (2004). The data we use in our estimations is obtained from Grid Thoma. Previous studies document evidence that patent value strongly varies across patent applications (e.g. Harhoff et al. (1999)). While in the past many different indicators have been used to measure patent value, more recent literature suggests to combine several indicators within a composite measure (see Lanjouw and Schankerman (2004)) by means of factor analysis. Factor analysis allows to filter out idiosyncratic shocks contained in each single indicator to retain only a common shock that influences all included factors. The so obtained common factor is then used in the empirical analysis as the composite quality index. A main underlying assumption to factor analysis is that the variance in each indicator may be traced back to a common factor that influences all indicators and an idiosyncratic component which is independent of the other indicators and may only impact one indicator. The general factor model is denoted:

$$y_{kn} = \alpha_k \nu_n + \beta X_n + \epsilon_{kn} \quad (8)$$

where y_{kn} is the observation of the k 'th patent indicator for the n 'th patent, ν_n is the common factor (here: patent quality) that is assumed to be normally distributed, α_k is the factor loading obtained and X_n is a vector of control variables. The factor loading determines the impact of the common factor on the patent indicators. Taken together, the common factor multiplied with the corresponding factor loadings is the common component K . Estimating the common factor is a minimization problem of the idiosyncratic term, where a linear combination of the indicators that explains as much as possible the total variance of each indicator has to be identified. The common factor ν , however, is unobservable and therefore, no unique solution to the problem exists. To extract the common factor, principal components analysis is used. By means of principal components analysis, the data on y_{kn} is used to determine the first V eigenvalues and eigenvectors from the variance-covariance matrix. The common component is defined as $K = XVV'$, where $V = [p_1, \dots, p_v]$ and p_i is the eigenvector corresponding to the i 'th largest ($i = 1, \dots, Q$) eigenvalue of the covariance matrix of X . After having extracted the common component only the idiosyncratic term ϵ_{kn} remains.

The indicators we include in the analysis are family size, forward citations and technological classes. The common factor influences all three separate indicators of patent quality and eventually will be our multidimensional quality measure. The data we use to determine the common factor is information on the total number of patents granted at

the EPO. The *family size* of a patent covers all countries where patent protection is sought. When applying for patent protection at the EPO directly, the patentee may select the countries where the intellectual property right should be protected. These will be the countries where the patentee wants to use the patent in the production process and where the products are ultimately sold to the consumer. Since the cost for patent application increases in the number of countries where protection is sought, a firm will only apply in several countries if it expects the profits to outweigh the cost. Consequently, the size of a patents' family can be interpreted as an indicator of the patent's quality and its future earnings potential. For the construction of the measure, note that PATSTAT also contains information on patent applications to the US patent office and all other major national patent offices. This information is used to identify equivalent applications filed outside of the EPO at an earlier time (priority applications). In a first step, all priorities for the EPO patents were identified. In a second step, all applications that report the EPO application as a priority were identified. After removing any double counting, the number of patent applications plus the patents from step 1 constitute the size of the patent family.

Furthermore, *forward citations* provide information about how often a patent has been cited by following patent applications. The citations are an instrument to determine the scope of the patent right relative to prior art in the field. Therefore all necessary citations are added to the application

by the patent examiner during the filing process. On the one hand, this implies that not necessarily all innovations which draw on an existing patent in fact acknowledge the reference. On the other hand, an external patent examiner has the benefit of following a consistent and objective patent citation practice. The number of forward citations provides some information on the importance of the invention for future research in the field and hence, will be another indicator of quality of a patent. When constructing the number of forward citations, we only include citations within a five-year-interval after the application date.

Last, we include the number of *technological classes* in the composite quality index which have been shown by previous research to be an indicator of technological quality (see Lerner (1994)). This is a measure of the scope of application of the respective technology. The technological classes are listed in the patent document and are eight digit codes of the International Patent Classification (IPC) system.

In a previous step to the principal components analysis, the separate quality indicators are regressed on the year of application and the main technology class in a three stage least squares estimation procedure to filter out any trends in time or industry. The residuals from this first step are then used to estimate the factor model by maximum likelihood estimation, assuming that the common component ν is normally distributed. See also Lanjouw and Schankerman (2004) and Hall

et al. (2007) for a thorough discussion of the theoretical framework and the estimation procedure of the factor model.

Tables

Table A1: CFC Legislation in 2003

Country	CFC Dummy	Tax Haven Definition
Belgium	0	-
Czech Republic	0	-
Denmark	1	Effective tax <75 percent of Danish tax
Finland	1	Effective tax <60 percent of Finnish tax
France	1	Effective tax <66 percent of French tax
Germany	1	Effective tax <25 percent
Great Britain	1	Effective tax <75 percent of British tax
Greece	0	-
Ireland	0	-
Italy	1	Black list
Luxembourg	0	-
Netherlands	0	-
Norway	1	Effective tax <66 percent of Norwegian tax
Poland	0	-
Portugal	1	Effective tax <60 percent of Portuguese tax
Spain	1	Effective tax <75 percent of Spanish tax
Sweden	1	Effective tax <55 percent of Swedish tax
Switzerland	0	-
Austria	0	-
Canada	1	Always binding
Japan	1	Effective tax <25 percent
United States	1	Effective tax <75 percent of US tax

Notes: CFC Dummy takes on the value 1 if the parent country has enacted CFC legislation and the value 0 otherwise. In the case of Norway, the 66 percent rule does not apply if a bilateral tax treaty exists between Norway and the country of the controlled subsidiary, unless the majority of the income in that subsidiary is passive. In the case of Italy, the black list of tax havens is too long to be reported, but it is based on and is very similar to the OECD tax haven list.

Table A2: Distribution of patents and tax rates by country

Country	Patents		Firms in Parent Country	Percentage of High Quality		Patent Income Tax				TP Law Changes
	# Inventions	# Applications		Inventions	Applications	Min	Max	Changes	Large Changes	
AN	0	314	4		49.68	34.00	39.00	2	0	
AT	5668	4617	103	14.47	15.36	25.00	38.90	2	1	1
AU	1905	1553	5	44.93	46.17	30.00	39.00	4	1	4
BB	0	464	0		49.57	25.00	40.00	6	2	
BE	4917	3776	195	27.11	25.16	33.99	41.00	3	1	2
BM	0	59	7		54.24	0.00	0.00	0	0	
CA	3664	3638	8	41.21	40.96	36.10	44.60	4	0	1
CH	0	6007	179		30.50	21.30	28.50	6	0	0
CN	0	79	0		39.24	33.00	33.00	0	0	0
CY	0	41	0		48.78	10.00	42.50	5	3	
CZ	160	89	0	17.50	20.22	24.00	55.00	9	1	0
DE	104209	100870	780	13.35	13.06	38.29	59.67	14	1	1
DK	3385	3258	183	29.90	30.57	28.00	40.00	5	0	2
ES	2423	1856	70	16.92	15.57	35.00	35.30	1	0	3
FI	4657	4913	71	27.85	27.95	25.00	50.20	6	2	0
FR	39043	37715	417	17.32	17.05	15.00	33.33	2	1	0
GB	23950	19033	506	31.50	31.39	30.00	34.00	3	0	5
GI	0	36	0		52.78					
GR	93	73	2	24.73	30.14	29.00	40.00	4	0	0
HK	0	28	1		28.57	16.00	17.50	4	0	0
HU	320	229	0	30.00	28.82	9.50	40.00	3	2	1
IE	0	314	21		39.49	0.00	0.00	0	0	0
IL	0	75	3		44.00	34.00	40.00	5	0	1
IT	18752	16726	280	14.29	12.98	37.25	53.20	7	1	2
JP	94175	94090	32	21.60	21.56	40.69	54.70	5	1	2
KR	2152	2209	1	25.42	26.39	27.50	34.00	4	0	1
KY	0	98	0		46.94	0.00	0.00	0	0	
LI	0	575	0		19.13	20.00	20.00	0	0	
LU	0	411	20		27.25	29.63	39.40	7	1	0
MC	0	66	0		30.30					
MX	79	18	1	35.44	11.11	30.00	35.00	6	0	5
NL	12027	14118	454	21.10	22.77	29.60	35.00	3	0	4
NO	0	277	46		32.13	28.00	50.80	1	1	0
NZ	269	211	0	45.35	44.55	28.00	33.00	1	1	4
PA	0	46	0		34.78	30.00	50.00	5	3	0
PL	122	64	0	22.95	15.63	19.00	40.00	7	1	0
PT	97	124	4	14.43	16.13	27.50	39.60	4	1	1
SE	9869	10140	376	28.92	30.18	28.00	52.00	2	1	6
SG	0	88	0		23.86	20.00	31.00	6	0	6
SI	108	67	1	28.70	31.34	25.00	25.00	0	0	0
SK	25	14	0	8.00	0.00	19.00	40.00	3	2	1
TR	98	71	0	13.27	11.27	20.00	49.22	7	5	0
TW	0	91	1		17.58	25.00	25.00	0	0	1
US	105203	108365	175	42.33	41.16	34.00	40.00	4	2	1
VG	0	273	0		29.30					
ZA	0	53	4		33.96	37.80	37.80	0	0	4
Other	47	185	22	30.28	31.06					

Notes: High quality patents are defined as patents with a composite quality index in the top quartile of all patents in our sample. The column 'Patent Income Tax Changes' denotes how often the patent income tax rate has changed within our sample period. 'Large Changes' include increases or decreases of at least 5 percentage points. Analogously, column 'TP Law Changes' captures any variation of the 'Transfer Price Regulation' index that is larger than 0.1.

Table A3: Distribution of patents by industry

Country	First digit of NACE-Code									
	0	1	2	3	4	5	6	7	8	9
AT	.17	2.03	55.21	4.72	11.50	.07	18.99	5.46	1.67	.17
AU	.00	1.49	44.78	2.49	9.45	.00	14.93	12.94	13.93	.00
BE	.64	3.56	67.43	1.95	5.41	.35	3.37	11.83	5.19	.27
CA	.00	.37	50.74	2.94	14.71	.00	12.50	11.76	5.51	1.47
CZ	.00	.98	73.53	.98	7.84	.00	7.84	7.84	.98	.00
DE	.11	1.40	70.43	2.21	6.19	.12	11.70	4.88	2.72	.24
DK	.18	2.44	52.75	3.20	8.23	.29	14.91	15.92	.65	1.44
ES	.35	3.34	62.20	5.91	10.77	.18	5.32	7.02	4.80	.12
FI	.35	4.85	70.95	3.58	4.89	.39	5.77	8.04	.92	.26
FR	.14	1.88	54.45	7.71	6.01	.62	10.32	15.49	3.24	.13
GB	.85	3.12	53.56	5.87	5.57	.64	9.87	13.83	5.72	.98
GR	2.50	5.00	67.50	5.00	7.50	.00	5.00	7.50	.00	.00
HU	.00	2.13	66.49	4.79	4.26	.00	2.66	13.83	5.85	.00
IT	.47	3.74	65.96	5.81	7.75	.15	7.46	7.16	1.46	.05
JP	.09	.27	43.62	3.37	32.97	.09	10.93	6.92	1.64	.09
KR	.00	.00	44.00	.00	8.00	.00	48.00	.00	.00	.00
MX	.00	10.53	57.89	.00	10.53	.00	15.79	5.26	.00	.00
NL	.45	4.45	64.95	1.54	4.40	2.44	10.45	10.19	1.05	.07
NZ	3.13	6.25	46.88	3.13	.00	.00	6.25	25.00	9.38	.00
PL	.00	6.38	31.91	.00	2.13	.00	10.64	31.91	14.89	2.13
PT	1.61	11.29	74.19	.00	8.06	.00	3.23	.00	1.61	.00
SE	.24	5.16	56.45	5.27	5.25	.57	7.30	19.18	.54	.04
SI	1.39	.00	83.33	.00	5.56	.00	9.72	.00	.00	.00
SK	.00	7.14	57.14	.00	14.29	.00	7.14	14.29	.00	.00
TR	.00	.00	66.67	.00	4.76	.00	.00	23.81	4.76	.00
US	.53	2.82	56.02	1.65	5.01	1.53	12.59	14.38	5.39	.09
Other	.00	.00	80.00	6.67	.00	.00	6.67	6.67	.00	.00

Table A4: Ownership Location in a Tax Haven Country – All Corporate Patent Applications

	(1)		(2)		(3)		(4)		(5)		(6)	
	tax haven		low tax		tax haven		low tax		tax haven		low tax	
Patent Quality (Composite)	0.064*** (0.006)		0.047*** (0.007)		0.065*** (0.006)		0.047*** (0.007)		-0.002 (0.026)		-0.095*** (0.035)	
Patent Income Tax					0.088 (0.162)		0.078 (0.205)		0.117 (0.162)		0.159 (0.205)	
Patent Quality (Composite) x Patent Income Tax									0.169*** (0.063)		0.351*** (0.084)	
Macro controls	No		No		Yes		Yes		Yes		Yes	
Year Fixed Effects	Yes		Yes		Yes		Yes		Yes		Yes	
Inv. Country Fixed Effects	Yes		Yes		Yes		Yes		Yes		Yes	
Industry Fixed Effects	Yes		Yes		Yes		Yes		Yes		Yes	
Obs.	437,417		394,802		437,417		394,802		437,417		394,802	
χ^2	6553.763		5216.755		6543.392		5164.352		6537.522		5164.956	
Pseudo-R2	0.098		0.118		0.099		0.119		0.099		0.119	

Notes: The table presents coefficient estimates from the probit models described in the Results Section, run on the full sample of corporate patents. Standard errors in brackets below the coefficient estimates. *** ** * indicates significance at the 1, 5, 10 percent significance level. See the notes to Table 1 for a definition of the variables. Macro controls is the vector of control variables described in the Data Section. 'Year Fixed Effects', 'Inv. Country Fixed Effects', 'Industry Fixed Effects' are full sets of year, inventor country and technology class fixed effects respectively. 'tax haven' indicates that the dependent variable is 1 for patents where ownership is geographically separated from the inventor location and assigned to a tax haven economy as defined in Dharmapala and Hines (2009), and zero otherwise. The dummy variable 'low tax' indicates if patent ownership is assigned to a country with a patent income tax in the lowest sample quartile in all sample years. The number of observations differ between the two sets of regressions as the sample is restricted to patents that were invented in a country within EU or OECD which is not a tax haven economy and not a low tax country respectively, following the above definitions.

Table A5: Ownership Location in a Tax Haven Country – Patents Filed by Multinational Firms; Regressors Lagged by One Year

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	tax haven	low tax	tax haven	low tax	tax haven	low tax	tax haven	low tax	tax haven	low tax
Patent Quality	0.062*** (0.007)	0.042*** (0.008)	0.020 (0.028)	-0.124*** (0.039)	-0.072** (0.032)	-0.125*** (0.046)	-0.083** (0.035)	-0.147*** (0.048)	-0.027 (0.067)	-0.101 (0.114)
Patent Income Tax			-0.052 (0.020)	0.089 (0.264)	-0.003 (0.216)	-0.264 (0.298)	0.205 (0.226)	-0.069 (0.299)	0.300 (0.516)	-0.245 (0.577)
Patent Quality × Patent Income Tax			0.108 (0.069)	0.400*** (0.091)	0.306*** (0.076)	0.400*** (0.108)	0.321*** (0.083)	0.444*** (0.113)	0.120 (0.181)	0.314 (0.302)
CFC Dummy							-1.063*** (0.018)	-0.508*** (0.019)	-1.116*** (0.026)	-0.483*** (0.027)
Transfer Price Regulation									0.004 (0.021)	0.006 (0.025)
Parent in Tax Haven					1.390*** (0.016)		0.823*** (0.018)		0.813*** (0.027)	
Parent in Low Tax Country						1.808*** (0.019)		1.650*** (0.021)		1.689*** (0.028)
Macro controls	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Inv. Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	175377	136446	175377	136446	175377	136446	175377	136446	70026	57310
Cluster	175377	136446	175377	136446	175377	136446	175377	136446	70026	57310
χ^2	7643.897	4320.863	7733.179	4390.031	15371.267	12639.693	16831.140	13881.397	8207.875	6857.258
Pseudo-R2	0.127	0.121	0.128	0.122	0.249	0.332	0.317	0.350	0.346	0.336

Notes: The table presents coefficient estimates for all specifications in Table 2 with all regressors lagged by one year. Standard errors in brackets below the coefficient estimates. *** ** * indicates significance at the 1, 5, 10% significance level. See the notes to Table 1 for a definition of the variables. Macro controls is the vector of control variables described in the Data Section. Year Fixed Effects, Industry Fixed Effects are a full set of year, inventor country and technology class fixed effects respectively. Parent in Tax Haven indicates that the parent firm of the multinational group is located in a tax haven economy, following the [Dharmapala and Hines \(2009\)](#) definition. Parent in Low Tax Country indicates that the parent firm is located in a country with a patent income tax in the lowest sample quartile in all sample years. Tax Haven indicates that the dependent variable is for patents whose ownership is geographically separated from the inventor location and assigned to a tax haven economy as defined in [Dharmapala and Hines \(2009\)](#), and zero otherwise. The dummy variable low tax indicates if patent ownership is assigned to a country with a patent income tax in the lowest sample quartile in all sample years. The number of observations differ between the two sets of regressions as the sample is restricted to patents that were invented in a country within EU or OECD which is not a tax haven economy and not a low tax country respectively, following the above definitions.

Table A6: Ownership Location in a Tax Haven Country – Patents Filed by Multinational Firms; Regressors Lagged by Two Years

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	tax haven	low tax	tax haven	low tax	tax haven	low tax	tax haven	low tax	tax haven	low tax
Patent Quality (Composite Index)	0.060*** (0.007)	0.057*** (0.009)	0.010 (0.029)	-0.002 (0.040)	-0.073** (0.033)	-0.006 (0.048)	-0.083** (0.036)	-0.000 (0.049)	0.038 (0.073)	0.100 (0.110)
Patent Income Tax			-0.04 (0.203)	-0.521* (0.279)	-0.036 (0.218)	-0.765** (0.316)	0.163 (0.226)	-0.607* (0.313)	0.323 (0.737)	-0.462 (0.973)
Patent Quality × Lag Patent Income Tax			0.127* (0.071)	0.142 (0.091)	0.305*** (0.078)	0.140 (0.110)	0.320*** (0.086)	0.123 (0.114)	-0.040 (0.196)	-0.175 (0.287)
CFC Dummy							-1.065*** (0.018)	-0.490*** (0.021)	-1.158*** (0.027)	-0.560*** (0.032)
Transfer Price Regulation									0.006 (0.024)	0.000 (0.032)
Parent in Tax Haven					1.384*** (0.016)		0.814*** (0.018)		0.819*** (0.028)	
Parent in Low Tax Country						1.824*** (0.020)		1.627*** (0.023)		1.638*** (0.034)
Macro controls	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Inv. Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	165434	125151	165434	125151	165434	125151	165434	125151	66678	53650
Cluster	165434	125151	165434	125151	165434	125151	165434	125151	66678	53650
χ ²	7213.054	3713.532	7290.881	3754.855	14567.220	11675.801	16114.458	12668.258	7960.966	6264.398
Pseudo-R2	0.127	0.110	0.128	0.111	0.249	0.323	0.317	0.340	0.358	0.349

Notes: This table presents coefficient estimates for all specifications in Table 2 with all regressors lagged by two years. Standard errors in brackets below the coefficient estimates. ****, ***, **, * indicates significance at the 1, 5, 10% significance level. See the notes to Table 1 for definition of the variables. Macro controls is the vector of control variables described in the Data Section. "Year Fixed Effects", "Inv. Country Fixed Effects", "Industry Fixed Effects" are full sets of year, inventor country and technology class fixed effects respectively. "Parent in Tax Haven" indicates that the parent firm of the multinational group is located in a tax haven economy, following the [Dharmapala and Hines \(2009\)](#) definition. "Parent in Low Tax Country" indicates that the parent firm is located in a country with a patent income tax rate in the lowest sample quartile in all sample years, tax haven indicates that the dependent variable is 1 for patents where ownership is geographically separated from the inventor location and assigned to a tax haven economy as defined in [Dharmapala and Hines \(2009\)](#), and zero otherwise. The dummy variable "low tax" indicates if patent ownership is assigned to a country with a patent income tax in the lowest sample quartile in all sample years. The number of observations differ between the two sets of regressions as the sample is restricted to patents that were invented in a country within EU or OECD which is not a tax haven economy and not a low tax country respectively, following the above definitions.

Table A7: Conditional Logit Model – Elasticity Estimates

variable	(2a)	(2b)	(2c)	(2d)	(8a)	(8b)	(8c)
	tax rate				tax rate	CFC	TP
at quality =	-.5	+.5	+1.5	+2.5			
AT	-.633 (.06)	-1.659 (.069)	-2.682 (.12)	-3.703 (.181)	-4.5135 (.2202)	-1.8121 (.3269)	-.094 (.0112)
AU	-.635 (.061)	-1.663 (.07)	-2.688 (.122)	-3.712 (.185)	-4.515 (.2484)	-1.8127 (.3285)	-.0941 (.0121)
BE	-.635 (.059)	-1.664 (.067)	-2.693 (.11)	-3.722 (.158)	-4.5429 (.2065)	-1.8239 (.3286)	-.0946 (.0137)
CA	-.633 (.058)	-1.661 (.064)	-2.689 (.102)	-3.718 (.141)	-4.5415 (.2194)	-1.8234 (.3195)	-.0946 (.0114)
CH	-.618 (.063)	-1.608 (.08)	-2.581 (.142)	-3.535 (.222)	-4.2491 (.2492)	-1.706 (.2949)	-.0885 (.0129)
CZ	-.641 (.059)	-1.681 (.069)	-2.72 (.123)	-3.759 (.186)	-4.5778 (.4089)	-1.838 (.3489)	-.0954 (.0118)
DE	-.284 (.027)	-.822 (.033)	-1.463 (.056)	-2.208 (.083)	-2.9154 (.1395)	-1.1705 (.2043)	-.0607 (.0086)
DK	-.633 (.061)	-1.656 (.073)	-2.676 (.13)	-3.693 (.199)	-4.5196 (.3181)	-1.8146 (.3346)	-.0941 (.0153)
ES	-.638 (.06)	-1.672 (.071)	-2.705 (.123)	-3.737 (.184)	-4.524 (.2431)	-1.8164 (.3287)	-.0942 (.0149)
FI	-.631 (.063)	-1.651 (.077)	-2.664 (.138)	-3.671 (.215)	-4.4646 (.2715)	-1.7925 (.3243)	-.093 (.0139)
FR	-.61 (.062)	-1.584 (.077)	-2.533 (.139)	-3.456 (.217)	-4.1677 (.2859)	-1.6733 (.2848)	-.0868 (.012)
GB	-.626 (.061)	-1.638 (.074)	-2.643 (.13)	-3.642 (.199)	-4.4105 (.2771)	-1.7708 (.3206)	-.0919 (.0132)
GR	-.64 (.058)	-1.679 (.064)	-2.717 (.11)	-3.756 (.161)	-4.5813 (.2488)	-1.8394 (.3393)	-.0954 (.0147)
HR	-.641 (.061)	-1.68 (.076)	-2.718 (.144)	-3.755 (.23)	-4.57 (.3182)	-1.8348 (.3356)	-.0952 (.0141)
HU	-.64 (.065)	-1.676 (.085)	-2.708 (.163)	-3.735 (.269)	-4.5535 (.3425)	-1.8282 (.31)	-.0949 (.0144)
IE	-.641 (.071)	-1.678 (.102)	-2.707 (.215)	-3.724 (.378)	-4.5656 (.4487)	-1.8331 (.2911)	-.0951 (.0158)
IS	-.64 (.06)	-1.676 (.073)	-2.71 (.141)	-3.742 (.229)	-4.578 (.2991)	-1.838 (.3239)	-.0954 (.0135)
IT	-.631 (.058)	-1.657 (.064)	-2.684 (.098)	-3.713 (.13)	-4.5406 (.2393)	-1.823 (.3291)	-.0946 (.0117)
JP	-.628 (.058)	-1.651 (.064)	-2.676 (.094)	-3.705 (.118)	-4.4859 (.245)	-1.8011 (.3177)	-.0934 (.0131)
KR	-.64 (.062)	-1.679 (.075)	-2.716 (.135)	-3.752 (.209)	-4.58 (.31)	-1.8388 (.3482)	-.0954 (.0128)
LU	-.64 (.059)	-1.677 (.074)	-2.714 (.13)	-3.751 (.193)	-4.5887 (.4037)	-1.8423 (.3642)	-.0956 (.0148)
NL	-.62 (.061)	-1.621 (.072)	-2.618 (.121)	-3.61 (.178)	-4.2983 (.2196)	-1.7257 (.3102)	-.0895 (.0118)
NO	-.63 (.064)	-1.648 (.08)	-2.659 (.142)	-3.662 (.22)	-4.4568 (.2648)	-1.7894 (.3269)	-.0928 (.0132)
PL	-.64 (.061)	-1.678 (.075)	-2.714 (.132)	-3.75 (.2)	-4.5616 (.3818)	-1.8315 (.3291)	-.095 (.0123)
PT	-.637 (.06)	-1.67 (.067)	-2.702 (.115)	-3.734 (.17)	-4.5264 (.2561)	-1.8173 (.3346)	-.0943 (.0125)
SE	-.626 (.062)	-1.635 (.075)	-2.635 (.134)	-3.627 (.209)	-4.3484 (.2525)	-1.7459 (.3162)	-.0906 (.0116)
SI	-.641 (.062)	-1.681 (.077)	-2.719 (.147)	-3.756 (.238)	-4.5883 (.3248)	-1.8422 (.3305)	-.0956 (.0152)
US	-.619 (.06)	-1.622 (.071)	-2.623 (.114)	-3.625 (.162)	-4.403 (.2363)	-1.7678 (.3099)	-.0917 (.0128)

Notes: The table reports elasticity estimates for the patent income tax rate ('tax rate'), the CFC-related tax component ('CFC') and the transfer pricing risk measure ('TP'). See also the variable definitions in Tables 3 and 4. The elasticities in Columns (2a)-(2d) refer to the model presented in Column (2) of Table 4 and the elasticities in Columns (8a)-(8c) analogously to the model in Column (8) of Table 4. Countries are indicated by their ISO code 2-abbreviations, see the notes to Table 3. Specifications (2a)-(2d) report the elasticities evaluated at different levels of 'Patent Quality (Composite Index)', namely -0.5, 0.5, 1.5 and 2.5.

Table A8: Own and Cross-Country Elasticities: Patent Income Tax Rate

Country	AT	AU	BE	CA	CH	CZ	DE	DK	ES	FI	FR	GB	GR	HR
AT	-4.232	0.062	0.054	0.054	0.069	0.124	0.049	0.061	0.055	0.064	0.075	0.061	0.055	0.066
AU	0.022	-4.461	0.018	0.019	0.024	0.021	0.017	0.022	0.019	0.023	0.027	0.023	0.018	0.024
BE	0.088	0.090	-3.830	0.074	0.107	0.116	0.077	0.096	0.088	0.099	0.106	0.089	0.087	0.109
CA	0.016	0.017	0.013	-3.755	0.016	0.013	0.013	0.016	0.088	0.016	0.019	0.017	0.013	0.015
CH	0.342	0.355	0.324	0.279	-4.555	0.320	0.286	0.389	0.332	0.416	0.438	0.346	0.333	0.446
CZ	0.000	0.000	0.000	0.000	0.000	-4.918	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DE	1.500	1.561	1.403	1.335	1.718	2.224	-2.303	1.569	1.459	1.606	1.829	1.566	1.436	1.713
DK	0.095	0.101	0.088	0.083	0.117	0.109	0.081	-4.413	0.093	0.111	0.120	0.102	0.091	0.115
ES	0.036	0.036	0.036	0.029	0.044	0.038	0.032	0.039	-4.101	0.038	0.047	0.039	0.040	0.051
FI	0.125	0.132	0.116	0.106	0.158	0.073	0.104	0.143	0.119	-4.491	0.157	0.130	0.118	0.155
FR	0.476	0.498	0.413	0.402	0.560	0.482	0.374	0.498	0.455	0.501	-4.786	0.517	0.434	0.583
GB	0.350	0.373	0.312	0.314	0.399	0.238	0.291	0.371	0.344	0.369	0.462	-4.163	0.326	0.418
GR	0.004	0.004	0.004	0.003	0.005	0.010	0.003	0.004	0.005	0.005	0.005	0.004	-4.036	0.005
HR	0.009	0.008	0.009	0.006	0.011	0.000	0.007	0.008	0.011	0.009	0.012	0.008	0.010	-5.057
HU	0.017	0.017	0.016	0.013	0.022	0.064	0.013	0.018	0.017	0.020	0.023	0.017	0.016	0.023
IE	0.018	0.020	0.017	0.014	0.029	0.022	0.013	0.026	0.017	0.027	0.026	0.019	0.018	0.026
IS	0.003	0.004	0.003	0.003	0.005	0.005	0.003	0.005	0.003	0.005	0.004	0.003	0.003	0.005
IT	0.087	0.089	0.075	0.078	0.091	0.082	0.071	0.083	0.083	0.084	0.109	0.093	0.078	0.100
JP	0.062	0.062	0.054	0.057	0.066	0.050	0.051	0.061	0.053	0.063	0.071	0.062	0.054	0.063
KR	0.005	0.005	0.004	0.004	0.005	0.006	0.004	0.004	0.005	0.004	0.007	0.006	0.005	0.006
LU	0.006	0.006	0.006	0.005	0.008	0.027	0.005	0.007	0.005	0.008	0.006	0.005	0.006	0.006
NL	0.318	0.332	0.293	0.277	0.375	0.353	0.272	0.335	0.299	0.350	0.393	0.328	0.296	0.368
NO	0.061	0.063	0.060	0.049	0.083	0.060	0.052	0.071	0.060	0.078	0.076	0.060	0.061	0.080
PL	0.001	0.001	0.000	0.000	0.001	0.053	0.000	0.001	0.001	0.000	0.001	0.001	0.001	0.000
PT	0.015	0.015	0.013	0.013	0.017	0.039	0.013	0.015	0.012	0.016	0.017	0.014	0.013	0.016
SE	0.254	0.263	0.226	0.215	0.304	0.060	0.204	0.267	0.236	0.282	0.324	0.261	0.231	0.309
SI	0.003	0.003	0.003	0.003	0.004	0.008	0.003	0.004	0.003	0.004	0.004	0.003	0.003	0.004
US	0.320	0.347	0.271	0.322	0.316	0.323	0.264	0.313	0.315	0.292	0.426	0.391	0.289	0.355

Country	HU	IE	IS	IT	JP	KR	LU	NL	NO	PL	PT	SE	SI	US
AT	0.080	0.093	0.077	0.053	0.050	0.063	0.059	0.058	0.064	0.135	0.060	0.066	0.067	0.053
AU	0.028	0.034	0.020	0.019	0.018	0.022	0.020	0.021	0.023	0.023	0.021	0.024	0.024	0.019
BE	0.118	0.138	0.115	0.075	0.073	0.089	0.092	0.087	0.101	0.123	0.089	0.097	0.104	0.075
CA	0.018	0.021	0.019	0.015	0.014	0.016	0.015	0.015	0.015	0.014	0.016	0.017	0.016	0.016
CH	0.507	0.654	0.487	0.278	0.274	0.342	0.374	0.342	0.418	0.335	0.350	0.398	0.431	0.275
CZ	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.000	0.000
DE	1.954	2.228	1.810	1.340	1.280	1.568	1.500	1.487	1.627	2.360	1.522	1.623	1.689	1.362
DK	0.132	0.169	0.125	0.081	0.079	0.098	0.102	0.094	0.110	0.116	0.096	0.107	0.118	0.084
ES	0.050	0.057	0.046	0.032	0.029	0.041	0.036	0.034	0.041	0.049	0.035	0.038	0.044	0.034
FI	0.176	0.227	0.161	0.104	0.102	0.126	0.134	0.125	0.148	0.074	0.126	0.143	0.155	0.105
FR	0.684	0.850	0.575	0.413	0.376	0.528	0.450	0.450	0.516	0.548	0.465	0.525	0.555	0.427
GB	0.470	0.575	0.397	0.316	0.295	0.388	0.341	0.338	0.374	0.262	0.344	0.381	0.406	0.336
GR	0.006	0.007	0.005	0.003	0.003	0.004	0.004	0.004	0.005	0.011	0.004	0.004	0.005	0.003
HR	0.014	0.015	0.010	0.007	0.006	0.010	0.008	0.008	0.010	0.000	0.008	0.010	0.011	0.007
HU	-5.744	0.037	0.023	0.013	0.012	0.017	0.018	0.016	0.020	0.072	0.017	0.020	0.022	0.013
IE	0.037	-6.840	0.039	0.013	0.013	0.017	0.024	0.017	0.026	0.024	0.019	0.023	0.029	0.013
IS	0.006	0.009	-5.171	0.002	0.003	0.003	0.005	0.003	0.005	0.005	0.004	0.004	0.005	0.002
IT	0.105	0.117	0.075	-3.707	0.075	0.096	0.076	0.082	0.087	0.093	0.083	0.091	0.091	0.083
JP	0.073	0.082	0.073	0.055	-3.538	0.062	0.060	0.059	0.063	0.050	0.061	0.066	0.064	0.055
KR	0.007	0.007	0.006	0.005	0.004	-4.550	0.005	0.005	0.005	0.008	0.005	0.005	0.005	0.005
LU	0.008	0.011	0.010	0.004	0.005	0.005	-4.263	0.005	0.007	0.027	0.006	0.006	0.008	0.004
NL	0.428	0.505	0.384	0.276	0.266	0.327	0.320	-3.875	0.353	0.379	0.328	0.354	0.363	0.278
NO	0.091	0.116	0.086	0.049	0.049	0.059	0.069	0.062	-4.624	0.063	0.063	0.072	0.079	0.048
PL	0.001	0.001	0.001	0.001	0.000	0.001	0.001	0.001	0.001	-5.274	0.001	0.000	0.001	0.000
PT	0.020	0.023	0.019	0.012	0.012	0.014	0.015	0.015	0.016	0.042	-4.278	0.017	0.016	0.011
SE	0.349	0.433	0.298	0.215	0.207	0.262	0.252	0.248	0.285	0.061	0.253	-4.420	0.296	0.215
SI	0.005	0.007	0.004	0.003	0.003	0.003	0.004	0.003	0.004	0.008	0.003	0.004	-4.940	0.003
US	0.379	0.431	0.308	0.325	0.288	0.390	0.282	0.297	0.300	0.363	0.301	0.326	0.336	-3.524

Notes: The table reports own and cross-country elasticities capturing effects of the patent income tax rate on the international location of patents. Policy-changing jurisdictions are depicted in columns, countries facing externalities in rows.

Table A9: Own and Cross-Country Elasticities: CFC Tax Component

Country	AT	AU	BE	CA	CH	CZ	DE	DK	ES	FI	FR	GB	GR	HR
AT	-1.251	0.017	0.017	0.018	0.017	0.034	0.017	0.017	0.017	0.017	0.018	0.017	0.017	0.016
AU	0.006	-1.263	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
BE	0.026	0.025	-1.242	0.024	0.027	0.031	0.026	0.027	0.027	0.027	0.025	0.025	0.027	0.027
CA	0.005	0.005	0.005	-1.263	0.004	0.004	0.005	0.005	0.004	0.005	0.005	0.005	0.004	0.004
CH	0.108	0.106	0.112	0.100	-1.149	0.087	0.107	0.115	0.108	0.120	0.107	0.102	0.111	0.116
CZ	0.000	0.000	0.000	0.000	0.000	-1.262	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DE	0.404	0.405	0.411	0.404	0.403	0.536	-0.852	0.404	0.407	0.404	0.397	0.401	0.408	0.394
DK	0.029	0.029	0.030	0.029	0.031	0.029	0.029	-1.237	0.029	0.031	0.029	0.029	0.030	0.029
ES	0.011	0.010	0.012	0.010	0.011	0.010	0.011	0.011	-1.255	0.011	0.011	0.011	0.013	0.013
FI	0.039	0.039	0.040	0.038	0.042	0.020	0.039	0.042	0.038	-1.226	0.038	0.038	0.039	0.041
FR	0.161	0.161	0.155	0.159	0.159	0.141	0.154	0.155	0.161	0.155	-1.099	0.164	0.158	0.164
GB	0.106	0.108	0.104	0.109	0.104	0.063	0.105	0.107	0.107	0.103	0.110	-1.157	0.106	0.107
GR	0.001	0.001	0.001	0.001	0.001	0.003	0.001	0.001	0.002	0.001	0.001	0.001	-1.267	0.001
HR	0.002	0.002	0.002	0.002	0.003	0.000	0.002	0.002	0.003	0.002	0.003	0.002	0.002	-1.265
HU	0.004	0.004	0.004	0.004	0.005	0.013	0.004	0.005	0.004	0.005	0.005	0.004	0.005	0.005
IE	0.004	0.004	0.004	0.003	0.006	0.004	0.003	0.005	0.004	0.006	0.005	0.004	0.004	0.005
IS	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
IT	0.026	0.025	0.024	0.027	0.023	0.023	0.025	0.023	0.025	0.023	0.025	0.026	0.024	0.025
JP	0.020	0.019	0.019	0.021	0.018	0.015	0.019	0.018	0.018	0.019	0.018	0.019	0.019	0.017
KR	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.001	0.002	0.001	0.002	0.002	0.001	0.002
LU	0.002	0.002	0.002	0.002	0.002	0.007	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
NL	0.094	0.094	0.095	0.093	0.095	0.093	0.095	0.094	0.091	0.096	0.091	0.091	0.093	0.092
NO	0.018	0.018	0.019	0.016	0.021	0.015	0.018	0.020	0.018	0.021	0.018	0.017	0.019	0.020
PL	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PT	0.004	0.004	0.004	0.004	0.004	0.010	0.004	0.004	0.004	0.005	0.004	0.004	0.004	0.004
SE	0.079	0.078	0.078	0.077	0.080	0.016	0.077	0.078	0.076	0.080	0.078	0.076	0.077	0.081
SI	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
US	0.099	0.102	0.093	0.113	0.084	0.088	0.097	0.092	0.100	0.084	0.102	0.112	0.095	0.092

Country	HU	IE	IS	IT	JP	KR	LU	NL	NO	PL	PT	SE	SI	US
AT	0.017	0.017	0.019	0.018	0.018	0.018	0.017	0.017	0.017	0.034	0.018	0.018	0.017	0.017
AU	0.006	0.006	0.005	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
BE	0.026	0.025	0.028	0.025	0.026	0.025	0.027	0.026	0.027	0.030	0.026	0.026	0.027	0.024
CA	0.004	0.004	0.006	0.006	0.006	0.005	0.005	0.005	0.005	0.003	0.005	0.005	0.005	0.006
CH	0.116	0.124	0.124	0.099	0.104	0.100	0.117	0.110	0.119	0.083	0.110	0.113	0.116	0.095
CZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000
DE	0.400	0.388	0.415	0.405	0.407	0.401	0.405	0.410	0.404	0.530	0.409	0.403	0.401	0.402
DK	0.030	0.032	0.031	0.028	0.029	0.028	0.031	0.031	0.031	0.029	0.029	0.030	0.031	0.028
ES	0.011	0.011	0.011	0.011	0.011	0.012	0.011	0.011	0.011	0.012	0.010	0.010	0.012	0.011
FI	0.040	0.042	0.041	0.037	0.038	0.037	0.042	0.040	0.042	0.019	0.040	0.040	0.041	0.036
FR	0.166	0.168	0.156	0.162	0.157	0.167	0.153	0.157	0.158	0.147	0.157	0.160	0.160	0.162
GB	0.106	0.107	0.099	0.109	0.107	0.110	0.105	0.105	0.103	0.064	0.105	0.105	0.106	0.113
GR	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.003	0.001	0.001	0.001	0.001
HR	0.003	0.003	0.002	0.002	0.002	0.003	0.002	0.002	0.003	0.000	0.002	0.002	0.003	0.002
HU	-1.263	0.006	0.005	0.004	0.004	0.004	0.005	0.004	0.005	0.014	0.005	0.005	0.005	0.004
IE	0.006	-1.259	0.007	0.003	0.003	0.004	0.005	0.004	0.005	0.004	0.004	0.005	0.006	0.003
IS	0.001	0.001	-1.267	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
IT	0.023	0.021	0.019	-1.242	0.026	0.026	0.023	0.025	0.023	0.023	0.025	0.024	0.023	0.027
JP	0.017	0.016	0.019	0.020	-1.248	0.019	0.019	0.020	0.019	0.013	0.020	0.019	0.018	0.019
KR	0.001	0.001	0.001	0.002	0.001	-1.267	0.001	0.001	0.001	0.002	0.001	0.001	0.001	0.002
LU	0.002	0.002	0.003	0.001	0.002	0.001	-1.267	0.002	0.002	0.007	0.002	0.002	0.002	0.001
NL	0.094	0.092	0.093	0.092	0.094	0.091	0.095	-1.172	0.095	0.093	0.097	0.095	0.093	0.090
NO	0.020	0.021	0.021	0.016	0.017	0.016	0.020	0.019	-1.248	0.014	0.019	0.019	0.020	0.015
PL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-1.255	0.000	0.000	0.000	0.000
PT	0.004	0.004	0.005	0.004	0.004	0.004	0.004	0.005	0.004	0.010	-1.264	0.005	0.004	0.004
SE	0.080	0.081	0.076	0.076	0.077	0.076	0.079	0.079	0.080	0.015	0.079	-1.188	0.079	0.074
SI	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.001	-1.268	0.001
US	0.087	0.082	0.079	0.113	0.106	0.112	0.089	0.094	0.084	0.091	0.093	0.091	0.090	-1.145

Notes: The table reports own and cross-country elasticities capturing effects of the CFC tax component on the international location of patents. Policy-changing jurisdictions are depicted in columns, countries facing externalities in rows.

Table A10: Own and Cross-Country Elasticities: Transfer Pricing Legislation

Country	AT	AU	BE	CA	CH	CZ	DE	DK	ES	FI	FR	GB	GR	HR
AT	-0.087	0.001	0.003	0.000	0.003	0.003	0.002	0.003	0.003	0.003	0.001	0.001	0.003	0.003
AU	0.000	-0.080	0.001	0.000	0.001	0.000	0.001	0.001	0.001	0.001	0.000	0.000	0.001	0.001
BE	0.002	0.002	-0.181	0.000	0.004	0.002	0.003	0.004	0.004	0.004	0.002	0.002	0.005	0.004
CA	0.000	0.000	0.000	-0.019	0.001	0.000	0.000	0.001	0.001	0.001	0.000	0.000	0.001	0.000
CH	0.007	0.006	0.016	0.001	-0.185	0.005	0.012	0.017	0.017	0.019	0.007	0.006	0.017	0.018
CZ	0.000	0.000	0.000	0.000	0.000	-0.123	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DE	0.027	0.023	0.057	0.005	0.063	0.059	-0.098	0.061	0.063	0.025	0.023	0.023	0.065	0.059
DK	0.001	0.001	0.004	0.000	0.004	0.002	0.003	-0.193	0.004	0.004	0.001	0.001	0.004	0.004
ES	0.001	0.001	0.002	0.000	0.002	0.002	0.001	0.002	-0.200	0.002	0.001	0.001	0.002	0.002
FI	0.001	0.001	0.005	-0.001	0.005	0.001	0.004	0.005	0.005	-0.198	0.001	0.001	0.005	0.00
FR	0.013	0.012	0.024	0.004	0.027	0.013	0.019	0.026	0.027	0.027	-0.072	0.012	0.027	0.028
GB	0.009	0.009	0.017	0.004	0.018	0.006	0.014	0.019	0.019	0.018	0.009	-0.069	0.019	0.019
GR	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	-0.206	0.000
HR	0.000	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	-0.199
HU	0.000	0.000	0.001	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.000	0.000	0.001	0.001
IE	0.000	0.000	0.001	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.000	0.001	0.001
IS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IT	0.002	0.002	0.004	0.001	0.004	0.002	0.004	0.004	0.004	0.004	0.002	0.002	0.004	0.004
JP	0.001	0.001	0.003	0.000	0.003	0.001	0.002	0.003	0.003	0.003	0.001	0.001	0.003	0.003
KR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LU	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NL	0.007	0.006	0.014	0.002	0.016	0.011	0.011	0.015	0.015	0.016	0.007	0.006	0.016	0.015
NO	0.002	0.001	0.003	0.000	0.004	0.001	0.002	0.003	0.003	0.004	0.001	0.001	0.003	0.004
PL	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PT	0.000	0.000	0.001	0.000	0.001	0.001	0.000	0.001	0.001	0.001	0.000	0.000	0.001	0.001
SE	0.005	0.005	0.012	0.001	0.013	0.002	0.009	0.012	0.012	0.013	0.005	0.005	0.012	0.013
SI	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
US	0.005	0.005	0.012	0.000	0.011	0.007	0.009	0.012	0.014	0.011	0.005	0.006	0.013	0.013

Country	HU	IE	IS	IT	JP	KR	LU	NL	NO	PL	PT	SE	SI	US
AT	0.002	0.003	0.003	0.001	0.001	0.001	0.003	0.002	0.003	0.003	0.002	0.002	0.003	0.001
AU	0.001	0.001	0.001	0.000	0.000	0.000	0.001	0.001	0.001	0.000	0.001	0.001	0.001	0.000
BE	0.004	0.004	0.005	0.001	0.002	0.001	0.004	0.003	0.005	0.002	0.003	0.003	0.004	0.001
CA	0.000	0.000	0.001	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.001	0.000
CH	0.015	0.019	0.019	0.003	0.005	0.005	0.018	0.010	0.018	0.004	0.009	0.010	0.018	0.002
CZ	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000
DE	0.051	0.060	0.069	0.011	0.022	0.020	0.064	0.037	0.064	0.053	0.035	0.037	0.063	0.009
DK	0.003	0.004	0.004	0.000	0.001	0.001	0.004	0.002	0.004	0.002	0.002	0.002	0.004	0.000
ES	0.002	0.002	0.002	0.001	0.001	0.001	0.002	0.001	0.002	0.002	0.001	0.001	0.002	0.001
FI	0.004	0.006	0.006	0.000	0.001	0.001	0.006	0.003	0.005	0.001	0.003	0.003	0.005	0.000
FR	0.024	0.029	0.027	0.007	0.011	0.011	0.026	0.017	0.027	0.011	0.016	0.018	0.028	0.006
GB	0.016	0.019	0.018	0.005	0.008	0.008	0.019	0.013	0.018	0.006	0.012	0.012	0.019	0.005
GR	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000
HR	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.001	0.000
HU	-0.170	0.001	0.001	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.000	0.001	0.001	0.000
IE	0.001	-0.200	0.002	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.000	0.001	0.000
IS	0.000	0.000	-0.211	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
IT	0.004	0.004	0.003	-0.037	0.002	0.002	0.004	0.003	0.004	0.001	0.003	0.003	0.004	0.001
JP	0.002	0.002	0.003	0.001	-0.072	0.001	0.003	0.002	0.003	0.001	0.001	0.002	0.003	0.001
KR	0.000	0.000	0.000	0.000	0.000	-0.069	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LU	0.000	0.000	0.000	0.000	0.000	0.000	-0.204	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NL	0.013	0.015	0.016	0.003	0.006	0.006	0.016	-0.113	0.016	0.010	0.009	0.010	0.016	0.003
NO	0.003	0.004	0.004	0.001	0.001	0.001	0.004	0.002	-0.200	0.001	0.002	0.002	0.004	0.001
PL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-0.110	0.000	0.000	0.000	0.000	0.000
PT	0.001	0.001	0.001	0.000	0.000	0.000	0.001	0.000	0.001	0.001	-0.116	0.000	0.001	0.000
SE	0.011	0.013	0.013	0.002	0.004	0.004	0.013	0.008	0.013	0.001	0.008	-0.115	0.013	0.002
SI	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-0.205	0.000
US	0.010	0.011	0.011	0.002	0.004	0.004	0.012	0.008	0.011	0.007	0.007	0.007	0.012	-0.031

Notes: The table reports own and cross-country elasticities capturing effects of changes in transfer pricing regulations on the international location of patents. Policy-changing jurisdictions are depicted in columns, countries facing externalities in rows.

Table A11: Simulation – Baseline
Location Propensity

Application Country	Baseline Loc. Prop.
AT	.0165589
AU	.0011283
BE	.0218429
CA	.0022436
CH	.060555
DE	.4700068
DK	.0112003
ES	.0098621
FI	.0116616
FR	.1414826
GB	.0537668
GR	.0014138
HU	.0018579
IE	.0010214
IS	.0001476
IT	.0162974
JP	.0155617
KR	.0016837
LU	.0022016
NL	.0824239
NO	.005894
PT	.0042604
SE	.03501
SI	.0005273
US	.0313905

Notes: The table reports the patent location propensity per choice country based on the current tax environment (i.e., current patent income tax rates, CFC provisions and transfer pricing scores). Choice countries are indicated by their 2-digit ISO code (see also the notes to Table 3).