



IPR Regimes and Economic Growth

Ricardo H. Cavazos Cepeda
Trade and Agriculture Directorate, OECD

“Knowledge Economy and Human Progress
The World Conference on Intellectual Capital for Communities”

Paris, France
26-27 May 2011

Why Intellectual Property Rights?

Microeconomic rationale

- **Market failure related to the spill-over effects of ideas – transmission and appropriation**
- **Given the intangible nature of Intellectual Property (IP), innovators have difficulties appropriating the economic benefits of their ideas.**
- **Governments may grant IPR protection to assist innovators & provide incentives for innovation & IP dissemination (both proprietary & open).**
- **Markets provide incentives to innovate: international accords recognize IP holders' right to license, rent, assign**
- **Counterfeits & piracy: weaken incentives**

Why Intellectual Property Rights?

Macroeconomic rationale

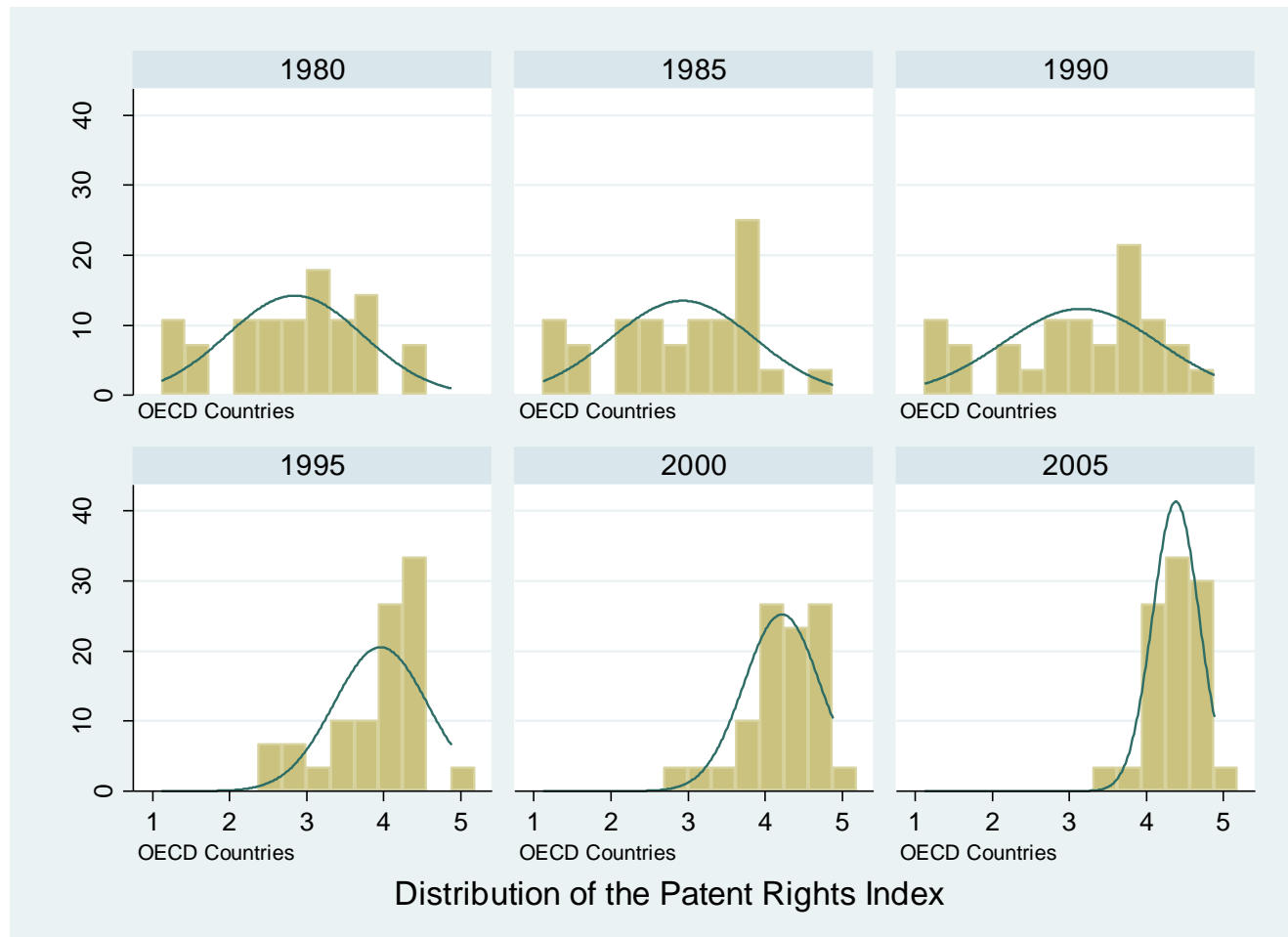
- **Open economies grow faster than closed economies**
- **Most of world trade is in intermediate goods, 56% (machinery and equipment) and services 73% (OECD, 2009) –inputs of production**
- **Imported intermediate embody foreign technology**
- **Foreign direct investment –access to and transfer of foreign technology**
- **Governments need to create a suitable economic environment through complementary policies**

OECD work in IPRs

- **Several OECD studies use indices to measure IPR strength, based on work done in co-operation with Walter Park, American University**
- **Patent Rights Index**
 - **membership in international treaties**
 - **coverage**
 - **restrictions on rights**
 - **enforcement provisions**
 - **duration of protection**
- **Similar indices exist for copyright and trademarks**

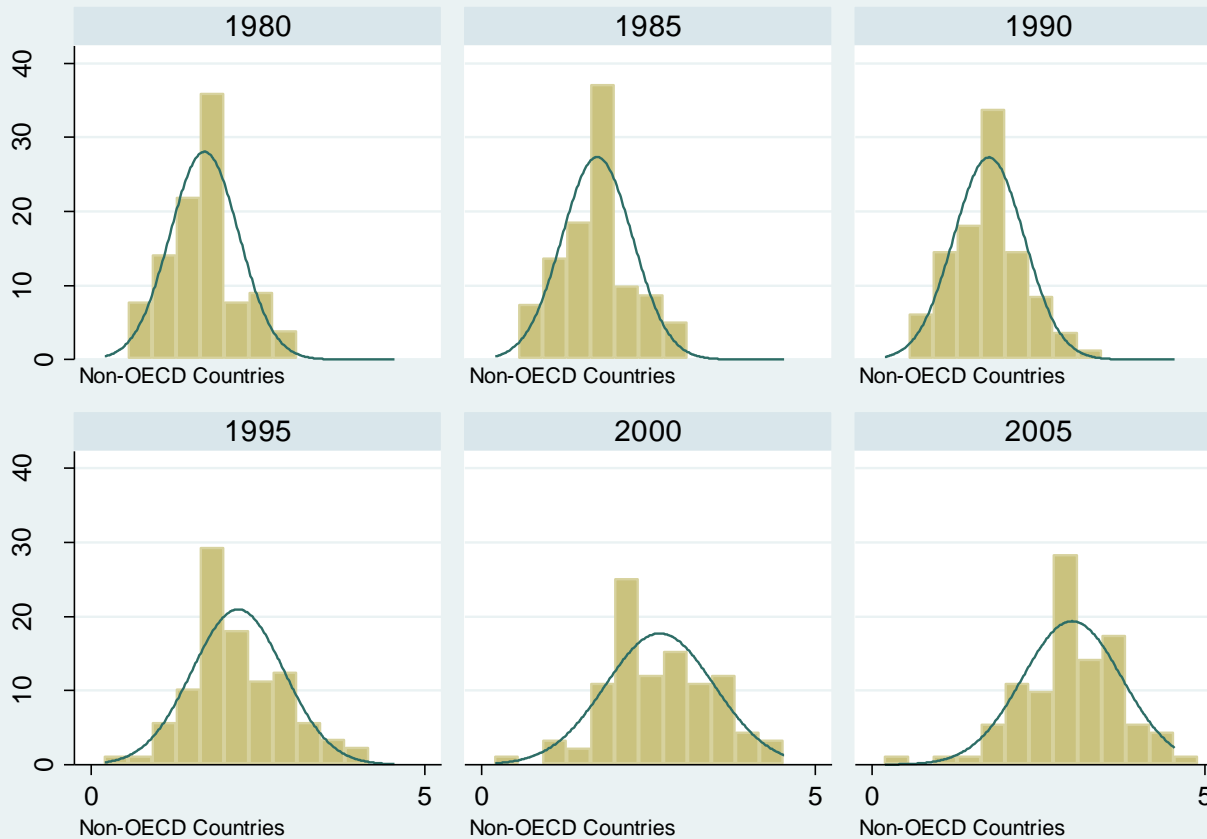
Distribution of the Index of Patent Rights Based on laws on the Books

(0 = weak, 5 = strong)
OECD Countries



Distribution of the Index of Patent Rights Based on laws on the Books

(0 = weak, 5 = strong)
non-OECD Countries

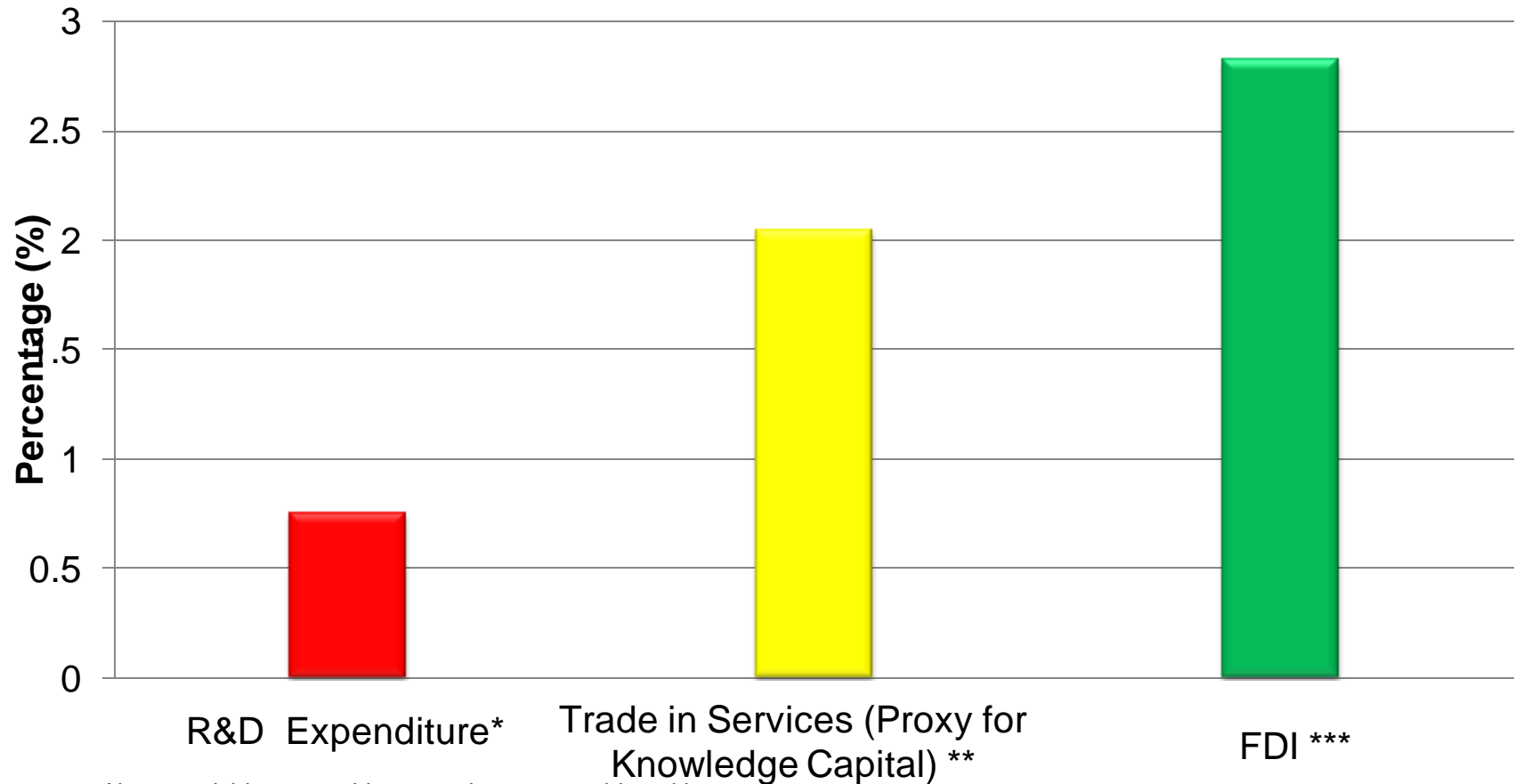


Distribution of the Patent Rights Index

Punch Line

- IPR protection can *help* deliver R&D, knowledge capital, FDI & eventually technological achievement & productivity growth
- IPRs central to the ability of rights holders to capitalise on their innovation & for others to access IP; but complementary policies needed.
- Policies for sound business environment are key.
- Innovation is branching & dynamic – care required not to unduly constrain or prejudge technology, competition, entrepreneurship
- All the above is positively correlated with economic growth

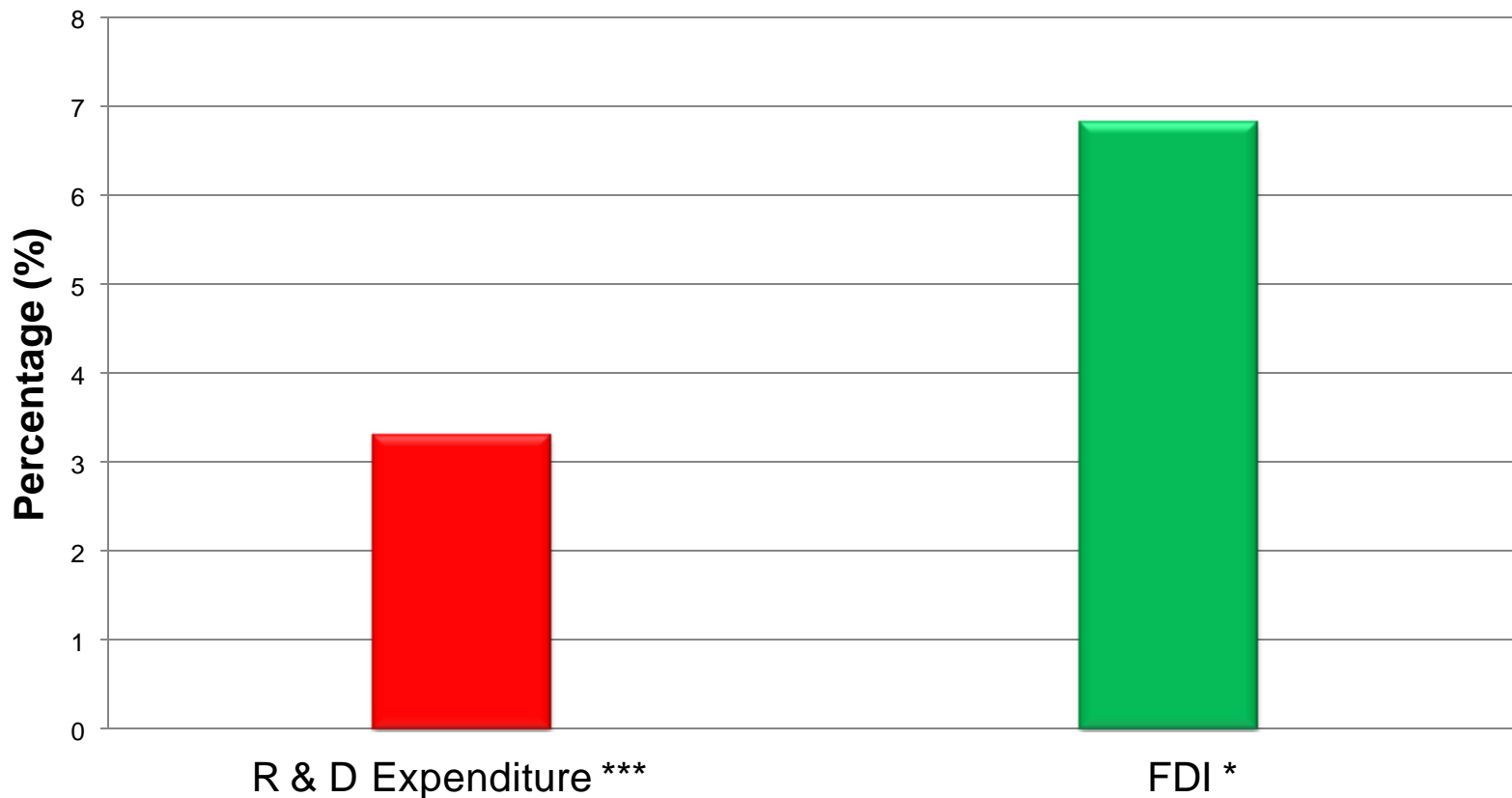
Relationship of a 1% change in the Patent Rights Index to other key indicators



Notes: variables entered in regression as natural logarithms
Number of observations =113

Source: Cavazos, Lippoldt, and Senft (2010)

Relationship of a 1% change in the Copyright Index to other key indicators



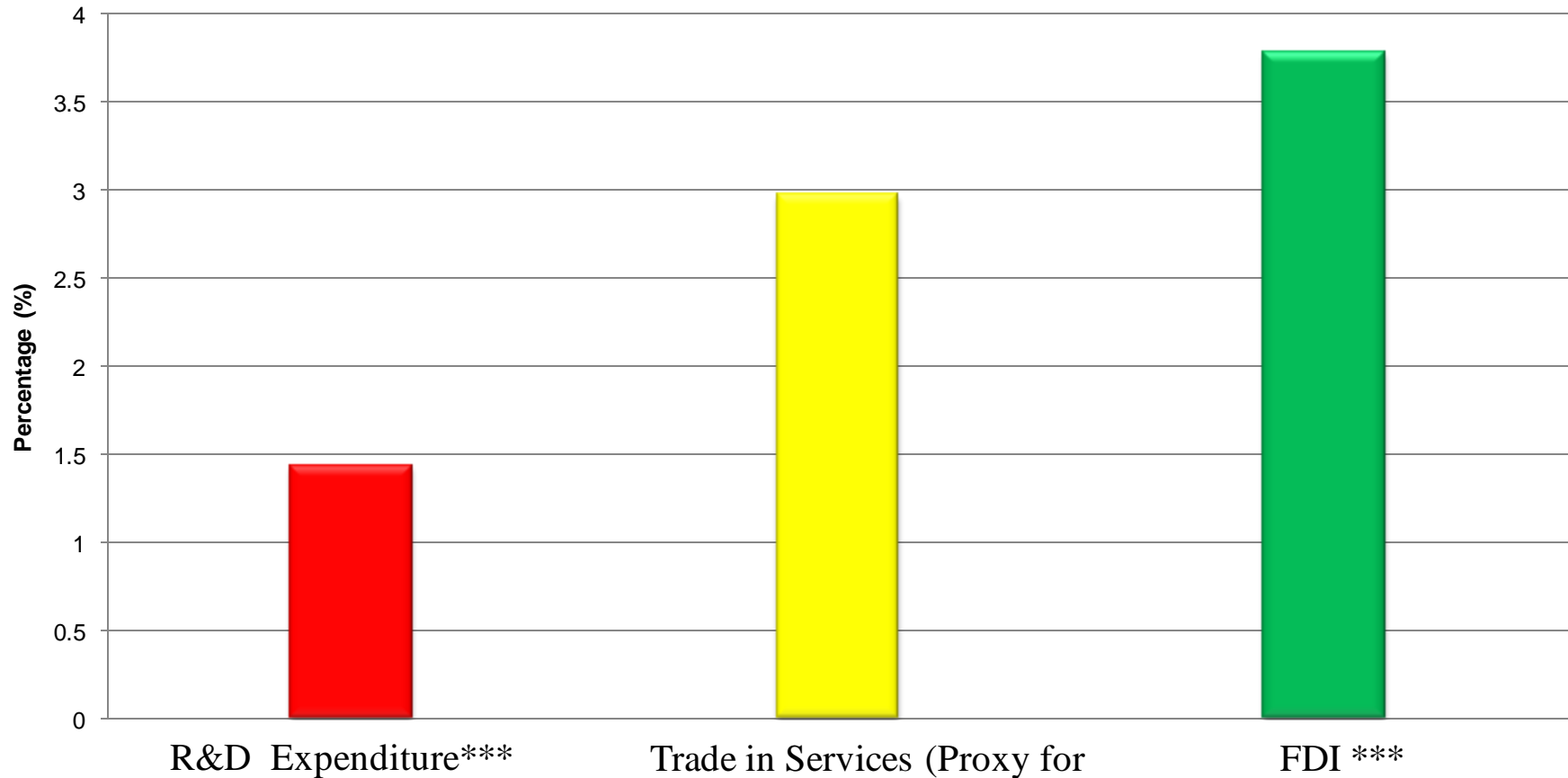
Notes: variables entered in regression as natural logarithms

Number of observations: 108

Standard Errors: * $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$

Source: Cavazos, Lippoldt, and Senft (2010)

Relationship of a 1% change in the Trademark Rights Index to other key indicators



Notes: variables entered in regression as natural logarithms

Number of observations: 92

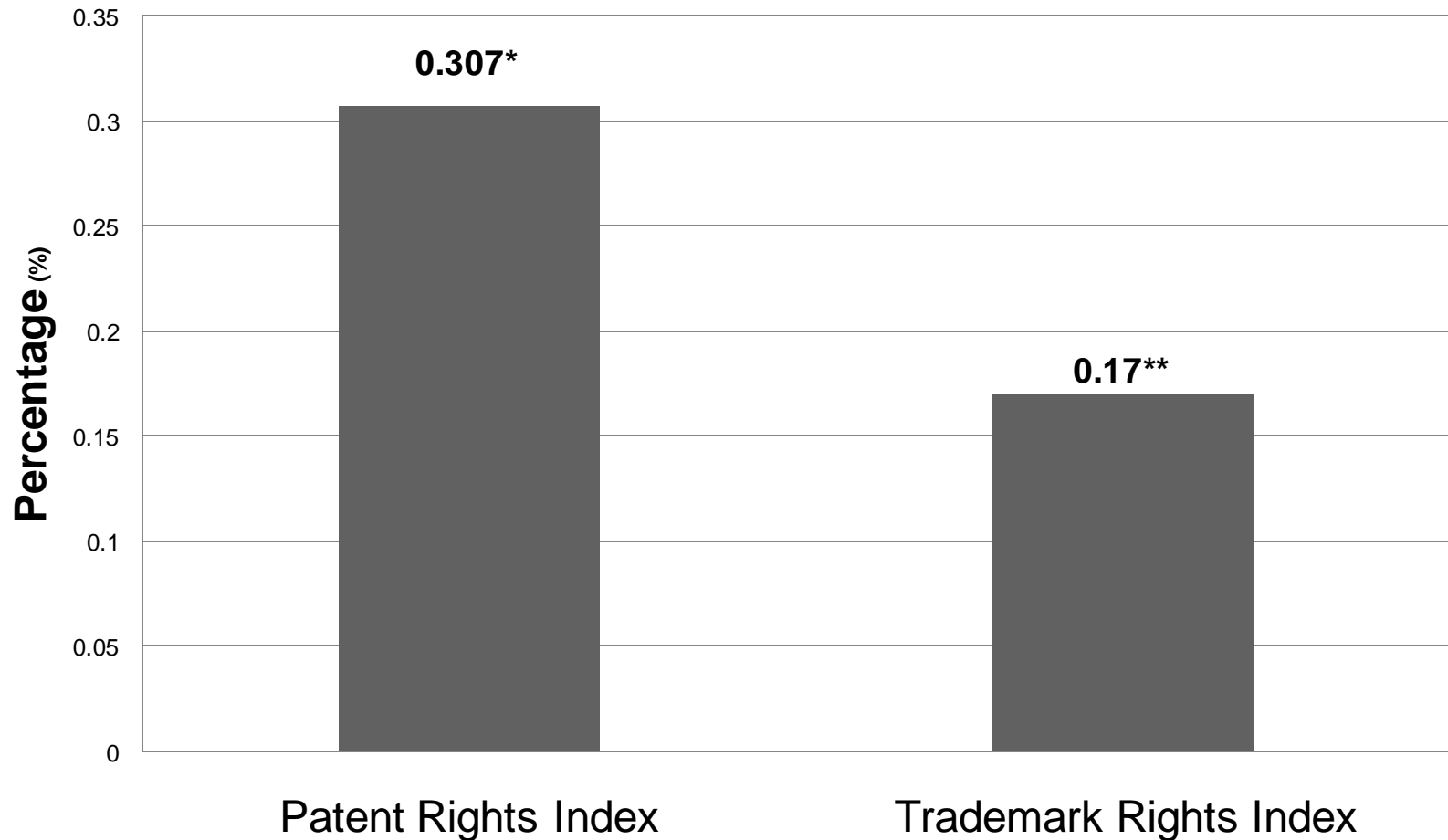
Standard Errors: *p<0.1 **p<0.05 *** p<0.01

Source: Cavazos, Lippoldt, and Senft (2010)

WB Technology Achievement Index 1990-2000

- **Components:**
 - Innovation (e.g., patents, journal articles)
 - Technological adaptive capacity (e.g., human capital)
 - Channels of technology diffusion (e.g., scale of licensing)
 - Diffusion of recent technologies (e.g., Internet users)
 - Diffusion of old technologies (e.g., electric consumption, tractors per 100 hectares)

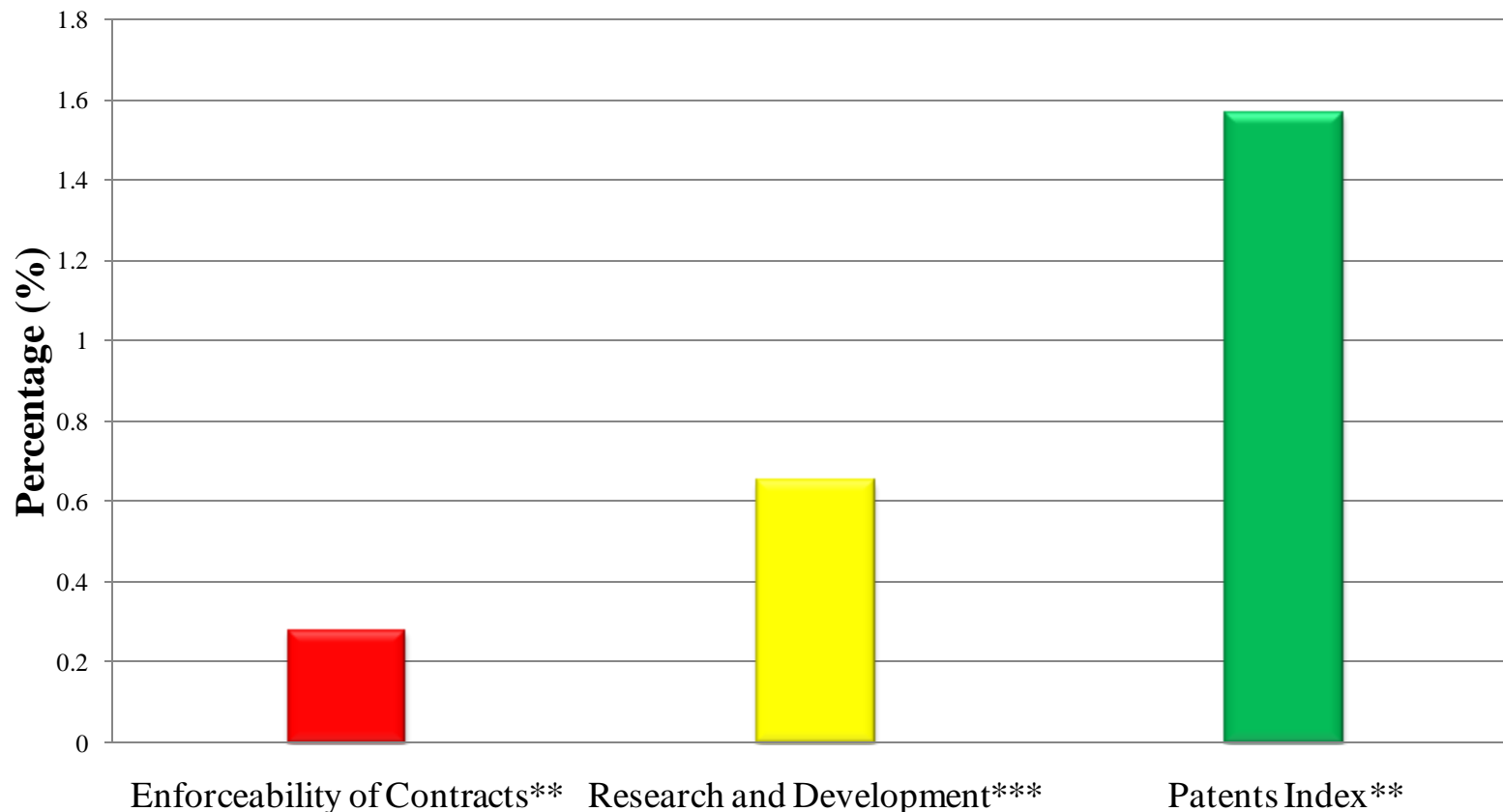
Influence of 1% Change in IPR Protection on Technological Achievement, HICs, 1990-2000



Source: Cavazos and Lippoldt (2011, forthcoming).

* $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$

Complementary Policies for Knowledge Capital Development (KC response to 1% change in each policy indicator)



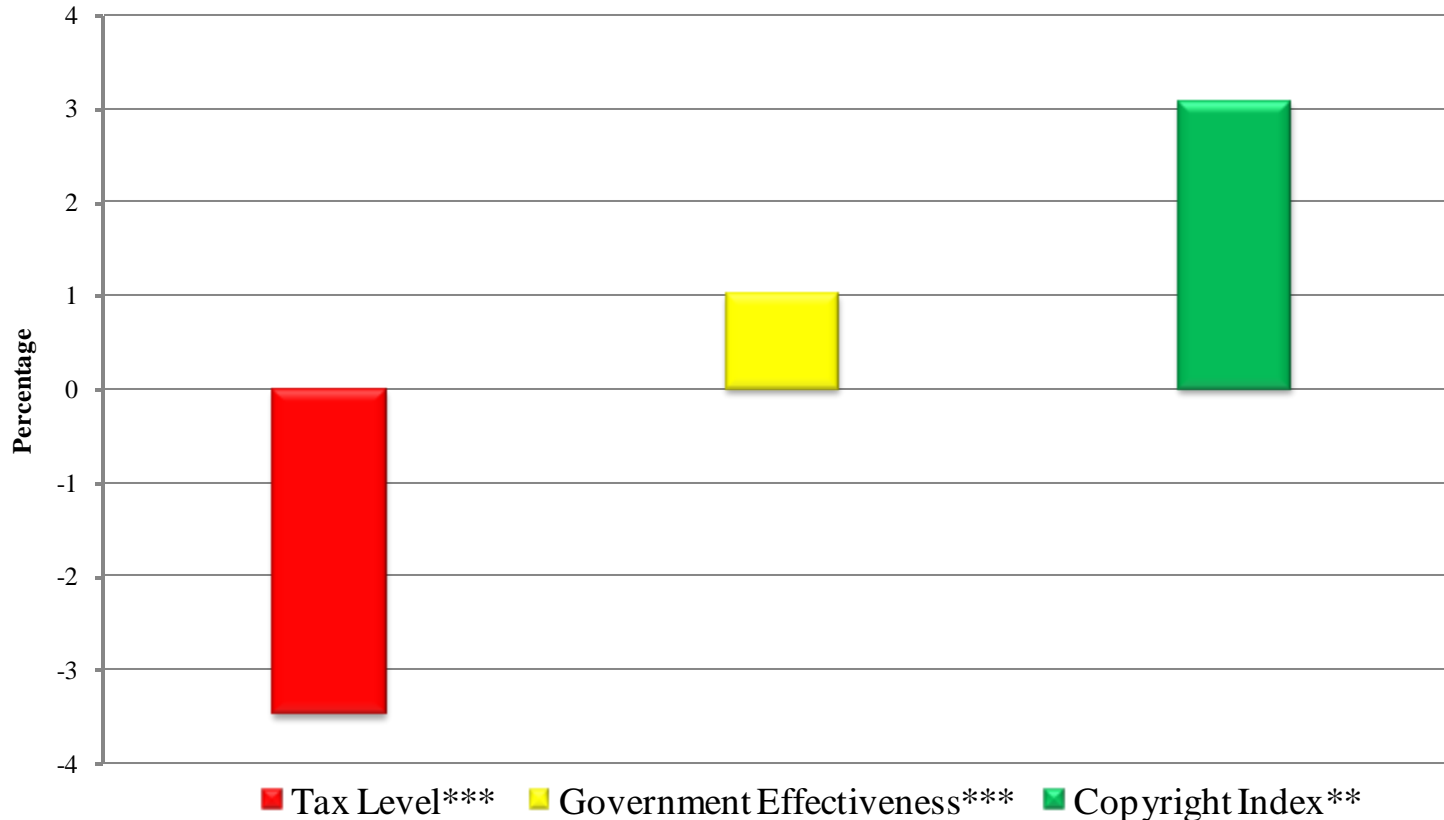
Notes: variables entered in regression as natural logarithms

Number of observations: 87

Standard Errors: *p<0.1 **p<0.05 *** p<0.01

Source: Cavazos, Lippoldt, and Senft (2010)

Complementary Policies for FDI Development (FDI response to 1% change in each policy indicator)



Notes: variables entered in regression as natural logarithms

Number of observations: 87

Standard Errors: *p<0.1 **p<0.05 *** p<0.01

Source: Cavazos, Lippoldt, and Senft (2010)

Complementary Policies for R&D Expenditure (R&D response to 1% change in each policy indicator)



Notes: variables entered in regression as natural logarithms

Number of observations: 87

Standard Errors: *p<0.1 **p<0.05 *** p<0.01

Source: Cavazos, Lippoldt, and Senft (2010)

Summing Up Various Analyses: List of Significant Policy Complements

- **IPR protection: patents, copyright, trademarks**
- **Physical property rights**
- **Legal effectiveness; enforceability of contracts**
- **Tax levels**
- **Government effectiveness**
- **Free trade**
- **R&D expenditure**
- **University-Industry research collaboration**

References

- Cavazos, R., D. Lippoldt and J. Senft (2010), “Policy Complements to the Strengthening of IPRS in Developing Countries”, OECD Trade Policy Working Papers, No. 104, OECD Publishing.
<http://dx.doi.org/10.1787/5km7fmwz85d4-en>
- Zhao, M (2010), “Policy Complements to the Strengthening of IPRS in Developing Countries – China’s Intellectual Property Environment: A Firm-Level Perspective”, OECD Trade Policy Working Papers, No. 105, OECD Publishing .
<http://dx.doi.org/10.1787/5km7fmtw4qmv-en>
- Cavazos-Cepeda, Ricardo H. and Douglas C. Lippoldt (2010), “The Strengthening of IPR Protection: Policy Complements” WIPO Journal, Volume 2 Issue 1, Thomson-Reuters.
Available at
http://www.wipo.int/export/sites/www/about-wipo/en/wipo_journal/pdf/wipo_journal_2_1.pdf
- Cavazos-Cepeda, Ricardo H. and Douglas C. Lippoldt (2011), “Intellectual Property Reform and Productivity Enhancement: 1990-2000” in Breaking through on trade: How a changing world trade dynamic affects policy OECD publishing *forthcoming*

OECD Trade and Agriculture



www.oecd.org/trade

Contact

ricardo.cavazos@oecd.org

douglas.lippoldt@oecd.org

tad.contact@oecd.org