The Political Economy & Economic History of Spanish Patents

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Main Questions

I. WHAT HAPPENED?
   1) What’s the history of Spanish patent system?
   2) How does its evolution fit in with what was happening internationally?

II. WHY DID IT HAPPEN?
   3) What factors explain big changes in system over time?
   4) What complementary economic reforms were coupled with these changes?
   5) What exactly were Spanish policymakers trying to achieve?

III. WHAT EFFECT DID IT HAVE?
   • How did patents help Spanish firms acquire technology from frontier?
Bottom Line Up Front

• Technology transfer from frontier important for Spanish industries.
• When foreign inventors had modicum of security, this meant they had framework to transfer knowhow & commercialize inventions in sectors such as iron & steel.
• Patent system did trick, provided it protected foreigners’ rights.
• Licensing/technical agreements underwritten by patent system.
• But there were winners & losers from patent reform & complementary reforms. Losers did not go willingly into the night.
Why do patents lead to invention & innovation (Barnett; Haber; Kieff; Spulber)?

1. Because they’re property rights, allow inventors to capture R on I.
2. Because they’re property rights, underpin web of contracts behind innovation: allow ideas to be sold, licensed, separated & bundled.
3. Publicly recorded patent discloses info. about invention & threatens exclusion, acting as beacon.
4. Patents promote specialization: market participants focus on their comparative advantage.
5. Collateral/intermediation/new, more nimble firms/stimulates new ideas.
New Consensus: Gainsays IPR Importance

Strong intellectual property rights *retard* econ. development in late industrializing countries (Boldrin & Levine 2013):

- Patents increase costs of acquiring state-of-the-art technology from countries @ innovation frontier.
- Weaker IPR allows developing countries to draw freely upon best ideas & imitate most innovative practices.
- Asian Tigers = imported machinery, FDI, or espionage.
Empirical Contributions of this Paper

1) Document long history of Spanish patent system; identify four distinct regimes:

i. **HYBRID 1826-1877**: invention & introduction patents of equal strength/foreigners’ rights somewhat curtailed.

ii. **REFORMIST 1878-1928**: stronger invention patents/foreigners’ rights improved.

iii. **RENTIER 1929-1985**: much stronger introduction patents/foreigners’ rights greatly curtailed.

iv. **REFORMIST 1986-today**: strong invention patents/introduction patents abolished/foreigners’ rights very strong.
Empirical Contributions

2) Identify political economy of reformist & rentier regimes:
   • Reformists: strengthened rights of original, foreign inventors. Favored trade liberalization & other economic reforms. Reform coalition after 1868 Revolution; similarly after 1977 democratization.
Empirical Contributions

3) Exploit long run datasets to document technology transfer process via patents:
   1. patent types (invention v. introduction)
   2. real cost of obtaining patents (as ratio of avg. wages)
   3. who obtained patents (foreigners v. Spaniards)?
   4. what economic sector?
   5. patent royalties/technical assistance fees
   6. evolution of Spain’s industrial base
   7. case study of Spain’s steelmaking industry
Theoretical Contributions of this Paper

• Inventions: both codifiable and non-codifiable components.

• Espionage conducted by late industrializers CANNOT deliver knowhow required for inventions tied to advances in physics, chemistry, electromagnetism & organizational dynamics.

• Nor can they rely on their citizens studying & working abroad, knowledge of basic science, exposure to technical literature, membership in international societies & travel to exhibitions.
Theoretical Contributions

• Patent licensing contracts outline how critical knowhow conveyed.
• Contract → licensor gains plans/goods/services/human capital:
  ✓ drawings/blueprints
  ✓ machinery
  ✓ on site tutorials & training
  ✓ new relationships w/suppliers & distributors
  ✓ continued upkeep/improvements
Theoretical Contributions

• Inventors who license patents abroad: travel to distant lands to help licensees acquire knowhow & adapt inventions to differences in raw materials/other inputs & logistical problems.

• Modifications & improvements made abroad patented in both home & host.

• Host country inventors come out of woodwork & also patent—both in host & home country.
Spanish Steelmaking: illustrating mechanism
Political Economy of Spain’s REFORMIST Patent Regime (1878 to 1928)

Setting the Stage:


• Reformers—lawyers, intellectuals, bureaucrats, upstart merchants & modernizing army officers—made inroads fixing mess.

• Rent-seekers struck back: municipal government officials, Church officers, merchants involved in mercantile trade routes & provincial, landholding aristocrats w/feudal property rights.

• Reformers win 1868 Liberal Revolution.
Spain’s REFORMIST Patent Regime (1878 to 1928)

Nuts & Bolts:
1. Invention patents extended from 15 to 20 years.
2. Original, foreigner inventors: right to re-patent their inventions.
3. Upfront fees reduced/payments spread out over patent life.
5. Inventors had right to patent products, not only processes.
6. 1884: Spain joined International Union for the Protection of Industrial Property.
Political Economy of Spain’s REFORMIST Patent Regime (1878 to 1928).

Complementary Reforms:
Stronger patents part of broader reforms that ended absolutism/feudalism/mercantilism:
  • market for land centered on private property rights.
  • free wage labor centered on modern commercial code.
  • more liquid & competitive financial system.
  • freer internal & international trade.
Invention Patents (mostly obtained by foreigners) explode during Second Patent Regime
Bessemer Steel Process Introduced to Spain
EXTRAS
Making Spain Great Again (1939 to 1977)
Political Economy of Fourth Patent Regime

• Upon Franco’s death in 1975, Spain attempted to recover from deep economic crisis induced by protectionism & crony capitalism.

• Spain democratized in 1977. It then joined European Union in 1986.

• These developments set off cascade of economic reforms:
  o (Further) reducing barriers to trade, capital flows & foreign investment.
  o Reform of financial system to be more competitive & abide by market based allocation of credit.
  o And, of course, liberalizing the patent system & harmonizing it with international best practices!
Spain’s Fourth Patent Regime (1986 to today)

• Introduction patents eliminated.
• A technical examination & novelty requirement introduced.
• Working requirements weakened.
• Products could be patented, not only processes.
• Spain signs Europe’s Patent Cooperation Treaty: Europeans receive patent in European Patent Office, which is valid across as many EU countries as inventor cares to designate.
Figure 1. Patenting by Foreigners in Spain (1834-2001)
Figure 3. Spanish Patents by Economic Sector (1826 to 2000)
Figure 9. Spain’s Income from Iron Ore (1830 to 1996)
Figure 4. Spanish Industrialization (1830 to 2000)
Figure 7. Expenditures on Royalties, Copyrights and Licenses (1963 to 1973)
Figure 8. Technical Assistance Payments in Spanish License Contracts (1961 to 1971)