# **Summary Tables on Patent Policy**

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Table 1. The presence of patent protection. The sample consists of the sixty largest countries (by gross domestic product) at the end of 1997, observed at 25-year intervals from 1850 to 1999. The table denotes whether the given country had patent protection at the beginning of a given year ("Y" denotes cases where such protection existed, "N" cases where it did not, and "R" that the country automatically recognized patents granted by another country, also noted). The footnotes denote whether patent protection was available in whole or part for a number of important technologies.

Observations where the country was not an independent entity are filled in.

	1850	1875	1900	1925	1950	1975	1999
Algeria						Y <sup>CC,FF,MM,a</sup>	$Y^{CC,FF,MM,a}$
Argentina	N	$Y^{CC,FF}$	$Y^{CC,FF}$	$Y^{CC,FF}$	$Y^{CC,FF,M}$	$Y^{CC,FF,M}$	$Y^{CC,FF,MM,P}$
Australia				$Y^{\text{CC},\text{FF},\text{MM}}$	$Y^{CC,FF,MM}$	$Y^{CC,FF,MM}$	$\mathbf{Y}^{\text{CC,FF,MM,P}}$
Austria	$Y^{CC,FF}$	$Y^{CC}$	$Y^{C,F,M}$	$Y^{C,F,M}$	$Y^{C,F,M}$	$Y^{CC,F,M}$	$Y^{CC,FF,M,PP}$
Bangladesh						$Y^{C,FF,M}$	$\mathbf{Y}^{\mathrm{C},\mathrm{FF},\mathrm{M}}$
Belgium	$Y^{CC,FF,MM}$	$Y^{CC,FF,MM}$	$Y^{CC,FF,MM}$	$Y^{CC,FF,MM}$	$Y^{CC,FF,M}$	$Y^{\text{CC,FF,MM,PP}}$	$Y^{CC,FF,MM.PP}$
Brazil	$Y^{CC,FF,MM}$	$Y^{CC,FF,MM}$	$Y^{\text{CC},\text{FF},\text{MM}}$	$Y^{CC,FF,MM}$	$Y^{C,F,M}$	$\mathbf{Y}^{\mathrm{C}}$	$Y^{CC,FF,MM}$
Canada		$Y^{CC,FF,MM}$	$Y^{\text{CC},\text{FF},\text{MM}}$	$Y^{CC,FF,MM}$	$\mathbf{Y}^{\text{CC,F,M}}$	$Y^{C,F,M}$	$Y^{CC,FF,MM,P}$
Chile	$Y^{CC,FF,MM}$	$Y^{\text{CC},\text{FF},\text{MM}}$	$Y^{\text{CC},\text{FF},\text{MM}}$	$Y^{CC,FF,M}$	$Y^{C,F,M}$	$Y^{C}$	$Y^{CC,FF}$
China	N	N	N	N	N	N	$Y^{CC,FF,MM,P}$
Columbia	$Y^{CC,FF,MM}$	$Y^{\text{CC},\text{FF},\text{MM}}$	$Y^{CC,FF,MM}$	$Y^{\text{CC},\text{FF},\text{MM}}$	$\mathbf{Y}^{\text{CC,F,M}}$	$Y^{CC,FF,M}$	$Y^{CC,FF,M}$
Czech Republic				$\mathbf{Y}^{\text{C,FF,PP}}$	$Y^{C,F,M,PP}\\$	Y	$Y^{CC,FF,MM}$
Denmark	N	Y <sup>CC,FF,MM</sup>	$Y^{CC}$	$Y^{CC}$	$\mathbf{Y}^{\mathrm{C},\mathrm{M}}$	$Y^{CC,FF,MM}$	$Y^{CC,FF,MM}$
Egypt						$Y^{CC,F,M}$	$Y^{CC,FF,M}$
Finland	-			$Y^{C,F,M}$	$Y^{C,F,M}$	$Y^{CC,FF,MM}$	$Y^{CC,FF,MM}$
France	$Y^{CC,FF}$	$Y^{CC,FF}$	$Y^{CC,FF}$	$Y^{CC,FF,M}$	$Y^{CC,FF,M}$	$Y^{CC,FF,M,PP}$	$Y^{CC,FF,MM,PP}$
Germany	$Y^{\text{CC,FF,MM}}$	$Y^{CC,FF,MM}$	$\mathbf{Y}^{\mathrm{C}}$	$Y^{C,F,M}$	$Y^{C,F,M}$	$\mathbf{Y}^{\mathrm{C},\mathrm{FF},\mathrm{M},\mathrm{PP}}$	$\mathbf{Y}^{\text{C,FF,M.PP}}$
Greece	N	N	N	$Y^{CC,FF,MM}$	$Y^{CC,FF,M}$	$Y^{CC,FF,M}$	$Y^{CC,FF,MM}$
Hungary				$\mathbf{Y}^{\text{C,F,M,PP}}$	$\mathbf{Y}^{\mathrm{C,F,M,PP}}$	$\mathbf{Y}^{\text{C,F,M,PP}}$	$Y^{CC,FF,MM,PP}$
India	-		-		$Y^{C,F,M}$	$\mathbf{Y}^{\mathrm{C,F,M}}$	$\mathbf{Y}^{\mathrm{C,F,M}}$
Indonesia					N	N	$Y^{CC,FF,MM}$
Iran	N	N	N	N	$Y^{CC,FF,M}$	$Y^{CC,FF,M}$	$\mathbf{Y}^{\text{CC,FF,M}}$
Iraq					$Y^{CC,FF}$	$Y^{CC,FF,M}$	$\mathbf{Y}^{\text{CC,FF,M}}$
Ireland				N	$Y^{C,F,M}$	$Y^{CC,F,M}$	$Y^{CC,FF,MM}$
Israel	_				$Y^{CC,FF,MM}$	$Y^{CC,FF}$	$Y^{CC,FF,MM.P}$
Italy	$Y^{CC,FF,MM}$	$Y^{CC,FF}$	$Y^{CC,FF}$	$Y^{CC,FF}$	$Y^{CC,FF,PP}$	$\mathbf{Y}^{\mathrm{CC},\mathrm{FF},\mathrm{P}}$	$Y^{CC,FF,MM.P}$
Japan	N	N	$\mathbf{Y}^{\mathrm{CC}}$	Y	Y	Y	$Y^{CC,FF,MM,PP}$
Kuwait						$Y^{CC,F,M}$	$Y^{CC,FF,M,SS}$
Libya						$Y^{CC,FF,MM}$	$Y^{CC,FF,M}$
Malaysia	-					R—UK	$Y^{CC,FF,MM}$
Mexico	$Y^{CC,FF,MM}$	$Y^{CC,FF,MM}$	$Y^{CC,FF,MM}$	$Y^{C,FF,MM}$	$Y^{C,FF,M}$	$\mathbf{Y}^{\text{C,FF,MM}}$	$Y^{CC,FF,MM.P}$
Morocco						$Y^{CC,FF,M}$	$Y^{CC,FF,M,SS}$
Myanmar					R—India	N	N
Netherlands	$Y^{CC,FF,MM,b}$	N	N	$Y^{CC,FF,MM}$	$Y^{C,F,M}$	$\mathbf{Y}^{\mathrm{C,F,M,P}}$	$Y^{CC,FF,MM,PP}$
New Zealand				$Y^{C,F,M}$	$Y^{C,F,M}$	$Y^{CC,F,M,P}$	$Y^{CC,FF,MM,PP,SS}$
Nigeria						$Y^{CC,FF,MM}$	$Y^{CC,FF,MM}$
Norway	$Y^{CC,FF,MM}$	$Y^{CC,FF}$	$Y^{CC,F,M}$	$Y^{C,F,M}$	$Y^{C,F,M}$	$\mathbf{Y}^{\text{CC,FF,M}}$	$Y^{CC,FF,M}$
Pakistan					$Y^{C,F,M}$	$Y^{C,FF}$	$Y^{CC,FF,M}$
Peru	N	$Y^{CC,FF}$	$Y^{CC,FF}$	$Y^{CC,FF}$	$Y^{CC,FF,M}$	$Y^{CC,FF}$	$Y^{CC,FF,M}$
Philippines					$Y^{CC,FF,MM}$	$Y^{CC,FF}$	$Y^{C,FF,M}$
Poland				$Y^{C,F,M}$	$Y^{C,F,M}$	$\mathbf{Y}^{\mathrm{C,F,M}}$	$Y^{CC,FF,M,PP}$
Portugal	$Y^{CC,FF,MM}$	$Y^{FF}$	$Y^{C,FF,M}$	$\mathbf{Y}^{\mathrm{C},\mathrm{FF},\mathrm{M}}$	$\mathbf{Y}^{\mathrm{C,F,M}}$	$\mathbf{Y}^{\mathrm{C,F,M}}$	$Y^{CC,FF,MM}$

Russia	$Y^{\text{CC,FF,MM,c}}$	$Y^{\text{CC},\text{FF},\text{MM},c}$	$Y^{C,F,c}$	N	$\mathbf{Y}^{\mathrm{C},\mathrm{F}}$	$\mathbf{Y}^{\text{C,F,M}}$	$Y^{CC,FF,MM,P}$
Saudi Arabia				N	N	N	$Y^{CC,FF,MM}$
Singapore						R—UK	$Y^{CC,FF,MM}$
South Africa				$Y^{CC,FF,MM}$	$Y^{C,FF,M}$	$\mathbf{Y}^{\mathrm{CC}}$	$Y^{CC,FF,MM,P}$
South Korea	N	N	N		$Y^{CC,FF}$	$Y^{CC,FF,P}$	$Y^{CC,FF,MM,PP}$
Spain	$Y^{CC,FF,MM}$	$Y^{CC,FF,MM}$	$Y^{CC,FF}$	$Y^{F,M}$	$\mathbf{Y}^{\mathrm{C,F,M}}$	$\mathbf{Y}^{\mathrm{C,F,M}}$	$\mathbf{Y}^{\mathrm{C,FF,M,P}}$
Sweden	$Y^{CC,FF,MM}$	$Y^{CC,FF}$	$Y^{CC,F,M}$	$Y^{CC,F,M}$	$\mathbf{Y}^{\mathrm{C,F,M}}$	$Y^{CC,FF,MM}$	$Y^{CC,FF,MM}$
Switzerland	N	N	Y	$Y^{C,M}$	$\mathbf{Y}^{\mathrm{C},\mathrm{M},\mathrm{d}}$	$\mathbf{Y}^{\mathrm{C}}$	$Y^{CC,FF,MM,PP}$
Syria					$Y^{CC,FF,M}$	$Y^{CC,FF,M}$	$Y^{CC,FF,M}$
Taiwan					$\mathbf{Y}^{\mathrm{C,F}}$	$\mathbf{Y}^{\mathrm{C}}$	$Y^{CC,F,M,P,S}$
Thailand	N	N	N	N	N	N	$Y^{CC,FF,MM}$
Turkey	N	N	$Y^{CC,FF,e}$	$Y^{CC,FF}$	$Y^{CC,FF,M}$	$Y^{CC,FF,M}$	$Y^{CC,FF,M}$
Ukraine							$Y^{CC,FF,MM}$
United Arab Emirates						N	$Y^{CC,FF,M}$
United Kingdom	$Y^{CC,FF,MM}$	$Y^{CC,FF,MM}$	$Y^{CC,FF,MM}$	$Y^{CC,FF,MM}$	$Y^{CC,F,M}$	$Y^{CC,F,M,P}$	$Y^{CC,FF,MM,P}$
United States	$Y^{CC,FF,MM}$	$Y^{CC,FF,MM}$	$Y^{CC,FF,MM}$	$Y^{\text{CC},\text{FF},\text{MM}}$	$Y^{CC,FF,MM,P}$	$Y^{CC,FF,MM,P}$	$Y^{CC,FF,MM,PP,SS}$
Venezuela	N	N	$Y^{CC,FF}$	$Y^{CC,FF}$	$\mathbf{Y}^{\text{CC,FF,P}}$	$Y^{CC,M}$	$Y^{CC,FF,M}$

C = Chemical patents allowed under certain conditions.

CC = Chemical patents allowed.

F = Food patents allowed under certain conditions.

FF = Food patents allowed.

M = Medicinal patents allowed under certain conditions.

MM = Medicinal patents allowed.

P = Plant patents allowed under certain conditions.

PP = Plant patents allowed.

S = Software patents allowed under certain conditions.

SS = Software patents allowed.

- a = Patents only awarded to foreign applicants; no domestic patents.
- b = No railroad-related patents.
- c = No weapons-related patents.
- d = No textile process patents.
- e = No electricity-related patents

Table 2. The length of patent protection. The sample consists of the sixty largest countries (by gross domestic product) at the end of 1997, observed at 25-year intervals from 1850 to 1999. The table denotes the duration of a patent award to a domestic entity carried to full term (not including any extension granted at the discretion of government officials). Observations where the country was not an independent entity are filled in; those where the country did not have a patent system are shaded.

	1850	1875	1900	1925	1950	1975	1999
Algeria						20 ap <sup>a</sup>	20 ap <sup>a</sup>
Argentina		15 aw	15 aw	15 aw	15 aw	15 aw	20 ap
Australia				16 ap***	16 ap**	16 ap**	20 ap
Austria	15 aw	15	15 pub	15 pub	18 pub	18 pub	20 ap
Bangladesh			1		•	16 prior**	16 prior**
Belgium	15	20 ap	20 ap	20 ap	20 ap	20 ap	20 ap
Brazil	5***	5***	15 aw	15 aw	15 aw*	15 ap	20 ap
Canada		15	18 aw	18 aw	17 aw	17 aw	20 ap
Chile	10 work***	10 work***	10 work**	10 aw**	15 aw*	15 aw*	15 aw
China							20 ap
Columbia	20	20	20 aw	50 aw	20 aw	12 aw	15 ap
Czech Republic				15 pub	15 pub	15 ap	20 ap
Denmark		5**	15 aw	15 aw	17 ap	17 ap	20 ap
Egypt						15 ap*,P[10]	15 ap*,P[10]
Finland				15 aw	20 ap	17 ap	20 ap
France	15 aw	15 ap	15 ap	15 ap	20 ap	20 ap	20 ap <sup>P[27]</sup>
Germany	15 aw	15	15 ap	18 ap	18 ap	18 ap	20 ap <sup>P[25]</sup>
Greece				15 ap	15 ap	15 ap	20 ap
Hungary				15 ap	20 ap	20 ap	20 ap
India					16 ap**	14 prior <sup>P[7],b</sup>	$14 \text{ aw}^{P[7],b}$
Indonesia							14 ap*
Iran					20 ap	20 ap	20 ap
Iraq					15 ap	15 ap	15 ap
Ireland					16 ap**	16 ap**	20 ap
Israel					16 ap	20 ap	20 ap
Italy	5**	15 ap	15 ap	15 ap	15 ap	15 ap	$20 \text{ ap}^{P[38]}$
Japan			15 aw	15 pub**	15 pub**	15 pub <sup>c</sup>	20 ap <sup>P[25]</sup>
Kuwait						15 ap*,P[10]	15 ap*,P[10]
Libya						15 ap*,P[10]	15 ap*,P[10]
Malaysia							15 aw <sup>c</sup>
Mexico	10 work***	10 work***	20 aw*	20 aw*	15 ap	15 ap	20 ap
Morocco						20 ap	20 ap
Myanmar							
Netherlands	15			15 aw	18 aw	20 ap	20 ap <sup>P[25]</sup>
New Zealand				16 ap***	16 ap**	16 ap**	20 ap**
Nigeria						20 ap	20 ap
Norway	15 aw***	3***	15 ap	17 ap	17 ap	17 ap	20 ap
Pakistan					16 ap**	16 prior**	16 prior
Peru		10	10 aw	10 aw**	10 aw*	15 aw	20 ap
Philippines					17 aw	17 aw	17 aw
Poland				15 aw	15 ap	15 ap	20 ap
Portugal	15	15 aw*	15 aw	15 aw	15 aw	15 aw	20 ap
Romania				15 ap	15 ap	15 ap	20 ap
Russia	10 aw	10 aw	15 aw		15 ap	15 ap	20 ap

Saudi Arabia	_						20 aw
Singapore							20 ap
South Africa				14 ap***	14 ap***	16 ap**	20 ap*
South Korea					17 aw**	12 pub <sup>d</sup>	$20 \text{ ap}^{P[25]}$
Spain	15 aw	15 aw	20 aw	20 aw	20 aw	20 aw	20 ap
Sweden	15 aw***	3***	15 ap	15 ap	17 ap	17 ap	$20 \text{ ap}^{P[25]}$
Switzerland			15 ap	$15 \text{ ap}^{P[10]}$	$15 \text{ ap}^{P[10],C[10]}$	18 ap	20 ap
Syria					15 ap	15 ap	15 ap
Taiwan					15 ap	15 ap	$20 \text{ ap}^{P[25]}$
Thailand							20 ap
Turkey			15 ap	15 ap	15 ap	15 ap	20 ap
Ukraine							20 ap
United Arab Emirates	_						15 ap
United Kingdom	14***	14 ap***	14 ap***	16 ap**	16 ap**	16 ap**	20 ap
United States	14 aw**	17 aw	17 aw	17 aw	17 aw	17 aw	20 ap <sup>P[25],e</sup>
Venezuela			15 aw	15 aw	10 aw	10 aw	15 ap

ap = Date of patent application.

aw = Date of patent award.

pub = Date of patent publication.

prior = Date of original ("priority") patent application.

work = Date at which patent is first worked in a given country (or end of compulsory working period).

- \* = Extension of patents are possible for up to five years.
- \*\* = Extension of patents is possible for more than 5, but 10 or less years.
- \*\*\* = Extension of patent for more than 10 or an indefinite period is possible.
- C = Chemical patents may be of a different length. Bracketed number indicates maximum possible length.
- P = Pharmaceutical patents may be of a different length. Bracketed number indicates maximum possible length.
- a = Patents only awarded to foreign applicants; no domestic patents.
- b = Pharmaceutical awards cannot exceed lesser of seven years from the application date or five years from the award date.
- c = Patents cannot last for more than 20 years from application date.
- d = Patents cannot last for more than 15 years from application date.
- e = Extensions also possible for patents delayed by interference procedures.

In some cases, nineteenth-century patent laws were ambiguous as to whether the award initiated with the application or award date. This reflected the fact that the gap between these two was typically very short.

Table 3. The cost of patent protection. The sample consists of the sixty largest countries (by gross domestic product) at the end of 1997, observed at 25-year intervals from 1850 to 1999. The table denotes the fee charged a domestic patentee for a patent award carried to full term (not including any extension granted at the discretion of government officials), expressed in 1998 U.S. dollars. (All payments are discounted at the ten-year U.S. Treasury yield or a proxy therefor.) Observations where the country was not an independent entity are filled in; those where the country did not have a patent system are shaded.

	1850	1875	1900	1925	1950	1975	1999
Algeria						NA	78ª
Argentina		4704	6493	3205	226	144	2657
Australia				530	552	944	2774
Austria	3284	4665	11671	1403	2848	2523	5867
Bangladesh						NA	208
Belgium	4836	3185	5887	1242	2811	875	1398
Brazil	894	688	21070	2292	290	100	6657
Canada		719	1036	336	276	230	2067
Chile	941	711	6999	439	214	47	132
China							3371
Columbia	8234	5997	4117	10318	NA	NA	1204
Czech Republic				1888	437	673	2278
Denmark		143	8280	2393	2426	1808	4951
Egypt						240	67
Finland	-			382	3101	1489	4544
France	4189	3125	4933	1443	1711	1066	3597
Germany	37	19	22694	14076	5938	4367	6803
Greece				1782	616	169	2728
Hungary				272	1344	2451	2835
India	-				1355	194	206
Indonesia							1940
Iran					NA	205	$0_{\rm p}$
Iraq					NA	NA	NA
Ireland					2050	569	3541
Israel					1364	384	1377
Italy	857	2665	4341	1824	1024	412	3456
Japan			2356	1155	484	505	15150
Kuwait						NA	43
Libya						NA	NA
Malaysia							933
Mexico	6314	4632	2709	2132	223	194	1473
Morocco						NA	4401
Myanmar							
Netherlands	5352			4187	2410	7065	6062
New Zealand				564	582	243	874
Nigeria						NA	NA
Norway	$0_{\rm p}$	168	2682	1830	1277	2004	4300
Pakistan					1876	162	25
Peru		14711	8118	4072	NA	112	NA
Philippines					NA	280	24
Poland				2735	842	270	2569
Portugal	66	862	692	234	139	13	1517
Romania				6057	NA	917	3976

Russia	5433	4675	18941		4271	868	5280
Saudi Arabia							2762
Singapore							2963
South Africa				906	565	205	22
South Korea					NA	NA	4757
Spain	6234	4601	21954	2989	474	90	2840
Sweden	$0_{\rm p}$	$0_{\rm p}$	3218	4266	2934	2023	2720
Switzerland			4235	1846	1626	2753	5111
Syria					NA	NA	383
Taiwan					NA	NA	2155
Thailand							5662
Turkey	_		2283	733	865	1324	2768
Ukraine							2992
United Arab Emirates							NA
United Kingdom	37237	10195	6612	4025	1631	1052	3787
United States	618	546	720	386	343	442	5840
Venezuela			2389	2227	NA	400	NA

NA = No data on patent fees are available.

In making the computations, for 1950 and afterwards, it is assumed that awards occur two years after the application date (one year after publication date). For 1900 and 1925, it is assumed awards occur one year after the application date (and publication date). For 1850 and 1875, it is assumed awards occur only a nominal period after application.

<sup>&</sup>lt;sup>a</sup>Fee is only for foreign applicants; no domestic patents.

<sup>&</sup>lt;sup>b</sup>Fee is only a nominal tax or publication costs (for domestic patentees only, in the case of Iran).

Table 4. Limitations on patent protection. The sample consists of the sixty largest countries (by gross domestic product) at the end of 1997, observed at 25-year intervals from 1850 to 1999. The table denotes the "working" period: the number of years after the award when the patent may be licensed to third parties by the government or revoked if not employed in a given country. (Extensions for extraordinary circumstances may be provided, but are not reported.) The footnotes denote other important limitations on patent protection. Observations where the country was not an independent entity are filled in; those where the country did not have a patent system are shaded.

	1850	1875	1900	1925	1950	1975	1999
Algeria						3 <sup>CL,PU</sup>	3 <sup>CL,PU</sup>
Argentina		2	2	2	2	$2^{\mathrm{CL}}$	$2^{\mathrm{CL}}$
Australia				$4^{\text{CL,R}}$	$3^{\mathrm{CL}}$	$3^{\mathrm{CL}}$	$3^{\mathrm{CL}}$
Austria	$1^{\mathrm{D}}$	$1^{\mathrm{D,PU}}$	$3^{\mathrm{CL,PU}}$	$3^{CL}$	$3^{\mathrm{CL}}$	3 <sup>CL,PU,R</sup>	$3^{\mathrm{PU}}$
Bangladesh						$4^{\mathrm{CL,R}}$	4 <sup>CL</sup>
Belgium	2	1	1 <sup>a</sup>	1	1	1	$3^{\mathrm{CL,PU}}$
Brazil	2	2	$3^{\mathrm{CL,R}}$	$3^{R}$	$2^{R}$	$3^{\mathrm{CL,R}}$	$3^{\mathrm{CL}}$
Canada		3 <sup>CLs,PU</sup>	2 <sup>CLs,PU</sup>	$2^{\mathrm{CLs}}$	$3^{CL}$	3 <sup>CL,PU</sup>	$3^{\mathrm{PU}}$
Chile	Discr.	Discr.	Discr.	1	None	None	None
China							3 <sup>CL,PU</sup>
Columbia	1	1	1	1	None	3 <sup>CL,R</sup>	$3^{\mathrm{CL}}$
Czech Republic				3 <sup>CL</sup>	3 <sup>CL,R</sup>	3 <sup>CL,PU</sup>	None <sup>PU</sup>
Denmark		$1^{\mathrm{PU}}$	$3^{PU}$	3	$3^{\mathrm{CL}}$	3 <sup>CL,PU</sup>	3 <sup>CL,PU</sup>
Egypt						3 <sup>CL,PU,R</sup>	3 <sup>CL,PU,R</sup>
Finland	-			3	$3^{\mathrm{CL}}$	3 <sup>CL,PU</sup>	3 <sup>CL,PU</sup>
France	2	2	2	2	3 <sup>CLs</sup>	$3^{\text{CL,PU}}$	3 <sup>CL,PU</sup>
Germany	$0.5^{\mathrm{PU}}$	$0.5^{PU}$	3 <sup>CL,PU,R</sup>	$3^{CL,R}$	$3^{\mathrm{CL}}$	Immed. <sup>CL,PU</sup>	Immed. <sup>CL,PU</sup>
Greece	0.5	0.5		$3^{\rm CL}$	$3^{CL}$	3 <sup>CL,PU</sup>	$3^{\text{CL,PU}}$
Hungary				$3^{\text{CL,R}}$	$3^{CL}$	3 <sup>CL,PU</sup>	None <sup>CL,PU</sup>
India	_				$3^{CL}$	$3^{\text{CL,R}}$	3 <sup>CL</sup>
Indonesia							5 <sup>PU</sup>
Iran					5	5	5
Iraq					2	$3^{\mathrm{CL,R}}$	3 <sup>CL</sup>
Ireland					$3^{\mathrm{CL,R}}$	$3^{\mathrm{CL}}$	$3^{CL}$
Israel	-				$3^{\mathrm{CL}}$	$3^{\mathrm{CL,PU}}$	3 <sup>CL,PU</sup>
Italy	1	2	2	2	$3^{R}$	$3^{\text{CL,R}}$	3 <sup>CL,PU</sup>
Japan			3 <sup>CL,R</sup>	3 <sup>CL</sup>	$3^{CL}$	$3^{\text{CL,PU}}$	3 <sup>CL,PU</sup>
Kuwait			3			3 <sup>CL,PU,R</sup>	3 <sup>CL,PU</sup>
Libya						3	3 <sup>CL,PU,b</sup>
Malaysia	-						$3^{PU}$
Mexico	None	None	None <sup>PU</sup>	3	3	3 <sup>PU,R</sup>	$3^{\mathrm{PU}}$
Morocco	Tione	110110	rvone			3	3 <sup>b</sup>
Myanmar						3	
Netherlands	2			5 <sup>CL</sup>	3 <sup>CL</sup>	3 <sup>CL,PU</sup>	3 <sup>CL,PU</sup>
New Zealand	2			4 <sup>CL,R</sup>	$3^{\text{CL,R}}$	$3^{\mathrm{CL}}$	$3^{\mathrm{CL}}$
Nigeria Nigeria				_	3	3 <sup>CL,PU</sup>	3 <sup>CL,PU</sup>
Norway	$2^{\mathrm{D}}$	$1^{\mathrm{D}}$	3 <sup>CL,D,PU</sup>	$3^{\mathrm{CL}}$	$3^{\mathrm{CL}}$	$3^{\text{CL,PU}}$	3 <sup>CL,PU</sup>
Pakistan		±			4	4 <sup>CL,R</sup>	$4^{\mathrm{CL,R}}$
Peru		2	2	2	2	$2^{\mathrm{CL}}$	$3^{\text{CL}}$
Philippines					3 <sup>CL</sup>	$3^{\text{CL}}$	$2^{\mathrm{CL}}$
Poland				3	$3^{\text{CL,R}}$	3 <sup>CL,R,PU</sup>	3 <sup>CL,PU</sup>
Portugal	7.5 <sup>CL,R</sup>	1 <sup>CL,R</sup>	$2^{\text{CL,R}}$	$2^{\mathrm{CL,R}}$	3 <sup>CL,R</sup>	3 <sup>CL,R</sup>	$3^{\mathrm{CL,c}}$
Romania	1.5	1		$4^{\mathrm{D,R}}$	$4^{\mathrm{CL}}$	$3^{\text{CL,PU}}$	3 <sup>CL,PU</sup>
Kullallia				4	4	J	J

Russia	2.5	2.5	5		3 <sup>CL,R</sup>	None <sup>CL,PU,R</sup>	3 <sup>CL,PU</sup>
Saudi Arabia							2 <sup>PU</sup>
Singapore				GY.	G.	CY	4 <sup>CLs,PU</sup>
South Africa				$2^{CL}$	$3^{\mathrm{CLs}}$	3 <sup>CL</sup>	$3^{\mathrm{CL,PU}}$
South Korea					3	3	$3^{\mathrm{CL,PU}}$
Spain	1	1 <sup>D</sup>	$2^{\mathrm{D}}$	3	3	3	$3^{\mathrm{CL,PU}}$
Sweden	$2^{\mathrm{D}}$	2	$3^{\mathrm{PU},\mathrm{R}}$	$3^{R}$	$3^{\text{CL,R}}$	$3^{\mathrm{CL,PU}}$	$3^{\mathrm{CL,PU}}$
Switzerland			Immed.PU,R	$3^{CL}$	$3^{\mathrm{CL}}$	$3^{\mathrm{CL,PU}}$	$3^{\mathrm{CL,PU}}$
Syria					3	2	2
Taiwan					3	3	$4^{\mathrm{CL,PU}}$
Thailand							$3^{\mathrm{CL,PU}}$
Turkey			$2^{\mathrm{D}}$	2	2	2	$2^{PU}$
Ukraine							3
United Arab Emirates							$2^{\mathrm{PU}}$
United Kingdom	None	None	None <sup>CL</sup>	$4^{\mathrm{CL,R}}$	$3^{\rm CL}$	3 <sup>CL</sup>	$3^{\mathrm{CL,PU}}$
United States	1.5 <sup>d</sup>	None	None	None	None	None	None
Venezuela			2	2	2	2	3

Discr. = Government can set working period at its discretion.

Immed. = Awardee must begin working patent immediately after award.

None = No compulsory working period.

CL= Government can demand compulsory licensing of patents for reasons other than non-working.

CLs= Compulsory licensing provisions only for some industries (typically pharmaceuticals).

D = Damages in patent infringement cases are limited to a fixed amount.

PU = Prior users of a patented technology cannot be sued for infringement.

R = Government can revoke patents for reasons other than non-working and failure to comply with compulsory licensing order.

- a = Calculated from date first worked abroad.
- b = Working can be in any country, any Paris Convention country, or in the country of origin.
- c = Working can be in any European Community country.
- d = Applies to foreign patentees only.

No data other than working requirements is reported for Libya, South Korea, and Taiwan in 1975. No data on prior user rights is reported for any country in 1925 and 1950 and Bangladesh and Ukraine in any year.

Table 5. Discrimination against foreign patentees. The sample consists of the sixty largest countries (by gross domestic product) at the end of 1997, observed at 25-year intervals from 1850 to 1999. The table denotes the duration (in years) of a patent award filled by a foreign entity carried to full term relative to that of a domestic entity (both not including any extensions granted at the discretion of government officials). The footnotes denote the presence of other important discriminatory provisions. Observations where the country was not an independent entity are filled in; those where the country did not have a patent system are shaded.

	1850	1875	1900	1925	1950	1975	1999
Algeria						$0^{NW,a}$	$0^{\mathrm{NW,a}}$
Argentina		-5 <sup>D</sup>	-5 <sup>D,NP</sup>	-5 <sup>D,NP</sup>	-5 <sup>D,NP</sup>	-5 <sup>D,NW</sup>	$0^{ m NW}$
Australia				$0^{\mathrm{NP}}$	0	$0_{ m NW}$	0
Austria	$0_{ m D}$	$0^{ m D}$	$0^{ m NP}$	0	0	$0^{ m NW}$	0
Bangladesh						$0^{\mathrm{NP,NW,b}}$	$0^{\mathrm{NW,b}}$
Belgium	$0^{\mathrm{D,c}}$	$0^{ m D,c}$	$0_{ m D}$	$0_{ m D}$	$0_{ m D}$	$0^{ m D,NW}$	0
Brazil	0	0	$0_{ m D}$	$0_{ m D}$	$0_{ m D}$	0	0
Canada		0	$0^{\mathrm{D,NP}}$	0	0	$0^{ m NW}$	0
Chile	$0^{\mathrm{E,d}}$	-10 <sup>e</sup>	$0^{ m NP}$	$0^{ m NP}$	$0^{\mathrm{D,NP}}$	$0^{\mathrm{D,NP,NW}}$	$0^{ m NW}$
China							0
Columbia	$0_{ m D}$	$0^{\mathrm{D}}$	$0^{\mathrm{D,NP}}$	$0^{\mathrm{D,NP}}$	$0^{\mathrm{D,NP}}$	$0^{ m NP,NW}$	$0^{ m NW}$
Czech Republic				$0^{\mathrm{NP}}$	$0^{ m NP}$	$0^{\mathrm{NP,NW}}$	0
Denmark		$0^{E[-10]}$	0	0	0	0	0
Egypt						$0^{ m NW}$	$0^{ m NW}$
Finland	-			0	0	$0^{ m NW}$	0
France	$0^{ m D,c}$	$0^{ m D}$	0	0	0	0	0
Germany	0	0	$0^{ m NP}$	0	0	0	0
Greece				0	0	$0^{ m NW}$	0
Taiwan					$0^{\mathrm{NP}}$	$0^{\mathrm{NP,NW}}$	$0^{ m NP,NW}$
Hungary	-			0	0	$0^{ m NW}$	0
India					$0^{ m NP}$	$0^{\mathrm{NP,NW,b}}$	$0^{ m NP}$
Indonesia	-						0
Iran					$0^{\mathrm{D,NP}}$	$0^{ m D,NW}$	0 <sup>D,F[+133100%],NW</sup>
Iraq					$0^{\mathrm{D,NP}}$	$0^{\mathrm{D,NP,NW}}$	$0^{\mathrm{D,F}[+67\%],\mathrm{NW}}$
Ireland	-				0	$0^{ m NW}$	0
Israel					0	$0^{ m NW}$	0
Italy	$0^{\mathrm{D,F[50\%]}}$	$0_{ m D}$	$0_{ m D}$	$0_{ m D}$	0	$0^{ m NW}$	0
Japan			0	0	0	0	0
Kuwait						$0^{ m NP,NW}$	$0^{\mathrm{NP,NW}}$
Libya						$0^{\mathrm{NP,NW}}$	$0^{ m NW}$
Malaysia							$0^{NW}$
Mexico	0	0	$0^{ m NP}$	0	0	$0^{ m NW}$	0
Morocco						$0^{ m NW}$	$0_{ m NW}$
Myanmar							
Netherlands	$0^{\mathrm{D,c}}$			0	0	$0^{ m NW}$	0
New Zealand				0	0	$0^{ m NW}$	0
Nigeria						$0^{ m NW}$	$0_{ m NW}$
Norway	-10 <sup>E</sup>	$0_{ m D}$	0	0	0	$0^{ m NW}$	0
Pakistan					$0^{ m NP}$	$0^{\mathrm{NP,NW,b}}$	$0^{\mathrm{NP,NW,b}}$
Peru		0	$0^{ m NP}$	$0^{ m NP}$	$0^{ m NP}$	$0^{\mathrm{F}[+26\%],\mathrm{NP},\mathrm{NW}}$	$0_{ m NW}$
Philippines					$0^{ m NP}$	$0^{ m NW}$	$0_{ m NW}$
Poland				0	0	$0^{ m NW}$	0
Portugal	$0_{\mathrm{D}}$	-10 <sup>E[-5]</sup>	0	0	0	$0^{ m NW}$	0

Romania	-4 <sup>D,F[+100%]</sup>	-4 <sup>D,F[+100%]</sup>	$0^{ m D,NP}$	0 <sup>D,F[+100%]</sup>	$0^{ m NP}$	$0^{ m NW,d} \ 0^{ m F[+75\%],NP}$	0
Russia Saudi Arabia	-4	-4 ' '	0 ,		0	0 1 3	$0^{ m D,NP,NW}$
Singapore							0
South Africa	-			$0^{ m NP}$	0	$0^{ m NW}$	$0^{ m NW}$
South Korea					$0^{ m NP}$	$0^{\mathrm{NP,NW}}$	0
Spain	-10 <sup>F[+200%]</sup>	-10 <sup>F[+200%]</sup>	-10	-15 <sup>F[+40%]</sup>	-10	$-10^{\mathrm{NW}}$	0
Sweden	$-10^{E}$	$0_{ m D}$	0	0	0	0	0
Switzerland			0	0	0	0	0
Syria					0	$0_{ m NW}$	$0^{ m NW}$
Thailand							$0^{ m NP,NW}$
Turkey			$0^{\mathrm{D,NP}}$	$0^{\mathrm{D,NP}}$	$0_{ m D}$	$0^{\mathrm{D,NW}}$	0
Ukraine							0
United Arab Emirates							$0^{ m NW}$
United Kingdom	0	$0_{ m D}$	0	0	0	0	0
United States	$0^{D,F[+900\%],f,g,h}$	$0^{\mathrm{D,h}}$	$0^{\rm h}$	$0^{\rm h}$	$0^{\rm h}$	$0^{\rm h}$	0
Venezuela			$0^{\mathrm{D,NP}}$	$0^{\mathrm{D,NP}}$	$0^{\mathrm{D,NP}}$	$0^{\mathrm{D,NP,NW}}$	$0^{NP,NW}$

D = Duration of foreign patents is limited to that of patent abroad.

E = Extension of foreign patents is for a shorter period (difference in years is in brackets, unless discretionary).

F = Fees changed foreign patentees are higher (percentage differential in brackets).

NP = Country has not ratified the Paris (International) Convention of 1884 (only reported for 1900 or after).

NW = Country has not ratified the Washington Convention (Patent Co-operation Treaty) of 1970. Countries that ratified the agreement in its first effective year are included as having ratified the agreement in 1975.

- a = Patents only awarded to foreign applicants; no domestic patents.
- b = Award based on international priority date.
- c = Applying for a subsequent foreign patent will invalidate the domestic patent.
- d = The minimum difference. Length of foreign patent awards is discretionary.
- e = Patents only awarded to domestic applicants; no foreign patents.
- f = Fee for British citizens 1567% of domestic rate.
- g = Working requirement for foreign patentees only.
- h = Discrimination against foreign patentees though evidentiary rules in patent interference proceedings.

See Table 3 for a listing of those observations where no fee data are available.

Table 6. Discretion granted the patentee: renewal fees. The sample consists of the sixty largest countries (by gross domestic product) at the end of 1997, observed at 25-year intervals from 1850 to 1999. The table denotes the ratio of the costs incurred in the second half of the patent award carried to full term (not including any extension granted at the discretion of government officials) to the total cost in the first half (expressed in nominal dollars). The footnotes denote the number of renewal fees paid during this period. Observations where the country was not an independent entity are filled in; those where the country did not have a patent system are shaded.

	1850	1875	1900	1925	1950	1975	1999
Algeria						NA	145%****
Argentina		33%****	40%****	49%****	52%****	36%****	98%****
Australia				63%*	234%****	169%****	236%****
Austria	55%****	0%	544%****	881%****	552%****	769%****	466%****
Bangladesh						NA	370%****
Belgium	0%*	280%****	282%****	295%****	361%****	365%****	303%****
Brazil	0%	0%	286%****	222%****	89%****	0%**	192%****
Canada		50%**	50%**	0%	0%	0%	146%****
Chile	0%	0%	0%	0%	99%**	50%**	0%
China							510%****
Columbia	0%	0%	0%	0%	NA	NA	58%**
Czech Republic				544%****	529%****	70%****	330%****
Denmark		0%	493%****	436%****	331%****	230%****	195%****
Egypt						187%****	156%****
Finland				364%****	373%****	297%****	317%****
France	88%****	88%****	88%****	154%****	217%****	141%****	218%****
Germany	0%	0%	233%****	771%****	793%****	788%****	661%****
Greece				233%****	155%****	173%****	291%****
Hungary				507%****	748%****	281%****	194%****
India					404%****	327%****	818%****
Indonesia							344%****
Iran					NA	152%****	146%****
Iraq					NA	NA	141%****
Ireland					287%****	327%****	205%****
Israel					188%***	221%****	356%***
Italy	100%*	133%****	133%****	219%****	323%****	322%****	564%****
Japan			216%****	226%****	508%****	345%****	751%****
Kuwait						NA	0%
Libya						NA	0%
Malaysia					1	1112	278%****
Mexico	0%	0%	109%***	109%****	106%****	106%****	103%****
Morocco	0,0	0,0	10,70	105,0	10070	NA	151%****
Myanmar						1171	13170
Netherlands	0%			188%****	189%****	151%****	231%****
New Zealand	070			0%**	135%***	146%***	162%***
Nigeria				0,0	15570	NA	0%
Norway	0%	0%	205%****	395%****	305%****	267%****	246%****
Pakistan		J / U	20270	27270	385%****	385%****	375%****
Peru		0%	111%****	0%	NA	682%*	NA
Philippines		070	111/0	J / U	NA	150%****	150%****
Poland				461%****	378%****	183%****	232%****
Portugal	0%	88%****	0%	114%****	105%****	72%****	225%****
_	0 / 0	00/0	0/0	224%****		193%****	174%****
Romania				۵24%0°°°°	0%	195%0****	1/4%0~~~

Russia	0%	0%	357%****		327%****	109%****	296%****
Saudi Arabia							107%****
Singapore							153%****
South Africa				178%***	124%****	114%****	100%****
South Korea					NA	NA	841%****
Spain	0%	0%	282%****	341%****	446%****	351%****	353%****
Sweden	0%	0%	176%****	250%****	343%****	243%****	226%****
Switzerland			198%****	198%****	198%****	425%****	99%****
Syria					NA	NA	150%****
Taiwan					NA	NA	354%****
Thailand							884%****
Turkey			88%****	88%****	169%****	95%****	93%****
Ukraine							239%****
United Arab Emirates							NA
United Kingdom	0%	133%**	467%****	333%****	313%****	260%****	276%****
United States	0%	0%	0%	0%	0%	0%	60%***
Venezuela			0%	0%	NA	149%****	NA

NA = No data on patent fees are available.

I compute the ratio of the total cost incurred during the last half of the period from patent application to the expiration of the award (with no provisions for discretionary extensions) to the cost in the first half. For 1950 and afterwards, it is assumed that awards occur two years after the application date (one year after publication date). For 1900 and 1925, it is assumed awards occur one year after the application date (and publication date). For 1850 and 1875, it is assumed awards occur only a nominal period after application.

<sup>\* =</sup> One renewal fee.

<sup>\*\* =</sup> Two renewal fees.

<sup>\*\*\* =</sup> Three to five renewal fees

<sup>\*\*\*\* =</sup> Six or more renewal fees.

Table 7. Discretion granted the patentee: administrative procedures. The sample consists of the sixty largest countries (by gross domestic product) at the end of 1997, observed at 25-year intervals from 1850 to 1999. The table denotes the maximum length of time (in years from the application date) that a patentee can delay the examination of a patent application. The footnotes denote other major areas where patentees can exercise discretion during the patent approval process. Observations where the country was not an independent entity are filled in; those where the country did not have a patent system are shaded.

	1850	1875	1900	1925	1950	1975	1999
Algeria						$0^{A}$	$0^{ m A,U}$
Argentina		$0^{A,P}$	$0^{A,P}$	$0^{A,P}$	$0^{A,P}$	$0^{A,P}$	$0^{A,P}$
Australia				$0^{A,P}$	$0^{A,P}$	$5^{A,P}$	$5^{A,P,U}$
Austria	0	$0^{A}$	$0^{A}$	$0^{\mathrm{A}}$	$0^{A}$	$0^{A}$	$0^{A}$
Bangladesh						$0^{A,P}$	$0^{A,P}$
Belgium	$0^{A}$	$0^{A}$	$0^{A}$	$0^{A}$	$0^{A}$	$0^{ m A,U}$	$0_{\Pi}$
Brazil	0	0	$0^{A,P}$	$0^{A,P}$	$0^{ m A,U}$	$3^{ m U}$	$3^{\mathrm{U}}$
Canada		$0_{\rm b}$	$0_{\mathrm{b}}$	$0^{P}$	$0^{\mathrm{P}}$	$0^{P}$	$0^{\mathrm{P}}$
Chile	0	0	0	0	$0^{\mathrm{P}}$	$0^{\mathrm{P}}$	$0^{A,P}$
China							${f 3}^{ m U}$
Columbia	0	0	0	0	0	$0^{A}$	$0^{ m A,U}$
Czech Republic				$0^{\mathrm{A}}$	$0^{A}$	$0^{A}$	$3^{\mathrm{A,U}}$
Denmark		0	$0^{A}$	$0^{\mathrm{A}}$	$0^{\mathrm{A}}$	$0^{\mathrm{A}}$	0
Egypt						$0^{\mathrm{A}}$	$0^{A}$
Finland				$0^{\mathrm{A}}$	$0^{\mathrm{A}}$	$0^{A}$	0
France	$0^{\mathrm{A}}$	$0^{A}$	$0^{\mathrm{A}}$	$0^{A}$	$0^{\mathrm{A}}$	$0^{\mathrm{A}}$	$3^{A}$
Germany	0	0	$0^{ m A,U}$	$0^{ m A,U}$	$0^{ m A,U}$	$7^{\mathrm{A,U}}$	$7^{ m U}$
Greece				$0^{A}$	$0^{A}$	$0^{A}$	$0^{ m A,U}$
Hungary				$0^{A}$	$0^{A}$	5	$5^{ m U}$
India	-				$0^{A,P}$	$0^{A,P}$	$0^{A,P}$
Indonesia					Ü		$2.5^{\mathrm{U}}$
Iran					$0^{\mathrm{A}}$	$0^{A}$	$0^{A}$
Iraq					$0^{A}$	$0^{A}$	$0^{A}$
Ireland					$0^{A,P}$	$0^{A,P}$	$0^{ m P,U}$
Israel	-				$0^{A}$	$0^{\mathrm{A}}$	$0^{\mathrm{A}}$
Italy	0	$0^{A}$	$0^{\mathrm{A}}$	$0^{\mathrm{A}}$	$0^{ m A,U}$	$0^{ m A,U}$	$0^{\mathrm{U}}$
Japan			$0^{A,P}$	$0^{ m A,U}$	$0^{ m A,U}$	7 <sup>A,U</sup>	$7^{\mathrm{U}}$
Kuwait			Ů			$0^{\mathrm{A}}$	$0^{A}$
Libya						$0^{A}$	$0^{A}$
Malaysia	-				i		Indef. <sup>U</sup>
Mexico	$0^{\mathrm{A}}$	$0^{A}$	$0^{\mathrm{A}}$	0	$0^{\mathrm{A}}$	$0^{\mathrm{A}}$	$0^{\mathrm{A,U}}$
Morocco	Ü					$0^{A}$	$0^{A}$
Myanmar						U U	U U
Netherlands	$0^{\mathrm{A}}$			$0^{\mathrm{A}}$	$0^{\mathrm{A}}$	7 <sup>A</sup>	7
New Zealand	0			$0^{A,P}$	$0^{A,P}$	$0^{A,P}$	$0^{A,P}$
Nigeria				U	U	0	0
-	$0^{\mathrm{A}}$	$0^{\mathrm{A}}$	$0^{\mathrm{A}}$	$0^{\mathrm{A}}$	$0^{\mathrm{A}}$	$0^{A}$	0
Norway Pakistan	U	U	U	U	$0 \\ 0^{A,P}$	$0^{A,P}$	$0^{\mathrm{A,P}}$
		0	0	$0^{\mathrm{A}}$	$0^{P}$	$0^{P}$	$0^{P,U}$
Peru		0	0	<u> </u>		$0_{ m U}$	$0^{\mathrm{U}}$
Philippines				$0^{ m A,U}$	$egin{pmatrix} 0 \ 0^{ ext{A,U}} \end{pmatrix}$	$0^{ m A,U}$	$0^{ m A,U}$
Poland	$0^{\mathrm{A,P}}$	$0^{A}$	$0^{\mathrm{A}}$	$0^{A,C}$	$0^{A,U}$	$0^{A,U}$	$0^{\Lambda,\odot}$
Portugal ·	0,,,	0,,	U''			-	
Romania				$0^{A}$	$0^{A}$	$0^{A}$	$2.5^{A,U}$

Russia	$0^{A}$	$0^{A}$	$0^{A}$		$0^{A}$	$0^{A}$	$3^{\mathrm{U}}$
Saudi Arabia							$0^{\mathrm{A}}$
Singapore							1.875
South Africa				$0^{A,P}$	$0^{A,P}$	$0^{A,P}$	$0^{\mathrm{A,P}}$
South Korea					$0^{\mathrm{U}}$	$0_{\Pi}$	$5^{A,U}$
Spain	0	0	$0^{A}$	$0^{A}$	$0^{ m A,U}$	$0^{ m A,U}$	$1.25^{A,U}$
Sweden	$0^{A}$	$0^{A}$	$0^{A}$	$0^{A}$	$0^{A}$	$0^{\mathrm{A}}$	0
Switzerland			$0^{A,P}$	$0^{\mathrm{A}}$	$0^{A}$	$0^{A}$	0
Syria					$0^{A}$	$0^{\mathrm{A}}$	$0^{\mathrm{A}}$
Taiwan					$0^{A}$	$0^{ m A,U}$	$0^{ m A,U}$
Thailand							6
Turkey			$0^{A}$	$0^{A}$	$0^{A}$	$0^{A}$	$7^{\mathrm{A,U}}$
Ukraine							$0^{\mathrm{A}}$
United Arab Emirates							$0^{\mathrm{A}}$
United Kingdom	$0^{A,P}$	$0_{\mathrm{b}}$	$0^{P}$	$0^{A,P}$	$0^{A,P}$	$0^{A,P}$	0
United States	$0^{\mathrm{A,P}}$	$0_{ m P}$	$0_{\rm b}$	0	0	0	$0^{\mathrm{P}}$
Venezuela			$0^{A}$	$0^{A}$	$0^{A}$	$0^{A}$	$0^{\mathrm{U}}$

A = Patents of addition (or improvement) can be awarded.
P = Preliminary patent applications can be awarded.
U = Utility model (minor) patents can be awarded.

Table 8. Discretion granted the government. The sample consists of the sixty largest countries (by gross domestic product) at the end of 1997, observed at 25-year intervals from 1850 to 1999. The table denotes the maximum period that government officials can extend a domestic patent award without legislative action. The footnotes denote other major areas where government officials can exercise discretion over the patent approval process. Observations where the country was not an independent entity are filled in; those where the country did not have a patent system are shaded.

	1850	1875	1900	1925	1950	1975	1999
Algeria						$0^{L}$	$0^{\mathrm{L}}$
Argentina		0	0	0	0	$0_{\Gamma}$	$0_{\Gamma}$
Australia				$14^{L}$	$10^{L}$	$10^{L}$	$0_{\Gamma}$
Austria	0	0	$0^{\mathrm{L}}$	$0_{\Gamma}$	$0_{\Gamma}$	$0_{\Gamma}$	0
Bangladesh						$10^{L}$	$10^{L}$
Belgium	0	0	0	0	0	0	$0_{\Gamma}$
Brazil	20	20	$0^{\mathrm{L}}$	$0_{\Gamma}$	$5^{\mathrm{L}}$	$0_{\Gamma}$	$0_{\Gamma}$
Canada		$0^{Ls,P}$	$0^{\mathrm{Ls},\mathrm{P}}$	$0^{\mathrm{Ls,P}}$	$0^{\mathrm{L,P}}$	$0^{\mathrm{L,P}}$	0
Chile	Indef.W	Indef.W	$10^{\mathrm{W}}$	$10^{\mathrm{F}}$	5	5	0
China							$0_{\Gamma}$
Columbia	$0^{\mathrm{F}}$	$0^{\mathrm{F}}$	$0^{\mathrm{F}}$	$0^{\mathrm{E,F}}$	$0_{\rm E}$	$0^{ m L}$	$0_{\Gamma}$
Czech Republic				$0^{ m L}$	$0^{ m L}$	$0_{\Gamma}$	0
Denmark		10	0	0	$0^{ m L}$	$0_{\Gamma}$	$0_{\Gamma}$
Egypt						$5^{\mathrm{L}}$	$5^{L}$
Finland				0	$0^{\mathrm{L}}$	$0^{ m L}$	$0^{ m L}$
France	0	0	0	0	$0^{\mathrm{Ls}}$	$0^{ m L}$	$0^{\mathrm{L}}$
Germany	0	0	$0^{\mathrm{L}}$	$0^{ m L}$	$0^{\mathrm{L}}$	$0^{ m L}$	$0_{\Gamma}$
Greece				$0^{ m L}$	$0^{ m L}$	$0^{ m L}$	$0^{ m L}$
Hungary				$0^{ m L}$	$0^{ m L}$	$0^{\mathrm{L}}$	$0^{ m L}$
India	-				$10^{L}$	$0^{\mathrm{L}}$	$0^{\mathrm{L}}$
Indonesia							2
Iran					0	$0_{\rm E}$	0
Iraq					0	$0^{\mathrm{L}}$	$0^{ m L}$
Ireland					$10^{\mathrm{E,L}}$	$10^{L}$	$0^{\mathrm{L}}$
Israel	-				$0^{\rm L}$	$0^{\mathrm{L}}$	$0^{\mathrm{L}}$
Italy	10	0	0	0	$0^{\mathrm{L}}$	$0^{\mathrm{L}}$	$0^{\mathrm{L}}$
Japan			$0^{\mathrm{L}}$	$10^{\mathrm{L}}$	$10^{L}$	$0^{\mathrm{L}}$	$0^{\mathrm{L}}$
Kuwait						$5^{ m L}$	$5^{ m L}$
Libya						5	$5^{\mathrm{L}}$
Malaysia							0
Mexico	Indef. <sup>F</sup>	Indef. <sup>F</sup>	5	5	0	$0^{ m L}$	0
Morocco						0	0
Myanmar	-			†			
Netherlands	0			$0^{\mathrm{L}}$	$0^{\rm L}$	$0^{ m L}$	$0^{L}$
New Zealand	Ü			Indef. E,L	$10^{L}$	$10^{L}$	10 <sup>L</sup>
Nigeria				111401.	10	$0^{\mathrm{L}}$	$0^{\mathrm{L}}$
Norway	Indef.	12	$0^{\rm L}$	$0^{\mathrm{L}}$	$0^{\rm L}$	$0^{\mathrm{L}}$	$0^{ m L}$
Pakistan	maci.				10	$10^{L}$	$0^{ m L}$
Peru		0	0	10	5	$0^{\mathrm{L}}$	$0^{ m L}$
Philippines		J	<u> </u>	10	$0^{\mathrm{L,P}}$	$0^{\mathrm{L,P}}$	$0^{\mathrm{L,P}}$
Poland				0	$0^{\mathrm{L}}$	$0^{ m L}$	$0^{ m L}$
Portugal	$0^{ m L}$	$5^{\mathrm{L}}$	$0^{\mathrm{L}}$	$0^{ m L}$	$0^{\mathrm{L}}$	$0^{ m L}$	$0^{ m L}$
Romania	<u> </u>	J	U	$0^{L}$	$0^{ m L}$	$0^{ m L}$	$0^{ m L}$
Rullallia				U	U	U	U

Russia	0	0	0		$0^{\mathrm{L}}$	$0^{\mathrm{L}}$	$0_{\Gamma}$
Saudi Arabia							$0_{ m F}$
Singapore							$0^{\mathrm{Ls}}$
South Africa				$14^{\rm L}$	14 <sup>Ls</sup>	$10^{L}$	$5^{ m L}$
South Korea					7	0	$0^{ m L}$
Spain	0	0	0	0	0	0	$0^{ m L}$
Sweden	Indef.	12	$0_{\Gamma}$	$0_{\Gamma}$	$0_{\Gamma}$	$0_{\Gamma}$	$0^{ m L}$
Switzerland			$0_{\Gamma}$	$0_{\Gamma}$	$0_{\Gamma}$	$0_{\Gamma}$	$0^{ m L}$
Syria					0	0	0
Taiwan					$0_{ m E}$	$0_{ m E}$	$0^{ m L}$
Thailand							$0^{ m L}$
Turkey			0	0	0	0	0
Ukraine							$0_{ m E}$
United Arab Emirates							0
United Kingdom	14	14	14 <sup>L</sup>	$10^{\rm L}$	$10^{L}$	$10^{L}$	$0^{ m L}$
United States	$7^{P}$	$0_{\scriptscriptstyle m b}$	$0_{\rm b}$	$0_{ m P}$	$0_{ m b}$	$0_{ m P}$	$0_{ m P}$
Venezuela			0	0	0	0	0

Indef. = No legislative limits on the period for which the government can extend a patent award.

E = Government has discretion over which patent applications to examine.

F = Government can vary fee charged patentee.

L = Government has power to license or revoke patents for reasons other than non-working.

Ls = Government has power to license or revoke some patents for reasons other than non-working (typically pharmaceutical patents).

P = Government can determine the original inventor (rather than being constrained to award patent to the first applicant).

W = Government has discretion over working period that is designated.

Table does not include cases where pharmaceutical patents are extended by a formula based on the duration of regulatory approval process. No data on licensing or revocation of patents is reported for Libya, South Korea, and Taiwan in 1975.

Table 9. The nature of the patent examination. The sample consists of the sixty largest countries (by gross domestic product) at the end of 1997, observed at 25-year intervals from 1850 to 1999. The table denotes whether patents are examined for novelty by patent office officials and whether outside parties can oppose patent grants prior to their official issue. Observations where the country was not an independent entity are filled in; those where the country did not have a patent system are shaded.

	1850	1875	1900	1925	1950	1975	1999
Algeria					_		_
Argentina				Ex	Ex	Ex	Ex
Australia				Ex,Op	Ex,Op	Ex,Op	Ex,Op
Austria			Ex,Op	Ex,Op	Ex,Op	Ex,Op	Ex,Op
Bangladesh						Ex,Op	Ex,Op
Belgium							
Brazil	Ex	Ex	$ExS^{a}$	$ExS^a$	Ex,Op	Ex,Op	Ex,Op
Canada		Ex,OpInt	Ex,OpInt	Ex,OpInt	Ex,OpInt	Ex,OpInt	Ex,OpPub
Chile	Ex	Ex	Ex,Op	Ex,Op	Ex,Op	Ex,Op	Ex,Op
China							Ex,Op
Columbia				ExS,OpPub	ExS,Op	Ex,Op	Ex,Op
Czech Republic				Ex,Op	Ex,Op	Ex,Op	Ex,OpPub
Denmark		Ex	Ex,Op	Ex,Op	Ex,Op	Ex,Op	Ex,Op
Egypt						Op	Op
Finland				Ex,Op	Ex,Op	Ex,Op	Ex,Op
France				_		Ex,OpPub	Ex,Op
Germany	Ex	Ex	Ex,Op	Ex,Op	Op	Ex,Op	Ex,Op
Greece			, ,	' '	1	, 1	Ex,OpPub
Hungary				Ор	Op	Ex,Op	Ex,OpPub
India				- 1	Op	Ex,Op	Ex,Op
Indonesia	_			-	- T	7 · F	О́р
Iran					Op	ExS,Op	Ор
Iraq		_	_		Op	2мо,ор	Op
Ireland	_				ExS,Op	Ex,Op	Ex,Op
Israel					Ор	Ex,Op	Ex,Op
Italy	Ор	$ExS^b$	$\operatorname{ExS}^{\operatorname{b}}$		Op	Ln,op	Op
Japan	Ор	EAG	Ex,OpInt	Ex,Op	Ex,Op	Ex,Op	Ex,Op
Kuwait			Lx,Opint	Lx,Op	Lx,Op	Ор	Ор
Libya	_					Ор	Ор
Malaysia						Ор	Ex,OpPub
Mexico	Ор	Ор	Ор		Ex	Ex	Ex,OpPub
Morocco	Ор	Ор	Ор		LA		Ex,Opi uo
Myanmar							_
•	Ev			Eu On	Eu On	Ev. On	Ev. On
Netherlands	Ex			Ex,Op	Ex,Op	Ex,Op	Ex,Op
New Zealand	_			ExS,Op	Ex,Op	Ex,Op	Ex,Op
Nigeria			F 0	F 0	F 0	F 0	Б. О
Norway	Op		Ex,Op	Ex,Op	Ex,Op	Ex,Op	Ex,Op
Pakistan		Б	Г	0.51	Op	Ex,Op	Ex,Op
Peru		Ex	Ex,	OpPub	Op	Ор	Ex,Op
Philippines				P. ô	Ex	Ex,OpInt	Ex,OpInt
Poland				Ex,Op	-	Ex,Op	Ex,Op
Portugal			Op	Op	Op	Op	Ex,Op
Romania						Ex	Ex,Op
Russia	Ex	Ex	Ex		Ex,Op	Ex	Ex,Op

Saudi Arabia Singapore	_						Ex,Op Ex,OpPub
South Africa				Ор	Ор	Op	Op
South Korea					Op	Ex,Op	Ex,Op
Spain							Ex,Op
Sweden	Op		Ex,Op	Ex,Op	Ex,Op	Ex,Op	Ex,Op
Switzerland						ExS <sup>c</sup> ,OpS <sup>c</sup>	ExS <sup>c</sup> ,OpS <sup>c</sup>
Syria							
Taiwan					ExS,Op	ExS,Op	Ex,Op
Thailand							Op
Turkey			$ExS^d$				
Ukraine							ExS
United Arab Emirates							
United Kingdom		Op	Op	Ex,Op	Ex,Op	Ex,Op	Ex,Op
United States	Ex,OpInt	Ex,OpInt	Ex,OpInt	Ex,OpInt	Ex,OpInt	Ex,OpInt	Ex,OpInt
Venezuela				OpPub	Op	Op	Ex,Op

Ex = All patent applications are examined prior to award.

ExS = Some patent applications are examined prior to award.

Op = Opposition procedure for all patent applications.

OpInt = No opposition procedure; pre-grant adversarial procedures can be initiated by patent office officials to resolve priority disputes.

OpPub = No opposition procedure; patent applications are published prior to award.

OpS = Opposition procure for some patent applications.

- a = Food and pharmaceutical applications only.
- b = Food applications only.
- c = Time measurement and textile patent applications only.
- d = Military applications only.

In some cases when there is no regular examination for novelty, the applicant can request that the patent office undertake such a search.

# **Appendix A: Information Sources on Patent Policy**

Patent Policy in 1850:

Coryton, John, 1855, A Treatise on the Law of Letters-Patent; For the Sole Use of Inventions in the United Kingdom of Great Britain and Ireland; Including the Practice Associated with the Grant; To Which is Added a Summary of the Patent Laws in Force in the Principal Foreign States. Philadelphia: T. & J.W. Johnson.

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## Patent Policy in 1925:

Baraclough, W.H., 1928, Every Inventor His Own Patent Agent; A Handy Book of the Principles of the Patent Law, with Appendices of the Patent Forms and Fees, Forms of Patent Specifications, Statutory Declarations, Patent Documents, Designs, Copyrights, Contracts, Partnerships, Medicine Stamp Act and an Abridged Index on Legal Points. London: Effingham Wilson.

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