

INTERNATIONAL PROPERTY RIGHTS INDEX (IPRI)

# 2009 REPORT

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In 2007, the Property Rights Alliance (PRA) presented for the first time the International Property Rights Index, produced under the Hernando de Soto Fellowship program. The core aim of the program is to produce the IPRI, which I am proud to present in its third edition. The 2009 IPRI stands as the most comprehensive effort at creating an international gauge of private property rights throughout the world. I am pleased to introduce the 2009 index, covering 115 countries.

This year's IPRI continues its efforts to educate politicians as well as economists, entrepreneurs and policy makers about the importance of developing and protecting property rights around the world.

This year's IPRI continues to point out the relationship between a strong property rights system and a country's economic well-being, revealing that much still needs to be done to extend property rights to more people, especially the poor. The IPRI is a long term project that seeks to improve property rights systems around the world. Collecting the appropriate data is still a challenge, particularly in the developing world where informal market activity is the rule rather than the exception.

I would like to congratulate the third De Soto Fellow, Anne Dedigama, for her work developing and researching this project.

Warmest regards,

A handwritten signature in black ink that reads "HDESSO". The letters are stylized and somewhat cursive.

Hernando de Soto  
President of the Institute for Liberty and Democracy (ILD)

**A**t the time of this report's publication, the global economy is facing overwhelming challenges. Now more than ever it is essential for policies to be put in place that spur economic growth and prosperity. Thus, the Property Rights Alliance (PRA), along with our global partners, is proud to bring to you the 2009 edition of the International Property Rights Index (IPRI). The 2009 IPRI seeks to provide evidence that economic growth is intricately linked with ownership and this report, now in its third year of publication, shows there is a positive correlation between a country's protection of both physical and intellectual property rights and its economic well-being.

PRA continues to champion the idea that the protection of both physical and intellectual property is equally important in nature and must be protected. Creating an environment where both forms of property are safe and legally enforceable contributes to increased levels of stability and encourages the free exchange of goods and ideas. This is done on a daily basis and often taken for granted by those that are afforded the chance to prosper from their investments. However, many citizens in developing nations lack these opportunities.

As property rights continue to face challenges around the world, and an economic crisis continues to loom, we see an opportunity for real reform. We hope this study will be a useful tool for policymakers, think tanks, academics, and investors by highlighting the importance of property rights as a key building block for economic growth.

We would like to thank all of the partners and contributors for their effort in helping with the development of the 2009 IPRI. I would also like to thank the author of this year's index, Anne Dedigama, for her time and dedication to creating a remarkable tool that property rights advocates around the world can use for years to come.

Finally, a special thank you to Hernando de Soto for lending his name and support to the Hernando de Soto Fellowship program. His commitment and passion to the area of property rights helped make our work possible.

Best regards,



Kelsey Zahourek  
Executive Director of the Property Rights Alliance  
Washington, DC

# GOVERNING PROPERTY RIGHTS<sup>1</sup>

By Dr D. Stanfield, Terra Institute

## PROPERTY RIGHTS IN CONSTANT EVOLUTION

Property rights in land are critically important for the functioning of societies. Stability and certainty of property rights form the foundation of financial and political security. But property rights are not normally stable or certain over the long term. The challenges of governing property rights are constantly evolving as economies become more globalized or more localized, as environmental conditions evolve, as the ethnic and class compositions of societies change. These ebbs and flows in human affairs find their reflections in property rights. Neglect of the social agreements over property rights can create flash-points for tribal, ethnic, class and religious tensions to ignite. Governmental institutions may become unable to resolve these property disputes, much less address their root causes.

Land administration and land management systems define and regulate the relationships among people and land<sup>2</sup>, the system of property rights.

The term “**land administration**” means the systems of processes for collecting, recording and disseminating information about the ownership, use and value of land<sup>3</sup>. Public institutions such as property registries work with private sector professionals such as real estate brokers, value assessors, conveyancing attorneys, land surveyors and mortgage bankers to maintain information about who owns what rights to what land, incorporating into the registration system the changes in such rights due to sales, inheritances and other sorts of contracts. Similarly public institutions such as urban and regional planning authorities work with land managers, environmental protection organizations and developers to maintain and use information about the uses of land. Concerning the value of land, public agencies such as the tax authorities and governmental valuation authorities who administer property taxes work with assessors and land owners on establishing and publishing information on the value of land.

“**Land Management**” refers to how the holders of land use the land.

“**Land governance**” refers to the application by public officials (state and community leaders) of land administration to influence how land managers use the land. Government officials and community leaders, elected and appointed, respond to public pressures to adopt programs for encouraging investments in land for economic gain and development, for satisfying the needs of people for land and affordable housing, and for protecting the land for the use of future generations. Governance entities (including state and local governmental units, tribal and community leaders in traditional societies) establish land policies, enact laws and regulations about the access to and use of land, and oversee in the main through land administration agencies how well the managers of land are achieving the broader social, environmental and economic goals.

The governing of property rights to land involves the balancing of the inherent tensions among the competing policy imperatives facing governance institutions.

## PROPERTY RIGHTS GOVERNANCE

Cases of successful governing of property rights somehow illustrate how people manage to balance three competing policy imperatives: 1) improve security by which land is held, 2) protect land and water resources, and 3) provide access to land by the disadvantaged:

Where market oriented economies are weak or just emerging, one imperative of land policy is: *make the exercise of property rights more secure*, by improving formal titles and the tradability through such efforts as the massive privatization programs of the former socialist countries and the titling, registry-cadastre modernization, and land market programs of nearly all market-

oriented countries. These efforts support the goal of economic efficiency of use of land and buildings and the linking of capital to these assets through mortgage markets. Political movements deriving from concerns with the environment and from the demands of disadvantaged frequently challenge these tenure security enhancing programs.

Where the land and water resources are degraded or are being dangerously degraded, a second property rights policy imperative is to *improve the environmental management and protection of land resources*. Improving environmental conditions through restrictions on the use of the land resources, however, has often run into ethnic conflicts at the local level and the economic interests pressuring for more exploitative uses of the land. The fundamental task is to help populations work out agreements over natural resource exploitation which are sustainable through a mixture of community resource management, alternative income sources, enforcement mechanisms and conflict resolution techniques. Such programs often restrict the rights of land owners, limiting the scope of their “ownership”. Such programs also often restrict the access of disadvantaged and privileged groups to land and water resources.

Where the gap between rich and poor, or between one ethnic group and another, or between those benefiting from patriarchal social and legal structures and those desiring gender equity, a third policy imperative is to *improve the access to land by disadvantaged groups (the poor, women in some regions, ethnic groups, refugees)*. Agrarian reforms and land banks in some countries have been used to shift the management of land from landlords to peasant farmers. Affordable housing programs are directed toward providing the poor with adequate housing. Women’s rights in land are secured through education and legal programs. Such programs tend to support the goal of social equity in land management. However, this trend has encountered strong resistance from the ethnic and economic groups that could be obliged to share some of their privileges with the disadvantaged groups to be favored. Also, where political opposition to asset redistribution is strong, opening up forests and other fragile eco-systems for human settlement in order to provide access to land for the landless is very tempting, and in conflict with conservation programs.

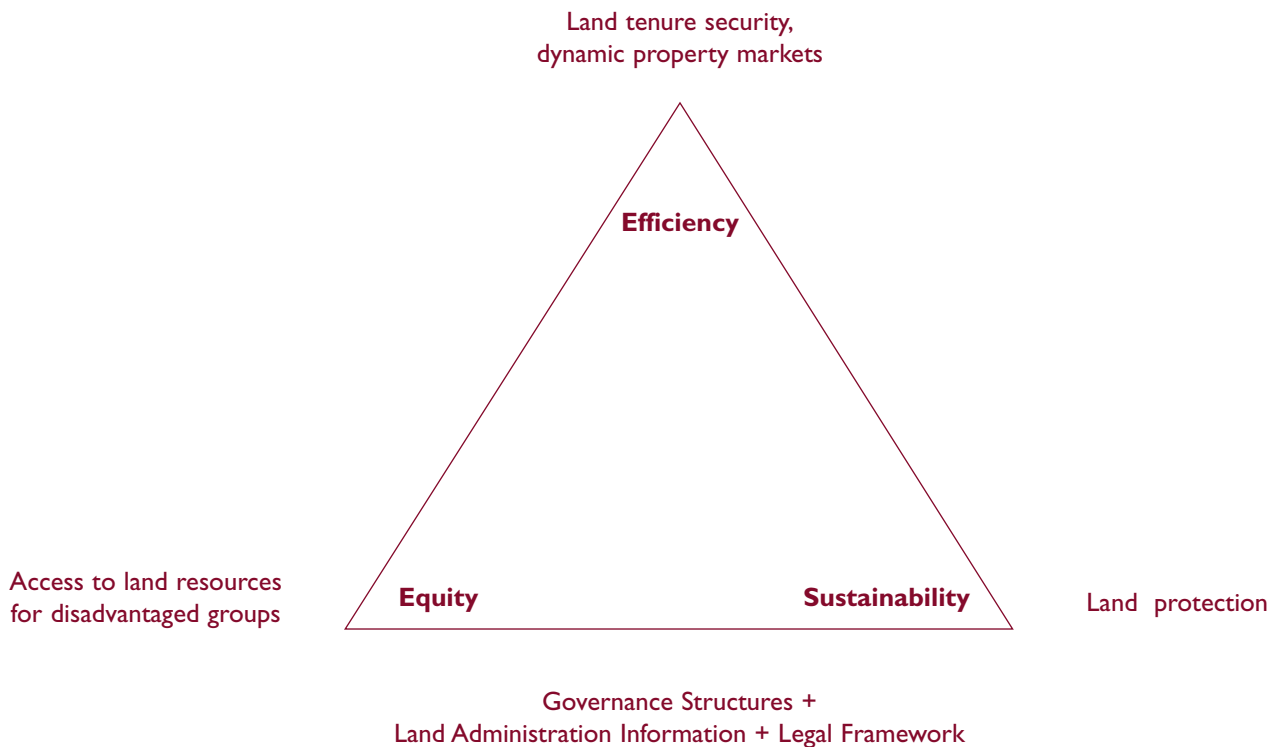
Balancing these imperatives is mediated by the capacities of local and central government and civil society for defining and resolving property rights issues, as well as by the availability of information about land use and property rights and the legal framework (formal and informal) that brings some predictability into the ways people react to the implementation of the often competing property rights imperatives. See Figure A.

This trio of policy imperatives revolving around property rights creates compelling new challenges for land governance institutions at the national and local levels to mediate among the diverse interests in land.

The foundation of property rights governance is comprised of three elements:

- 1) the capacity to incorporate diverse economic and political interests in dialogue and design of programs to resolve priority property rights issues,
- 2) the availability of suitable information about the capabilities and uses of land as well as the boundaries of properties, and
- 3) the legal framework, the rules which the society devises to handle the competing property rights imperatives, including formal expression of these rules in laws and regulations, as well as the customs which people devise about the exercise of property rights and the responsibilities of the holders of these rights.

We have been discussing the capacities of property rights regimes to adapt to changing circumstances. But property rights are notoriously resilient in the short run, even following a natural disaster or following a long period of social upheavals. By resiliency of property relations we mean the ability of the property rights system to maintain its fundamental identity in the face of ‘shocks’ such as major land policy shifts or changes in dominant livelihood strategies<sup>4</sup>. Resiliency of property rights governance can be understood<sup>v</sup> along several dimensions: (i) the speed with which property relationships are rebuilt

**Figure A. Triangle of policy imperatives in property rights governance**

after a shock; (ii) the degree to which democratic decision making and consensus are used to accomplish rebuilding decisions, (iii) the degree to which property regimes facilitate *entrance* and re-entrance for those seeking to join or re-join agreements about rights and obligations relating to the sustainable use and enjoyment of resources and the degree to which property regimes spread access to resources more widely and equitably after social disruptions of various sorts.

*The broad question is: how can countries effectively re-orient property rights governance institutions to achieve broad goals of economic development, social equity and environmentally sustainable development under the pressure of competing policy imperatives concerning property rights in land?*

There is no single formula to answer this question. Simply said but difficult to achieve is the observation that people have to identify the roots of the property rights challenges in their countries, and then devise solutions and implement them. People have to have the capacity for such actions.

A stable balancing of property right's imperatives in particular places at specific times that leads to prosperity is fundamental to a vibrant, just and sustainable global economic and political system. Continual strengthening of the capacity for this successful balancing competing property rights imperatives in particular places and times is an investment in a more harmonious future. The International Property Rights Index is an important step toward monitoring the governing of property rights and improving the capacities of people to govern better.

## ACKNOWLEDGEMENTS

We extend our special thanks to Hernando de Soto (ILD) for his exemplary and tremendous work in the area of property rights to bring the message of hope to the world's poor, whose work is an encouragement and inspiration to us. We are grateful to him for allowing Property Rights Alliance (PRA) the honor of naming the fellowship after him and look forward to continuing our relationship with him and the Institute of Liberty and Democracy (ILD).

We are also particularly grateful to the continual intellectual and financial assistance of Grover Norquist and the Americans Tax Reform Foundation towards the Hernando de Soto Fellowship program thus enabling us the annual publication of the International Property Rights Index (IPRI). It is our pleasure to thank the staff of Americans for Tax Reform (ATR) for their assistance and support.

We extend our special appreciation to Lorenzo Montanari and Nathan Pickering for their dedication and untiring research assistance which greatly improved the report. Special thanks are due to Alexandra C Horst (Hernando de Soto fellow 2006), Satya Thallam (Hernando de Soto fellow 2007) for their encouragement and support and to Scott LaGanga, whose conceptualization of the program and continual encouragement were instrumental.

The 2009 International Property Rights Index is not complete without the excellent papers contributed by David Stanfield (Land Tenure Centre, University of Wisconsin), Maria del Carmen Delgado (Institute of Liberty and Democracy (ILD)), Kriengsak Chareongwonsak (Harvard University), Sudhir Ravindran (Altacit Global Strategic Consultants), Arya Mathew (Altacit Global Strategic Consultants), Clarissa Augustinus (UN-HABITAT, Land Tenure Section) and Asa Jonsson (UN – HABITAT, Land Tenure Section). We are grateful to them for their valuable time in preparing the papers which contributed to the presentation of a rich array of topics contained in the IPRI 2009.

A note of thanks are due to the following persons and Organizations: Katherine B McGuire and Rodger Correa (Business Software Alliance), Joseph Papovich and Neil Turkewitz (Recording Industry Association of America), Greg Frazier (Motion Picture Association of America), Walter Park (American University), Collen Dyble and Yiqiao Xu (Atlas Foundation), Keith Clifford Bell (World Bank), Espen Beer Prydz (Organization for Economic Co-operation and Development), K.S. Gunasekera (Terra Institute), Alec Van Gelder (International Policy Network) and Margaret Tse (Instituto Liberdade).

We value the continual support and commitment of our partner organizations and welcome all our new partners to the 2009 IPRI project.

Our Sincere thanks to anyone not mentioned above, we value your support.

**Anne C Dedigama**

*2008 Hernando de Soto Fellow, Property Rights Alliance*

**Kelsey Zahourek**

*Executive Director, Property Rights Alliance*

## ABOUT THE AUTHOR

Anne C Dedigama is a Solicitor from Brisbane Australia with experience in a wide area of practice with special interest in property law and land rights. She is also a trained Mediator and a Translator. She is a Target Signatory of the National Pro Bono Resource Centre of Australia and a volunteer at the Refugee and Immigration Legal Service (RAILS) Australia.

As a former Industrial Relations Advisor and the Coordinator of a Mediation Services Project in Sri Lanka, she has been involved in compiling various statistical reports for the Employers Federation of Ceylon (EFC) including a research report for International Labor Organization (ILO) based on a survey questionnaire on cross cultural management.

Appointed as the Coordinator of a Mediation Services Project funded and supported by international aid organizations, unions, employers and individuals, the successful inauguration of the first Employment Mediation Services Centre (EMSC) in Sri Lanka took place under her management of the project. Whilst handling her first project she discovered an interest in issues related to social justice and development which she has pursued by participating in various international forums and Organizations that encourage research and policy development especially in the area of private property rights. She has developed a strong interest in the importance of securing property rights and its effect on economic development with keen interest in women and their property rights.

Having studied and worked in the area of property law, she has a sound understanding and knowledge of both the deed registration system of property and the Torrens system. She is looking forward to continuing post graduate studies with special research interest in private property rights and economic development.

## PARTNERS

We express our sincere gratitude to members of partner organizations for their commitment and dedication towards ensuring and furthering property rights in their respective countries and around the world. We thank our partners for their valuable time in completing the partner questionnaire which assisted us in incorporating changes to the Index thus contributing to the success of the IPRI in 2009.

## PREMISE OF THE HERNANDO DE SOTO FELLOWSHIP PROGRAM

### Property Rights Alliance (PRA) and the Hernando de Soto Fellowship

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The premise and development of an international index of property rights is due to the efforts of the Washington, DC-based Property Rights Alliance (PRA), dedicated to the protection of property rights (physical and intellectual) in the U.S. and around the world. PRA is an affiliate of the taxpayer advocacy organization, Americans for Tax Reform (ATR).

Despite the growing accessibility of international data and research in the property rights arena, existing indices and studies traditionally focus on either the physical or intellectual aspects of property rights. Additionally, most global indices are dedicated to broader topic areas than a more exclusive and nuanced debate on property rights, although it should be noted that indices such as the Heritage Foundation/Wall Street Journal *Index of Economic Freedom* and the Fraser Institute *Economic Freedom of the World* do address property rights although in the context of assembling a larger snapshot of each country. To overcome the consequent lack of a more broadly defined PR gauge, PRA introduced the *Hernando de Soto Fellowship* in 2006, with the core aim of the annually offered fellowship to provide continuous data development and concept improvement for the annual publication of the International Property Rights Index, presented here in its third edition.<sup>vi</sup>

### International Property Rights Index

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*International Property Rights Index 2009* is in its third year of publication. The 2009 IPRI is a comparative analysis of the significance of the protection of property rights to a country's economic development. It seeks to investigate the positive effects of a country's strong legal and political environment, recognition and enforcement of physical and intellectual property rights as key aspects to the economic development of a country. This year's report compares 115 economies using these three variables as core components and ranks them accordingly.

The 2009 IPRI contains a total of three case studies on topics in relation to private and intellectual property rights and a further paper on gender equality. The first two case studies highlight the importance of land titling based on simple, clear and accessible policies and a land administration system in order to improve the legal security of land tenure and receive economic benefits through participation in the markets. The third case study presents the significance of intellectual property rights and its protection. The last paper is on the significance of securing women's property rights in economic development. While the three case studies and the paper on women's property rights are not part of the quantitative scoring and ranking of the Index, it will give the readers of the IPRI an opportunity to refer to practical examples where mechanisms, laws and policies have been introduced with the aim of economic development through furthering property rights.

The purpose of the IPRI is to offer policy makers, researchers, business leaders and government officials a tool to understand the significance and the important role of private property in a nation's economic development. Since its inaugural publication in 2007, the Report has focused on data sources that best highlight and evaluate the strength of a nation's property regime with the authors bearing in mind the necessity for consistency of the Index.

In the 2009 Index, some changes to come of the variables were made while the method of calculation remained intact. The 2009 IPRI has maintained consistency through using the same scoring method used in the 2008 Report.

The 2009 IPRI is now in its third year of publication. While acknowledging the limitations of the report as they exist and discussed elsewhere in this Report, those involved in its publication remain confident that these shortcomings will become fewer and fewer with each subsequent edition. The ongoing Hernando de Soto Fellowship program aims at continual improvement of the Index.

The IPRI project has received positive feedback and continual support from its partner organizations from around the world. The PRA extends warm appreciation to all partners for their collaboration, efforts, enthusiasm and commitment towards affirming and furthering property rights, which has greatly added to the 2009 IPRI.

## CHAPTER I: INTRODUCTION

**"Private property is the most important guarantee of freedom."**

—Friedrich A. Hayek

**"The program of liberalism, therefore, if condensed into a single word, would have to read: property, that is, private ownership of the means of production... All the other demands of liberalism result from this fundamental demand."** <sup>7</sup>

—Ludwig Von Mises

The right to own and enjoy property is a fundamental part of rights of people and referred to as an extension of human rights. Milton Friedman, known as one of the most influential Economists and a former recipient of the *Nobel Prize* in Economics states that property rights are "the most basic of human rights and an essential foundation for other human rights."<sup>8</sup>

Indeed "Property rights are basic to all rights."<sup>9</sup> The desire to discover, to conquer and to possess new land was what led early explorers to the East and to the West from India to Africa and to the New World. The fundamental nature of property and its connection to prosperity perhaps is summed in the writings of J Hector de St. Jean Crevecoeur in his *Letters from an American Farmer* (1782) where he says – "The instant I enter on my own land, the bright ideas of prosperity, of exclusive right, of independence exalt my mind. Precious soil, I say to myself, by what singular custom of law is it that thou wast made to constitute the riches of the freeholder? What should we American farmers be without the distinct possession of that soil? It feeds, it clothes us, from it we draw even a great exuberancy, our best meat, our richest drink, the very honey of our bees comes from this privileged spot. No wonder we should thus cherish its possession, no wonder that so many Europeans who have never been able to say that such portion of land was theirs, cross the Atlantic to realize that happiness. Thus formerly rude soil has been converted by my father into a pleasant farm, and in return it has established all our rights; on it is founded our rank, our freedom, our power as citizens." While Crevecoeur was referring to the *American Dream* of the Settlers, the connection of prosperity to land and the freedom that comes with the establishment of this right to own property is unmistakable, which in modern times more appropriately refers to private property rights and economic development.

Private property rights is one's right to use their property, engage in lawful transactions related to the sale, purchase and mortgage of that property, and enjoy one's property to the exclusion of others. The exclusive nature of the right to own private property requires respect, protection which affords the freedom of ownership. A person who is deemed to be the owner of the property has this right of freedom of enjoyment of his property. Thus, private property rights are the hallmark of liberty.

The concept of property and the ownership right attached to it has been the subject of philosophical thought and debate for centuries. It requires the theoretical study and analysis of property covering social sciences, which is not the purpose of this study. The various schools of thought and theories on '*what is property and property ownership?*' assist us to understand property as a whole at the micro level. However, the present study focuses on property rights as the pulse of economic development at the level of its existence, applicability and performance in relation to the furtherance of an economy.

There are many factors that affect private property rights, among these the lack of the independence of the judiciary, absence of the rule of law, political unrest, civil war etc. Political stability and a sound legal environment encompassing the rule of law of a country, among other factors, are paramount to sustaining, protecting and developing a property rights regime.

This report refers to the concepts of both real and intellectual property rights at a macro level to understand the performance of economies of countries in relation to the protection of property rights by studying the aggregated indicators. It is a cross country study of property rights which seeks to understand the relationship between protection of property rights and economic development. It is important for the reader to understand that while the data used are from currently available sources considered most authoritative, there exist limitations to a study such as this, which focuses solely on the concept of property rights.

## CHAPTER II: PROPERTY RIGHTS AND ECONOMIC DEVELOPMENT

In a free society, where there is freedom of private property rights and the existence of the rule of law, its citizens will enjoy economic freedom stemming from a strong system of property rights. There is clearly an inherent connection between private property rights and economic development of a country. The economic growth of a country has its foundation in a strong system of property rights which ensures the protection of private property and the recognition of intellectual property rights.

### Private Property Rights

In development oriented societies, private property is equity, i.e. the legal ownership of private property creates collateral for the person who is deemed the owner. In an agriculture based society this could be collateral for obtaining loans from financial institutions which aids in sustaining the agricultural sector. Land could be used as collateral for creating new businesses, for further developing existing business and for activities that create and sustain wealth in a nation. Hernando de Soto, one of the greatest economists of our time writes *"Property, then is not mere paper but a mediating device that captures and stores most of the stuff required to make a market economy run. Property seeds the system by making people accountable and assets fungible, by tracking transactions, and also providing all the mechanisms required for the monetary and banking system to work and for investments to function. The connection between capital and modern money run through property."*<sup>10</sup>

When a property has value, it affords the owner an opportunity to participate in the economic process through successful entrepreneurial and/or agricultural activities. Property changes into an incentive for the owner to engage in work which enhances and contributes to the economy. With the recognition of property rights and due process which affords it marketability, an individual will become a participant in the production cycle which creates profit and/or loss, which in return contributes to the economic growth of a nation and finally raises the standard of living. This kind of economic empowerment spreads beyond a nation to link countries at a common ground, i.e. the international market. *"Legal property sets the exchange rates between different cultures and thus gives them a bedrock of economic commonalities from which to do business with each other."*<sup>11</sup>

Thus, there is an inextricable link between a well formed property system and the economy of a nation. As Hernando de Soto writes, *"The goal of a formal property is to put capital in the hands of the whole nation."*<sup>12</sup> Eradication of poverty has become the object of development programs run by international aid agencies. These programs are aimed at poverty reduction and sustainable development of property in the countries where they are implemented. *"Land and property are generally the major assets in any economy. In most countries, land accounts for between half to three-quarter of national wealth. Land is a fundamental factor for agriculture production and thus directly linked to food security."*<sup>13</sup>

### Intellectual Property Rights

For the purpose of this report the term 'property rights' refer to both real and intellectual property. Intellectual property rights are exclusive rights over *"...creations of the mind: inventions, literary and artistic works, and symbols, names, images, and designs used in commerce."*<sup>14</sup> Intellectual property rights encompass trademarks, patents, copyrights and related rights.

The world today revolves around businesses related to intellectual property (IP) whether it is pharmaceuticals, movies, music, books, software or inventions and industrial designs. In fact software alone is a market worth billions of dollars. The estimated losses from software related piracy alone in 2007, is \$8 billion to nearly \$48 billion worldwide.<sup>15</sup> The protection of IP is directly linked to the world market dealing in trade and investment resulting in economic growth. The protection of IP encourages innovation and creativity – an incentive for production. In fact a joint major study done by the World Intellectual Property Organization (WIPO) and the United Nations University (Japan) of six countries concluded that there exists a positive correlation between strengthening of IP system and subsequent economic growth.<sup>16</sup>

It is evident that property plays a fundamental role in economic development and the ability to secure and retain property is paramount to the process of economic progress.

## CHAPTER III: INDEX COMPOSITION AND COVERAGE

This chapter presents the concept, the three core components, the ten variables and detailed explanatory notes on the methodology and the country set of the IPRI 2009.

### The Concept

The IPRI is based on the study of the assumption that there exists a significant correlation between the protection of private property rights and a nation's economic growth. Armen A Alchian, an Economist who has contributed significantly in the economics of property rights writes that *"Well-defined and well-protected property rights replace competition by violence with competition by peaceful means. The extent and degree of private property rights fundamentally affect the ways people compete for control of resources. With more complete private property rights, market exchange values become more influential. The personal status and personal attributes of people competing for a resource matter less because their influence can be offset by adjusting the price."*<sup>xviii</sup> This sums up the foundation assumption of the IPRI.

While the concepts of 'property' and 'property rights' are a study in themselves requiring deep theoretical understanding and definition, the IPRI focuses on the importance of a strong macroeconomic environment comprising of the factors used as indicators in the three components for a country's economic growth.

The starting point of the Index was the correlation between the protection of private property rights and economic development. This together with the definition of private property and the results derived from the opinion survey constitute the three core categories (hereto referred to as "components") considered essential to the strengthening and protecting a country's private property system:

- 1) Legal and Political Environment (LP)
- 2) Physical Property Rights (PPR)
- 3) Intellectual Property Rights (IPR)

The Legal and Political Environment (LP) component represents the fundamental essence of a free environment in which judicial independence and the rule of law bestows on individuals the right to benefit from the existence of a strong private property rights system. A positive combination of judicial independence, the rule of law, political stability and the control of corruption creates an environment conducive for the growth of the economy through a system which upholds the protection of property rights.

The other two components, i.e. physical and intellectual property rights emphasize the importance of the protection of the same and its inextricable link to economic development. The variables included in these two categories account for important *de jure* rights and *de facto* outcomes of the countries considered.

### Limitations and Future Considerations

The valuable advice of policy makers, academics, researchers and practitioners familiar with the main concept, i.e. property rights and its correlation to economic development, both from a theoretical and practical point have been consulted in deciding the indicators used in this study.

From the beginning of the IPRI program, there was a desire to see a robust structural model of property rights and economic growth come out of the Index results. In the near future, we hope that this idea may come to fruition such that the resulting and

extant index data may find a better fit with the corresponding growth data, and the theoretical relationship between the property rights institutions and growth may find a formal expression that can be tested empirically and expanded upon by the other scholars.

Several things must be kept in mind when understanding the conceptualization and the outcomes of the IPRI. First, the IPRI ranking covers a relatively high number of nations from greatly varying economic, political and cultural backgrounds. Consequently, many of the countries' idiosyncratic characteristics with respect to property rights protection and strength cannot be considered here. None of the data used for the construction of the IPRI is generated by the authors themselves but was instead collected from third-party sources such as the World Bank, World Economic Forum and trade groups.

Finally, this study is open for further development especially in the area of trademarks in intellectual property rights. Due to the lack of availability of reliable data and the available data being limited or outdated has prompted the authors' to decide not to use trademark protection data used in the previous two publications. The data used in the third core component of the 2009 Index covers intellectual property rights as a whole thus covering the area of trademark protection. However, the authors remain confident that in future years with the development of new data bases by authoritative sources reliable data will be available for further improvement of the Index. It is hoped that the consistency and comparability of relevant data suitable for a cross country Report such as the IPRI would no doubt greatly improve the Index.

## **Variables**

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The 2009 IPRI comprises a total of ten variables, which are divided into the three main components: Legal and Political Environment (LP), Physical Property Rights (PPR), and Intellectual Property Rights (IPR). Despite a large number of property rights related variables considered by the authors, the final IPRI study focuses only on core factors that directly relate to the strength and protection of private property rights. The final ranking is very similar to the alternative rankings calculated with other factors included, and was preferred as it suffers less from the problems of dilution and remains parsimonious.

Of the ten variables incorporated into the index, the "Registering Property" variable is made up of two sub-variables. Thus, in sum the IPRI comprises elements of data for each country.

## **Legal and Political Environment (LP)**

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The political stability of a country void of corruption together with a strong legal system embracing the independence of the judiciary and the rule of law are crucial for the recognition, management, implementation and protection of private property rights. The combination of these variables paves the way for the recognition of an individual's liberty and offer greater freedom for economic movement. Therefore, the following variables are used as indicators in the Legal and Political Environment (LP) component.

### **Judicial Independence**

This variable examines the judiciary's freedom from influence by political and business groups. The independence of the judiciary is a central underpinning for the sound protection and sovereign support of the court system with respect to private property and is therefore considered in the IPRI.

Source: *World Economic Forum's 2007-2008 Global Competitiveness Index*.

### **Rule of Law**

This variable examines the extent to which individuals, investors and business managers are confident in the court system to uphold their property rights. It is drawn from the World Bank Institute's 2008 Governance Matters report, which combines several indicators including fairness, honesty, enforceability, quickness and affordability of the court system, protection of private property rights, judicial and executive accountability. This variable complements the previous variable as accountability by the judiciary and the executive is paramount to judicial independence. It builds faith in economically active individuals and businesses in their legal system to uphold all laws including the protection of private property rights.

Source: *World Bank Institute's 2008 Governance Matters*

## EXHIBIT I: Structure of the IPRI

- 1) Legal and Political Environment (LP)
  - Judicial Independence
  - Rule of Law
  - Political Stability
  - Control of Corruption
  
- 2) Physical Property Rights (PPR)
  - Protection of Physical Property Rights
  - Registering Property
  - Access to Loans
  
- 3) Intellectual Property Rights (IPR)
  - Protection of Intellectual Property Rights
  - Patent Protection
  - Copyright Piracy

### **Political Stability**

The degree of political stability crucially influences one's incentive to obtain or extend ownership and/or management of property. The higher the likelihood of government overthrow, the less likely people will be to obtain property and develop a trust in the validity of the rights attached.

Source: *World Bank Institute's 2008 Governance Matters*

### **Corruption**

Corruption in the public sector is drawn from the World Bank Institute's 2008 Governance Matters report, which combines several indicators which measure the extent to which public power is exercised for private gain. This includes petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. Similar to the other variables in the LP component, corruption influences the people's confidence in the existence of sound implementation and enforcement of property rights. Corruption reflects the degree of informality in the economy, which is a distracting factor to the expansion of respect for legal private property.

Source: *World Bank Institute's 2008 Governance Matters*

### **Physical Property Rights (PPR)**

A strong property rights regime advocates the protection of private property rights, ensures the implementation of policies, procedures and laws of registering property and creates opportunity for individuals and businesses to access credit, thereby providing the opportunity to actively participate economic movement. For these reasons, the authors considered the following three variables of high importance in private property rights protection.

#### **Protection of Physical Property Rights**

This variable directly relates to the strength of a country's property rights system as it reflects experts' views on the quality of the judicial protection of private property, including financial assets. Additionally, it encompasses professionals' opinions on the clarity of the legal definition of property rights.

Source: *World Economic Forum's 2007-2008 Global Competitiveness Index*

### **Registering Property**

This variable reflects businesses' point of view on how difficult it is to register property in terms of the number of days and procedures necessary. According to the source of this information, the variable "records the full sequence of procedures necessary when a business purchases land and a building to transfer the property title from the seller to the buyer." This information is critical because the more difficult property registration is, the more likely it is that assets stay in the informal sector, thus restricting the development of the broader public's understanding and support for a strong legal and sound property rights system. It also discourages assets from moving from lower to higher valued uses. This variable is a core component in the economic arguments set forth by Hernando de Soto.

Source: *The World Bank Group's 2008 Doing Business Report*

### **Access to Loans**

The authors decided to include this variable in the IPRI dataset because accessibility to a bank loan represents the opportunity for an individual to subsequently obtain property. Consequently, the easier it is to become a property owner, the stronger society's support for a strong formalized property rights system and the investment in property.

Source: *World Economic Forum's 2007-2008 Global Competitiveness Index*

### **Intellectual Property Rights (IPR)**

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The IPR component evaluates the protection of intellectual property covering all areas of intellectual property rights, and additionally it reviews a country's policies and their effectiveness in enforcing patents, and copyrights.

#### **Protection of Intellectual Property Rights**

This variable contains opinion survey outcomes reflecting a nation's protection of intellectual property, and is therefore a crucial component of the IPR component. Expert participants in each country were asked to rate their nations' IP protection from "weak/non-existent" to "equal to the world's most stringent."

Source: *World Economic Forum's 2007-2008 Global Competitiveness Index*

#### **Patent Protection**

The IPRI's variable on patent protection strength replicates the information provided by the 2000 Ginarte-Park Index of Patent Rights, updated using 2005 data thanks to the helpful cooperation of Walter Park. These data reflect a country's rank in patent strength which is based on five extensive criteria: coverage, membership in international treaties, restrictions on patent rights, enforcement, and duration of protection.

Source: *Ginarte-Park Index of Patent Rights (2005)*

#### **Copyright Piracy**

The level of piracy in the IP sector is an important indicator of the performance and execution of protecting intellectual property rights in a country. The information for this variable was collected from the 2008 U.S. Trade Representative's 301 Watch List Report and contains information of the piracy level of four separate industries including Business Software, Records & Music, Motion Pictures, and Entertainment Software. As this variable reflects *de facto* outcomes based on hard data, it rates a country according to its effectiveness of protecting IPR. The Watch List Report data was supplemented with the most updated available data from the various reporting industry groups and the International Intellectual Property Alliance.

Source: *U.S. Trade Representative's 2008 301 Watch List Report*

## Explanatory Notes on Methodology

The overall grading scale of the IPRI ranges from 0 to 10, with 10 representing the strongest level of property rights protection and 0 reflecting the non-existence of secure property rights in a country. Similarly, each component and variable is placed on the same 0 to 10 scale.

For the calculation of the final index score, the variables within each component are averaged to derive the score for each of the three components. The final overall IPRI score is itself the average of the component scores. During construction of the index, a number of weighting methods for the components were tried, based on the authors' subjective views as well as to account for the different variances within each variable. However, the choice of the weighting method had little impact on the final rating and ranking of the countries. Thus, for reasons of simplicity and objectivity, the final numbers presented in this report are the result of the simple average calculation that combines available variables into the three component area ratings, which in turn are averaged into the final IPRI score. However, the authors do not wish to imply that all components and areas in the Index are of equal importance. Thus, readers who prefer to weight the variables in a different manner are invited to do so.

The ten variables included in the IPRI stem from six different sources. In order to combine variables that did not come in an indexed form and therefore could not be easily normalized to the IPRI's 0-10 scale, we applied the following standardization formula:

$$\left\{ \frac{X_{max} - X_i}{X_{max} - X_{min}} \right\} * 10$$

$X_i$  represents the individual country's value of the factor involved, while  $X_{max}$  and  $X_{min}$  were set at the maximum value within original data set and zero, respectively. Specific notes on how original data was rescaled for the IPRI are given later in the report along with further information on each source. Where appropriate, the authors have used the rescaled scores for 2007 when comparing between the years. (Please note in 2008, the 2007 scores were rescaled)

## The Countries

The 2009 International Property Rights Index ranks a total of 115 countries from around the world. The selection of the countries was determined by the constraint of available data only. Covering 96 percent of the world's Gross Domestic Product, these countries differ substantially in economic performance and market structure. For means of comparison, the economies included in the IPRI were assigned to nine geographic regions, which include: Latin America, Western Europe, Central and Eastern Europe, Asia, Middle East/North Africa, Africa, Russia, Oceania and North America.

It is important to note that the number of countries covered by the IPRI's different data sources ranged from 40 to just over 200. Therefore the authors were provided with significant variation in the number of potential countries to be included in the IPRI. In order to be considered for the final IPRI ranking, a country's data needed to be represented in a minimum of one half of the included variables per category, although in most cases countries exceeded this threshold. Consequently, there are some countries which do not enter any of the final country sets of the Index's three components, and some which met the threshold of only one or two of the components. The countries that qualified for all three categories are the ones are the 115 included in this report.

## CHAPTER IV: RESULTS

This chapter presents the final results of the 2009 IPRI. After a short overview of data and outcomes, the complete 2009 IPRI scores and rankings are presented according to various criteria. In addition, the results for individual countries are highlighted. Finally, the relationship between scores on the index and a country's economic well-being is presented.

### Data and Outcome Characteristics

The IPRI's 2009 outcomes are mainly based on data obtained from currently available authoritative sources in the respective fields and areas. The data contained in these sources are based on qualitative data obtained through opinion surveys within the countries rated which complements quantitative data. Generally, experts in their respective field participate in these surveys, and the resulting rating in the form of a numeric factor, is based on their judgment. Thus, it must be emphasized that, based on these sources, the country ranked worst or best in the IPRI is not necessarily the one with the weakest property rights, but rather the one *perceived* to be the worst or best. Nevertheless, the authors view the expert surveys to be a good and reliable source of judgment related to a country's *de facto* characteristics, rather than some measure of what laws and practices may exist in statute only. Therefore, we hope that – with the help of partner institutions around the world – we will be able to obtain greater data in the future based on opinion surveys suited to our specific needs.

There are a few variables based on "hard data." For example, the numbers of procedures to register property, or estimations of the level of piracy, were included. However, for the future development of the Index we plan to obtain more data based on this kind of solid information. For example, it would be valuable to include some measure of the strength of constitutional anchors of private property protection, or the extent of land expropriation and judicial attitudes toward compensation. Also, each year's De Soto fellow will concentrate on seeking and including the most up-to-date sources. The 2009 IPRI is quite nearly a one year update of the 2008 report, with some exceptions where updated data or suitable substitutions were unavailable.

However, the authors of the 2009 IPRI have considered the requests by 2009 partner organizations to include in the Index case studies highlighting issues and developments in the areas of private and intellectual property rights to gain a better understanding of this area while completing the ranking of each country.

In analyzing the final outcome of the scoring process, the reader is presented with two related but ultimately different measures of property rights protection throughout the sample: ordinal and cardinal. The scores are presented in such a way that the reader can easily compare countries according to how they rank relative to each other, as well as how well they score compared to each other (and relative to the 0-10 scale). The authors hope that while the relative ranking proves useful, it is the score itself, which provides the most useful measure of how well a country protects property rights.

### IPRI Ranking<sup>18</sup>

This year's International Property Rights Index (IPRI) contains the ranking of 115 economies, which represents 96 percent of the world Gross Domestic Product (GDP). [Exhibits 2 and 3](#) present the ranking by the highest to the lowest scoring and ranking by country respectively.

Finland leads the country list a third year in a row with an increased score from the previous two years of 8.7 out of the possible 10. Both in 2008 and in 2007 according to the rescaled scoring (although in the original 2007 report, Finland scored 7.9 and was ranked 11) Finland scored 8.6 resulting in a rank of 1. Thus, the Scandinavian country takes the honor of being ranked 1 for the past three consecutive years (taking into consideration the rescaled scoring of the 2007 scoring for Finland). With a score of 8.5, the second position is occupied by Denmark and Netherlands this year. While the second position reflects an improved scoring as compared to 2008 and 2007, these two countries have managed to retain their position from the last two years. The fourth position is occupied by

New Zealand, Sweden, Germany and Norway all with a score of 8.3. Germany and Norway's scoring has remained the same for the past three years with a noticeable rise of New Zealand in the ladder of the ranking from 6 in 2008 to 4 in 2009. This year's top ten countries are rounded up with Australia and Switzerland (both with a score of 8.2), and Austria, Iceland and Singapore (all with a score of 8.1). Of these countries, Australia moved up to rank 8 in 2009 from rank 11 in 2008 followed by Austria and Singapore both ranked 13 in 2008 to 10 in 2009 with an improved score.

At the bottom end of the ladder of the ranking are Albania (3.5), Nigeria (3.5), Paraguay (3.5), Azerbaijan (3.4), Bosnia-Herzegovina (3.3), Chad (3.2), Venezuela (3.2), Guyana (3.2), Burundi (3.2), Zimbabwe (3.2), Angola (2.8) and Bangladesh scoring the lowest of the country set once again with a score of 2.5 which the lowest it has scored in the past three years (2.9 in 2008 and 2.6 in 2007).

The average of the entire sample is 5.4, down from 5.5 and 5.7 in 2008 and 2007 respectively. The top score at 8.7 this year is a change from 8.6 from the previous two years. Within the top ten countries itself, the scoring has changed together with the ranking of some of the countries. The bottom score is at its lowest at 2.5 this year as compared to past two years (2.9 in 2008 and 2.6 in 2007).

The widening gap between the highest IPRI score of 8.7 and lowest score of 2.6 illustrates a disparity in the property rights regime in the world, as measured by the IPRI criteria. The authors would argue that while those countries at the very bottom of the index scoring certainly demonstrate a severe deficiency in property rights protection, they are not alone in representing regimes with a clear need to improve. Indeed, a large number of countries with a scoring in the mid vicinity of 6 and below highlight the need for change and improvement.

A logical rejoinder to the fact that a country may score low in this index, is that different countries have different priorities, and thus improvements in other aspects of a country's institutional environment may unfairly be ignored in this report. We would respond that, as mentioned at the beginning, the starting assumption for this report is that a stronger, more stringent, comprehensive private property rights regime is desirable to one that is less, and further that this belief is reflected in the criteria used to score and rank the various countries. Thus, the authors would argue that a higher score is desirable and correlates to a stronger private property rights system.

Exhibit 4 presents the IPRI rankings by quintile. The color prism relates the quintiles to a specified color: purple for the top quintile contains 23 countries, blue for the second quintile contains 22 countries, green for the third contains 25 countries, yellow for the fourth 23 countries, and red for the bottom quintile contains 22 countries. Accordingly, the map on IPRI's distribution, displayed in the inside cover of this report, indicates which country belongs to which quintile.

The majority of the countries in the top quintile represent Western countries considered to be developed while the majority of the countries in the bottom quintile represent countries from Africa closely followed by Central European countries, Russia and Latin America. Of significance this year is that Croatia (Croatia's overall score has not changed from 4.9 in 2008), Bulgaria, Malawi and Benin have moved up from the fourth quintile in 2008 to the third quintile in 2009. This change reflects in the case of Ecuador and Pakistan, where both countries have moved up from the bottom quintile to the fourth quintile. Unless otherwise stated, all countries that have moved up in the ranking have improved the overall score.

At the other end of the spectrum are India, Slovenia, Costa Rica and Kuwait who have moved down to the third quintile from the second quintile together with Sri Lanka, Burkina Faso and Philippines who have moved from the third quintile to the fourth quintile. There is significant change in the scoring of these countries.

South Africa and Spain have moved from the top quintile to the second quintile, however, this does not reflect the fact that Spain has improved its IPRI score from 6.7 in 2008 to 6.8 in 2009 while South Africa has come down from a score of 6.9 in 2008 to 6.8 in 2009.

**EXHIBIT 2: By IPRI Ranking**

Rank	Country	IPRI	LP	PPR	IPR	Rank	Country	IPRI	LP	PPR	IPR
1	Finland	8.7	8.9	8.5	8.6		Bulgaria	5.1	4.5	5.6	5.1
2	Netherlands	8.5	8.4	8.6	8.6	60	Croatia	4.9	5.0	5.2	4.6
	Denmark	8.5	8.6	8.3	8.6		Colombia	4.9	3.7	5.7	5.3
4	New Zealand	8.3	8.8	8.3	7.9	62	El Salvador	4.8	4.2	6.0	4.2
	Sweden	8.3	8.6	8.5	7.8		Mali	4.8	4.4	5.2	4.8
	Germany	8.3	8.3	7.9	8.7		Romania	4.8	4.5	4.9	4.9
	Norway	8.3	8.5	8.7	7.7		Mexico	4.8	4.1	5.4	4.9
8	Switzerland	8.2	8.8	8.0	8.0		Jamaica	4.8	4.5	5.8	4.0
	Australia	8.2	8.3	8.1	8.2		Mauritania	4.8	4.0	5.2	5.0
10	Austria	8.1	8.4	7.8	8.1	68	Benin	4.7	4.6	4.7	4.8
	Iceland	8.1	8.9	8.5	6.8		China	4.7	4.0	5.6	4.4
	Singapore	8.1	8.2	8.2	7.8		Brazil	4.7	4.2	5.0	4.8
13	Ireland	8.0	8.1	7.9	7.8	71	Egypt	4.6	4.6	5.0	4.3
14	Canada	7.9	8.3	7.5	8.0		Sri Lanka	4.6	4.0	6.0	4.0
15	United Kingdom	7.8	7.9	7.1	8.5		Burkina Faso	4.6	4.2	4.4	5.3
	United States	7.8	7.1	7.8	8.6	74	Tanzania	4.5	4.5	4.6	4.5
17	Japan	7.6	7.4	7.2	8.2		Philippines	4.5	3.3	5.5	4.8
18	Belgium	7.5	7.4	6.7	8.2		Dominican Republic	4.5	4.2	5.2	4.1
19	Hong Kong	7.3	7.8	7.8	6.2	77	Honduras	4.4	3.6	5.6	4.1
20	France	7.2	7.1	6.4	8.1		Vietnam	4.4	4.4	5.5	3.4
	Luxembourg	7.2	8.4	5.1	7.9		Uganda	4.4	3.5	3.6	6.0
22	Portugal	7.1	7.1	7.2	7.0	80	Argentina	4.3	3.8	4.5	4.8
23	United Arab Emirates	6.9	6.6	7.7	6.4		Guatemala	4.3	3.4	5.6	3.9
24	Spain	6.8	6.1	7.1	7.3	82	Mozambique	4.2	4.0	4.8	3.9
	Korea (South)	6.8	6.3	7.3	6.8		Madagascar	4.2	4.3	4.2	4.1
	South Africa	6.8	5.9	7.1	7.4		Ukraine	4.2	3.7	4.6	4.3
27	Estonia	6.6	6.8	7.4	5.5		Kenya	4.2	3.1	5.6	3.9
	Malta	6.6	7.5	6.3	6.0		Peru	4.2	3.3	5.6	3.7
29	Chile	6.5	6.6	7.0	6.0	87	Kazakhstan	4.1	3.8	5.6	3.0
	Israel	6.5	6.0	6.6	7.0		Russia	4.1	3.1	4.8	4.3
	Qatar	6.5	7.0	6.8	5.6		Indonesia	4.1	3.3	5.6	3.4
	Taiwan	6.5	5.9	7.3	6.3	90	Zambia	4.0	4.1	5.1	2.8
33	Hungary	6.4	6.1	6.6	6.5		Pakistan	4.0	2.7	6.0	3.3
34	Slovakia	6.3	5.6	7.1	6.2		Algeria	4.0	3.7	4.6	3.7
	Cyprus	6.3	6.6	6.4	5.9		Ecuador	4.0	2.7	4.6	4.6
36	Malaysia	6.2	5.9	6.8	5.9	94	Nepal	3.9	3.1	5.4	3.3
37	Italy	6.1	5.6	5.9	6.8		Montenegro	3.9	4.1	5.6	1.9
	Czech Republic	6.1	6.0	5.7	6.5	96	Cameroon	3.8	3.0	4.5	4.0
39	Greece	6.0	5.8	6.1	6.0		Macedonia	3.8	3.8	4.6	2.9
40	Tunisia	5.9	5.7	7.1	5.0	98	Ethiopia	3.7	3.0	4.4	3.7
	Jordan	5.9	5.6	6.6	5.5		Armenia	3.7	3.7	5.6	1.8
	Lithuania	5.9	5.5	6.9	5.2	100	Serbia	3.6	3.6	4.7	2.6
43	Botswana	5.8	6.7	6.4	4.1		Nicaragua	3.6	3.0	4.2	3.6
44	Bahrain	5.7	5.5	6.5	5.2		Bolivia	3.6	3.1	4.2	3.4
	Mauritius	5.7	6.3	6.0	4.9		Moldova	3.6	3.5	5.0	2.2
46	Costa Rica	5.6	6.3	5.9	4.7	104	Albania	3.5	3.6	4.9	2.1
	Kuwait	5.6	6.3	6.9	3.7		Nigeria	3.5	2.6	4.3	3.6
	Slovenia	5.6	6.6	4.7	5.5		Paraguay	3.5	2.7	4.7	3.0
	India	5.6	4.9	6.7	5.1	107	Azerbaijan	3.4	3.2	5.0	2.1
50	Uruguay	5.5	6.5	5.2	4.9	108	Bosnia-Herzegovina	3.3	3.9	3.3	2.8
51	Latvia	5.4	5.7	6.2	4.2	109	Chad	3.2	1.8	4.1	3.8
	Thailand	5.4	4.5	7.0	4.6		Venezuela	3.2	2.0	4.5	3.2
53	Panama	5.3	4.2	6.8	5.0		Guyana	3.2	3.7	3.3	2.6
	Poland	5.3	5.3	4.8	5.8		Burundi	3.2	2.3	4.2	3.1
	Turkey	5.3	4.8	6.1	4.9		Zimbabwe	3.2	2.0	4.5	3.1
	Malawi	5.3	4.2	7.3	4.3	114	Angola	2.8	3.0	3.0	2.4
57	Trinidad and Tobago	5.1	4.7	5.1	5.5	115	Bangladesh	2.5	2.8	2.8	2.1
	Morocco	5.1	4.4	5.8	5.0						

## EXHIBIT 3: By Country

Country	IPRI	LP	PPR	IPR	Country	IPRI	LP	PPR	IPR
Albania	3.5	3.6	4.9	2.1	Latvia	5.4	5.7	6.2	4.2
Algeria	4.0	3.7	4.6	3.7	Lithuania	5.9	5.5	6.9	5.2
Angola	2.8	3.0	3.0	2.4	Luxembourg	7.2	8.4	5.1	7.9
Argentina	4.3	3.8	4.5	4.8	Macedonia	3.8	3.8	4.6	2.9
Armenia	3.7	3.7	5.6	1.8	Madagascar	4.2	4.3	4.2	4.1
Australia	8.2	8.3	8.1	8.2	Malawi	5.3	4.2	7.3	4.3
Austria	8.1	8.4	7.8	8.1	Malaysia	6.2	5.9	6.8	5.9
Azerbaijan	3.4	3.2	5.0	2.1	Mali	4.8	4.4	5.2	4.8
Bahrain	5.7	5.5	6.5	5.2	Malta	6.6	7.5	6.3	6.0
Bangladesh	2.5	2.8	2.8	2.1	Mauritania	4.8	4.0	5.2	5.0
Belgium	7.5	7.4	6.7	8.2	Mauritius	5.7	6.3	6.0	4.9
Benin	4.7	4.6	4.7	4.8	Mexico	4.8	4.1	5.4	4.9
Bolivia	3.6	3.1	4.2	3.4	Moldova	3.6	3.5	5.0	2.2
Bosnia-Herzegovina	3.3	3.9	3.3	2.8	Montenegro	3.9	4.1	5.6	1.9
Botswana	5.8	6.7	6.4	4.1	Morocco	5.1	4.4	5.8	5.0
Brazil	4.7	4.2	5.0	4.8	Mozambique	4.2	4.0	4.8	3.9
Bulgaria	5.1	4.5	5.6	5.1	Nepal	3.9	3.1	5.4	3.3
Burkina Faso	4.6	4.2	4.4	5.3	Netherlands	8.5	8.4	8.6	8.6
Burundi	3.2	2.3	4.2	3.1	New Zealand	8.3	8.8	8.3	7.9
Cameroon	3.8	3.0	4.5	4.0	Nicaragua	3.6	3.0	4.2	3.6
Canada	7.9	8.3	7.5	8.0	Nigeria	3.5	2.6	4.3	3.6
Chad	3.2	1.8	4.1	3.8	Norway	8.3	8.5	8.7	7.7
Chile	6.5	6.6	7.0	6.0	Pakistan	4.0	2.7	6.0	3.3
China	4.7	4.0	5.6	4.4	Panama	5.3	4.2	6.8	5.0
Colombia	4.9	3.7	5.7	5.3	Paraguay	3.5	2.7	4.7	3.0
Costa Rica	5.6	6.3	5.9	4.7	Peru	4.2	3.3	5.6	3.7
Croatia	4.9	5.0	5.2	4.6	Philippines	4.5	3.3	5.5	4.8
Cyprus	6.3	6.6	6.4	5.9	Poland	5.3	5.3	4.8	5.8
Czech Republic	6.1	6.0	5.7	6.5	Portugal	7.1	7.1	7.2	7.0
Denmark	8.5	8.6	8.3	8.6	Qatar	6.5	7.0	6.8	5.6
Dominican Republic	4.5	4.2	5.2	4.1	Romania	4.8	4.5	4.9	4.9
Ecuador	4.0	2.7	4.6	4.6	Russia	4.1	3.1	4.8	4.3
Egypt	4.6	4.6	5.0	4.3	Serbia	3.6	3.6	4.7	2.6
El Salvador	4.8	4.2	6.0	4.2	Singapore	8.1	8.2	8.2	7.8
Estonia	6.6	6.8	7.4	5.5	Slovakia	6.3	5.6	7.1	6.2
Ethiopia	3.7	3.0	4.4	3.7	Slovenia	5.6	6.6	4.7	5.5
Finland	8.7	8.9	8.5	8.6	South Africa	6.8	5.9	7.1	7.4
France	7.2	7.1	6.4	8.1	Spain	6.8	6.1	7.1	7.3
Germany	8.3	8.3	7.9	8.7	Sri Lanka	4.6	4.0	6.0	4.0
Greece	6.0	5.8	6.1	6.0	Sweden	8.3	8.6	8.5	7.8
Guatemala	4.3	3.4	5.6	3.9	Switzerland	8.2	8.8	8.0	8.0
Guyana	3.2	3.7	3.3	2.6	Taiwan	6.5	5.9	7.3	6.3
Honduras	4.4	3.6	5.6	4.1	Tanzania	4.5	4.5	4.6	4.5
Hong Kong	7.3	7.8	7.8	6.2	Thailand	5.4	4.5	7.0	4.6
Hungary	6.4	6.1	6.6	6.5	Trinidad and Tobago	5.1	4.7	5.1	5.5
Iceland	8.1	8.9	8.5	6.8	Tunisia	5.9	5.7	7.1	5.0
India	5.6	4.9	6.7	5.1	Turkey	5.3	4.8	6.1	4.9
Indonesia	4.1	3.3	5.6	3.4	Uganda	4.4	3.5	3.6	6.0
Ireland	8.0	8.1	7.9	7.8	Ukraine	4.2	3.7	4.6	4.3
Israel	6.5	6.0	6.6	7.0	United Arab Emirates	6.9	6.6	7.7	6.4
Italy	6.1	5.6	5.9	6.8	United Kingdom	7.8	7.9	7.1	8.5
Jamaica	4.8	4.5	5.8	4.0	United States	7.8	7.1	7.8	8.6
Japan	7.6	7.4	7.2	8.2	Uruguay	5.5	6.5	5.2	4.9
Jordan	5.9	5.6	6.6	5.5	Venezuela	3.2	2.0	4.5	3.2
Kazakhstan	4.1	3.8	5.6	3.0	Vietnam	4.4	4.4	5.5	3.4
Kenya	4.2	3.1	5.6	3.9	Zambia	4.0	4.1	5.1	2.8
Korea (South)	6.8	6.3	7.3	6.8	Zimbabwe	3.2	2.0	4.5	3.1
Kuwait	5.6	6.3	6.9	3.7					

**EXHIBIT 4: IPRI Ranking by Quintile**

	Top 20%	2nd Quintile	3rd Quintile	4th Quintile	Bottom 20%
strongest	Finland	Spain	Costa Rica	Egypt	Nepal
	Netherlands	South Africa	Kuwait	Sri Lanka	Montenegro
	Denmark	Korea (South)	Slovenia	Burkina Faso	Cameroon
	New Zealand	Estonia	India	Tanzania	Macedonia
	Sweden	Malta	Uruguay	Philippines	Ethiopia
	Germany	Chile	Latvia	Dominican Republic	Armenia
	Norway	Israel	Thailand	Honduras	Serbia
	Switzerland	Qatar	Panama	Vietnam	Nicaragua
	Australia	Taiwan	Poland	Uganda	Bolivia
	Austria	Hungary	Turkey	Argentina	Moldova
	Iceland	Slovakia	Malawi	Guatemala	Albania
	Singapore	Cyprus	Trinidad and Tobago	Mozambique	Nigeria
	Ireland	Malaysia	Morocco	Madagascar	Paraguay
	Canada	Italy	Bulgaria	Ukraine	Azerbaijan
	United Kingdom	Czech Republic	Croatia	Kenya	Bosnia-Herzegovina
	United States	Greece	Colombia	Peru	Chad
	Japan	Tunisia	El Salvador	Kazakhstan	Venezuela
	Belgium	Jordan	Mali	Russia	Guyana
	Hong Kong	Lithuania	Romania	Indonesia	Burundi
	France	Botswana	Mexico	Zambia	Zimbabwe
	Luxembourg	Bahrain	Jamaica	Pakistan	Angola
	Portugal	Mauritius	Mauritania	Algeria	Bangladesh
weakest	United Arab Emirates		Benin	Ecuador	
			China		
			Brazil		

**Ranking by Index Core Components**

The 2009 report is comprised of three core components and ten variables used in measuring and arriving at the final ranking of the 115 countries. This section relates to the country performance in each core component of the Index.

[Exhibit 5](#) presents the summary statistics for the overall IPRI and components for 2009.

This year's highest score in any one of the core components is 8.9 in Legal and Political Environment (LP) shared by Finland and Iceland. While in 2008 the highest score in any component is 8.9 for Finland in Legal and Political Environment (LP), in 2007, the highest score overall was 8.8 for Germany in Intellectual Property Rights (IPR). The lowest score in any of the core components is 1.8 in both LP and IPR shared by Chad and Armenia respectively. The highest mean score component is Physical Property Rights (PPR) this year at 5.9 as compared to 6.1 in 2008.

[Exhibit 6](#) identifies the top and bottom ten countries of the IPRI and each of its three core components (the rank listed in parentheses refers to the country's rank within that component). Finland and Iceland rank on top (8.9) in the Legal and Political Environment (LP) component, Norway (8.7) in the Physical Property Rights (PPR) followed by Germany (8.7) on top in the Intellectual Property Rights (IPR) component. At the bottom end, Chad ranks last in LP (1.8), Bangladesh ranks last in PPR (2.8) and Armenia ranks last in IPR (1.8).

In 2009, the top performing countries are more regionally spread out representing countries from northern European and Scandinavian countries and from Asia/Oceania. As compared to 2008 and 2007, this year a notable fact is that Austria and Australia are among the top 10 in at least two of the three core components followed by Finland, Iceland, Switzerland, New Zealand, Denmark, Sweden, Norway and Netherlands – the countries which managed to retain this position from 2008.

In 2008 among the top performing countries were northern European and Scandinavian countries which were also among top performers in 2007. For example, in 2007 Sweden, Norway, Finland and the UK all scored among the top five in at least two out of three components. In 2008, the same countries appeared among the top 10 in at least two out of three components, and were joined by Denmark, Netherlands, Germany, Switzerland, Iceland and New Zealand. While all these countries retained their position among the top 10 in at least two of the three core components, Germany and United Kingdom (UK) are the only country which have not retained their 2008 position in this category.

At the bottom end, Bangladesh has further decreased in its overall score and remains the country with the weakest overall score, joined by Nicaragua, Angola, Nigeria, Burundi, Chad, Guyana and Bosnia-Herzegovina being among the lowest 10 in at least two out of the three components. This year, with the exception of Chad and Angola, all the other countries are new to this category of being in the lowest 10 in at least two of the three core components.

As compared to the number of new countries which were added to the top 10 in at least two of the three components, the number of new countries added to the bottom end of the lowest 10 in at least two of the three components, the ratio is 2:5. The authors would argue that taking the starting assumption of this study that an increase in the scoring reflects a stronger property rights regime, then a decrease would reflect a stagnate or a deteriorating property rights system in need of improvement.

In fact, the eight countries which are among the lowest 10 in at least two of the three components are among the countries earning the lowest GDP per capita and represent 36% of countries in the bottom quintile. While the countries in the bottom quintile marks an average GDP per capita of \$2,563, these eight countries' average GDP per capita is \$1,490.

And [Exhibits 7, 8 and 9](#) give a complete rank ordering of the entire 115 country set according to the three core components of the study.

### EXHIBIT 5: Summary Statistics

Indicator	Mean	Median	Deviation	Minimum	Maximum
<b>IPRI</b>	<b>5.4</b>	<b>5.1</b>	<b>1.6</b>	<b>2.5</b>	<b>8.7</b>
LP	5.2	4.6	1.9	1.8	8.9
PPR	5.9	5.7	1.4	2.8	8.5
IPR	5.1	4.9	1.8	1.8	8.6

**EXHIBIT 6: Top 10 and Bottom 10 by Component (Number indicates rank)**

IPRI	LP	PPR	IPR
Finland (1)	Finland (1)	Norway (1)	Germany (1)
Netherlands (2)	Iceland (1)	Netherlands (2)	Finland (2)
Denmark (2)	Switzerland (3)	Finland (3)	Netherlands (2)
New Zealand (4)	New Zealand (3)	Sweden (3)	Denmark (2)
Sweden (4)	Denmark (5)	Iceland (3)	United States (2)
Germany (4)	Sweden (5)	New Zealand (6)	United Kingdom (6)
Norway (4)	Norway (7)	Denmark (6)	Japan (7)
Switzerland (8)	Luxembourg (8)	Singapore (8)	Belgium (7)
Australia (8)	Austria (8)	Australia (9)	Australia (7)
Austria (10)	Netherlands (8)	Switzerland (10)	France (10)
Iceland (10)			Austria (10)
Singapore (10)			
Albania (104)	Nicaragua (103)	Nigeria (105)	Zambia (105)
Nigeria (104)	Cameroon (103)	Burundi (106)	Bosnia-Herzegovina (105)
Paraguay (104)	Angola (103)	Bolivia (106)	Serbia (107)
Azerbaijan (107)	Ethiopia (103)	Madagascar (106)	Guyana (107)
Bosnia-Herzegovina (108)	Bangladesh (107)	Nicaragua (106)	Angola (109)
Chad (109)	Ecuador (108)	Chad (110)	Moldova (110)
Venezuela (109)	Paraguay (108)	Uganda (111)	Albania (111)
Guyana (109)	Pakistan (108)	Guyana (112)	Bangladesh (111)
Burundi (109)	Nigeria (111)	Bosnia-Herzegovina (112)	Azerbaijan (111)
Zimbabwe (109)	Burundi (112)	Angola (114)	Montenegro (114)
Angola (114)	Zimbabwe (113)	Bangladesh (115)	Armenia (115)
Bangladesh (115)	Venezuela (113)		
	Chad (115)		

**EXHIBIT 7: Ranking by LP Score**

Rank	Country	IPRI	LP	PPR	IPR	Rank	Country	IPRI	LP	PPR	IPR
1	Finland	8.7	8.9	8.5	8.6		Bulgaria	5.1	4.5	5.6	5.1
	Iceland	8.1	8.9	8.5	6.8		Jamaica	4.8	4.5	5.8	4.0
3	Switzerland	8.2	8.8	8.0	8.0		Tanzania	4.5	4.5	4.6	4.5
	New Zealand	8.3	8.8	8.3	7.9		Thailand	5.4	4.5	7.0	4.6
5	Sweden	8.3	8.6	8.5	7.8	63	Morocco	5.1	4.4	5.8	5.0
	Denmark	8.5	8.6	8.3	8.6		Mali	4.8	4.4	5.2	4.8
7	Norway	8.3	8.5	8.7	7.7		Vietnam	4.4	4.4	5.5	3.4
8	Luxembourg	7.2	8.4	5.1	7.9	66	Madagascar	4.2	4.3	4.2	4.1
	Austria	8.1	8.4	7.8	8.1	67	Malawi	5.3	4.2	7.3	4.3
	Netherlands	8.5	8.4	8.6	8.6		El Salvador	4.8	4.2	6.0	4.2
11	Australia	8.2	8.3	8.1	8.2		Burkina Faso	4.6	4.2	4.4	5.3
	Canada	7.9	8.3	7.5	8.0		Panama	5.3	4.2	6.8	5.0
	Germany	8.3	8.3	7.9	8.7		Brazil	4.7	4.2	5.0	4.8
14	Singapore	8.1	8.2	8.2	7.8		Dominican Republic	4.5	4.2	5.2	4.1
15	Ireland	8.0	8.1	7.9	7.8	73	Zambia	4.0	4.1	5.1	2.8
16	United Kingdom	7.8	7.9	7.1	8.5		Mexico	4.8	4.1	5.4	4.9
17	Hong Kong	7.3	7.8	7.8	6.2		Montenegro	3.9	4.1	5.6	1.9
18	Malta	6.6	7.5	6.3	6.0	76	Mozambique	4.2	4.0	4.8	3.9
19	Belgium	7.5	7.4	6.7	8.2		Mauritania	4.8	4.0	5.2	5.0
	Japan	7.6	7.4	7.2	8.2		China	4.7	4.0	5.6	4.4
21	Portugal	7.1	7.1	7.2	7.0		Sri Lanka	4.6	4.0	6.0	4.0
	United States	7.8	7.1	7.8	8.6	80	Bosnia-Herzegovina	3.3	3.9	3.3	2.8
	France	7.2	7.1	6.4	8.1	81	Argentina	4.3	3.8	4.5	4.8
24	Qatar	6.5	7.0	6.8	5.6		Kazakhstan	4.1	3.8	5.6	3.0
25	Estonia	6.6	6.8	7.4	5.5		Macedonia	3.8	3.8	4.6	2.9
26	Botswana	5.8	6.7	6.4	4.1	84	Ukraine	4.2	3.7	4.6	4.3
27	United Arab Emirates	6.9	6.6	7.7	6.4		Guyana	3.2	3.7	3.3	2.6
	Cyprus	6.3	6.6	6.4	5.9		Armenia	3.7	3.7	5.6	1.8
	Chile	6.5	6.6	7.0	6.0		Algeria	4.0	3.7	4.6	3.7
	Slovenia	5.6	6.6	4.7	5.5		Colombia	4.9	3.7	5.7	5.3
31	Uruguay	5.5	6.5	5.2	4.9	89	Serbia	3.6	3.6	4.7	2.6
32	Costa Rica	5.6	6.3	5.9	4.7		Honduras	4.4	3.6	5.6	4.1
	Kuwait	5.6	6.3	6.9	3.7		Albania	3.5	3.6	4.9	2.1
	Korea (South)	6.8	6.3	7.3	6.8	92	Moldova	3.6	3.5	5.0	2.2
	Mauritius	5.7	6.3	6.0	4.9		Uganda	4.4	3.5	3.6	6.0
36	Hungary	6.4	6.1	6.6	6.5	94	Guatemala	4.3	3.4	5.6	3.9
	Spain	6.8	6.1	7.1	7.3	95	Philippines	4.5	3.3	5.5	4.8
38	Israel	6.5	6.0	6.6	7.0		Indonesia	4.1	3.3	5.6	3.4
	Czech Republic	6.1	6.0	5.7	6.5		Peru	4.2	3.3	5.6	3.7
40	Malaysia	6.2	5.9	6.8	5.9	98	Azerbaijan	3.4	3.2	5.0	2.1
	South Africa	6.8	5.9	7.1	7.4	99	Nepal	3.9	3.1	5.4	3.3
	Taiwan	6.5	5.9	7.3	6.3		Russia	4.1	3.1	4.8	4.3
43	Greece	6.0	5.8	6.1	6.0		Bolivia	3.6	3.1	4.2	3.4
44	Tunisia	5.9	5.7	7.1	5.0		Kenya	4.2	3.1	5.6	3.9
	Latvia	5.4	5.7	6.2	4.2	103	Nicaragua	3.6	3.0	4.2	3.6
46	Jordan	5.9	5.6	6.6	5.5		Cameroon	3.8	3.0	4.5	4.0
	Slovakia	6.3	5.6	7.1	6.2		Angola	2.8	3.0	3.0	2.4
	Italy	6.1	5.6	5.9	6.8		Ethiopia	3.7	3.0	4.4	3.7
49	Lithuania	5.9	5.5	6.9	5.2	107	Bangladesh	2.5	2.8	2.8	2.1
	Bahrain	5.7	5.5	6.5	5.2	108	Ecuador	4.0	2.7	4.6	4.6
51	Poland	5.3	5.3	4.8	5.8		Paraguay	3.5	2.7	4.7	3.0
52	Croatia	4.9	5.0	5.2	4.6		Pakistan	4.0	2.7	6.0	3.3
53	India	5.6	4.9	6.7	5.1	111	Nigeria	3.5	2.6	4.3	3.6
54	Turkey	5.3	4.8	6.1	4.9	112	Burundi	3.2	2.3	4.2	3.1
55	Trinidad and Tobago	5.1	4.7	5.1	5.5	113	Zimbabwe	3.2	2.0	4.5	3.1
56	Egypt	4.6	4.6	5.0	4.3		Venezuela	3.2	2.0	4.5	3.2
	Benin	4.7	4.6	4.7	4.8	115	Chad	3.2	1.8	4.1	3.8
58	Romania	4.8	4.5	4.9	4.9						

**EXHIBIT 8: Ranking by PPR Score**

Rank	Country	IPRI	LP	PPR	IPR	Rank	Country	IPRI	LP	PPR	IPR
1	Norway	8.3	8.5	8.7	7.7	59	Guatemala	4.3	3.4	5.6	3.9
2	Netherlands	8.5	8.4	8.6	8.6		Kenya	4.2	3.1	5.6	3.9
3	Sweden	8.3	8.6	8.5	7.8		Montenegro	3.9	4.1	5.6	1.9
	Finland	8.7	8.9	8.5	8.6		China	4.7	4.0	5.6	4.4
	Iceland	8.1	8.9	8.5	6.8		Indonesia	4.1	3.3	5.6	3.4
6	New Zealand	8.3	8.8	8.3	7.9		Armenia	3.7	3.7	5.6	1.8
	Denmark	8.5	8.6	8.3	8.6		Honduras	4.4	3.6	5.6	4.1
8	Singapore	8.1	8.2	8.2	7.8		Kazakhstan	4.1	3.8	5.6	3.0
9	Australia	8.2	8.3	8.1	8.2		Bulgaria	5.1	4.5	5.6	5.1
10	Switzerland	8.2	8.8	8.0	8.0		Peru	4.2	3.3	5.6	3.7
11	Ireland	8.0	8.1	7.9	7.8	69	Philippines	4.5	3.3	5.5	4.8
	Germany	8.3	8.3	7.9	8.7		Vietnam	4.4	4.4	5.5	3.4
13	Austria	8.1	8.4	7.8	8.1	71	Nepal	3.9	3.1	5.4	3.3
	Hong Kong	7.3	7.8	7.8	6.2		Mexico	4.8	4.1	5.4	4.9
	United States	7.8	7.1	7.8	8.6	73	Croatia	4.9	5.0	5.2	4.6
16	United Arab Emirates	6.9	6.6	7.7	6.4		Uruguay	5.5	6.5	5.2	4.9
17	Canada	7.9	8.3	7.5	8.0		Mauritania	4.8	4.0	5.2	5.0
18	Estonia	6.6	6.8	7.4	5.5		Dominican Republic	4.5	4.2	5.2	4.1
19	Korea (South)	6.8	6.3	7.3	6.8		Mali	4.8	4.4	5.2	4.8
	Malawi	5.3	4.2	7.3	4.3	78	Trinidad and Tobago	5.1	4.7	5.1	5.5
	Taiwan	6.5	5.9	7.3	6.3		Zambia	4.0	4.1	5.1	2.8
22	Portugal	7.1	7.1	7.2	7.0		Luxembourg	7.2	8.4	5.1	7.9
	Japan	7.6	7.4	7.2	8.2	81	Brazil	4.7	4.2	5.0	4.8
24	Slovakia	6.3	5.6	7.1	6.2		Azerbaijan	3.4	3.2	5.0	2.1
	United Kingdom	7.8	7.9	7.1	8.5		Egypt	4.6	4.6	5.0	4.3
	Spain	6.8	6.1	7.1	7.3		Moldova	3.6	3.5	5.0	2.2
	Tunisia	5.9	5.7	7.1	5.0	85	Romania	4.8	4.5	4.9	4.9
	South Africa	6.8	5.9	7.1	7.4		Albania	3.5	3.6	4.9	2.1
29	Thailand	5.4	4.5	7.0	4.6	87	Russia	4.1	3.1	4.8	4.3
	Chile	6.5	6.6	7.0	6.0		Poland	5.3	5.3	4.8	5.8
31	Lithuania	5.9	5.5	6.9	5.2		Mozambique	4.2	4.0	4.8	3.9
	Kuwait	5.6	6.3	6.9	3.7	90	Benin	4.7	4.6	4.7	4.8
33	Qatar	6.5	7.0	6.8	5.6		Slovenia	5.6	6.6	4.7	5.5
	Malaysia	6.2	5.9	6.8	5.9		Serbia	3.6	3.6	4.7	2.6
	Panama	5.3	4.2	6.8	5.0		Paraguay	3.5	2.7	4.7	3.0
36	India	5.6	4.9	6.7	5.1	94	Macedonia	3.8	3.8	4.6	2.9
	Belgium	7.5	7.4	6.7	8.2		Tanzania	4.5	4.5	4.6	4.5
38	Hungary	6.4	6.1	6.6	6.5		Ukraine	4.2	3.7	4.6	4.3
	Israel	6.5	6.0	6.6	7.0		Ecuador	4.0	2.7	4.6	4.6
	Jordan	5.9	5.6	6.6	5.5		Algeria	4.0	3.7	4.6	3.7
41	Bahrain	5.7	5.5	6.5	5.2	99	Venezuela	3.2	2.0	4.5	3.2
42	Botswana	5.8	6.7	6.4	4.1		Zimbabwe	3.2	2.0	4.5	3.1
	Cyprus	6.3	6.6	6.4	5.9		Cameroon	3.8	3.0	4.5	4.0
	France	7.2	7.1	6.4	8.1		Argentina	4.3	3.8	4.5	4.8
45	Malta	6.6	7.5	6.3	6.0	103	Ethiopia	3.7	3.0	4.4	3.7
46	Latvia	5.4	5.7	6.2	4.2		Burkina Faso	4.6	4.2	4.4	5.3
47	Turkey	5.3	4.8	6.1	4.9	105	Nigeria	3.5	2.6	4.3	3.6
	Greece	6.0	5.8	6.1	6.0	106	Burundi	3.2	2.3	4.2	3.1
48	Mauritius	5.7	6.3	6.0	4.9		Bolivia	3.6	3.1	4.2	3.4
	El Salvador	4.8	4.2	6.0	4.2		Madagascar	4.2	4.3	4.2	4.1
	Sri Lanka	4.6	4.0	6.0	4.0		Nicaragua	3.6	3.0	4.2	3.6
	Pakistan	4.0	2.7	6.0	3.3	110	Chad	3.2	1.8	4.1	3.8
53	Costa Rica	5.6	6.3	5.9	4.7	111	Uganda	4.4	3.5	3.6	6.0
	Italy	6.1	5.6	5.9	6.8	112	Guyana	3.2	3.7	3.3	2.6
55	Jamaica	4.8	4.5	5.8	4.0		Bosnia-Herzegovina	3.3	3.9	3.3	2.8
	Morocco	5.1	4.4	5.8	5.0	114	Angola	2.8	3.0	3.0	2.4
57	Colombia	4.9	3.7	5.7	5.3	115	Bangladesh	2.5	2.8	2.8	2.1
	Czech Republic	6.1	6.0	5.7	6.5						

**EXHIBIT 9: Ranking by IPR Score**

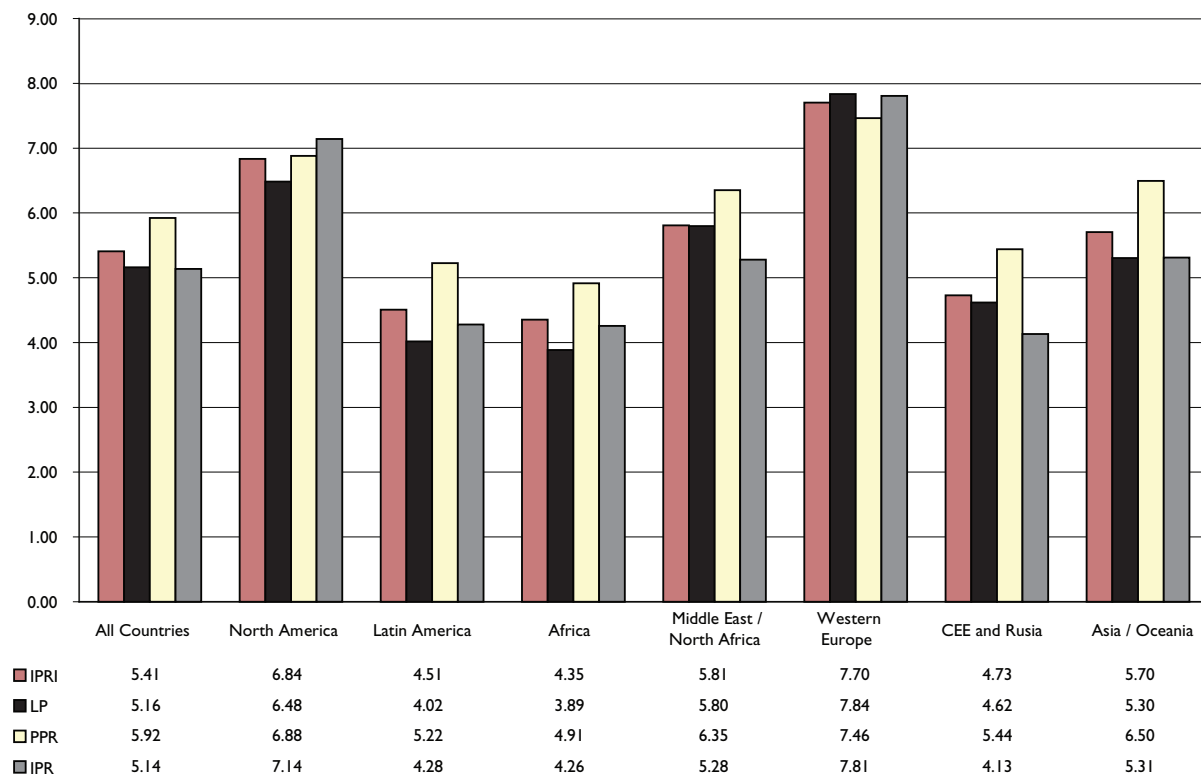
Rank	Country	IPRI	LP	PPR	IPR	Rank	Country	IPRI	LP	PPR	IPR
1	Germany	8.3	8.3	7.9	8.7		Mauritius	5.7	6.3	6.0	4.9
2	Finland	8.7	8.9	8.5	8.6	60	Mali	4.8	4.4	5.2	4.8
	Netherlands	8.5	8.4	8.6	8.6		Benin	4.7	4.6	4.7	4.8
	Denmark	8.5	8.6	8.3	8.6		Brazil	4.7	4.2	5.0	4.8
	United States	7.8	7.1	7.8	8.6		Philippines	4.5	3.3	5.5	4.8
6	United Kingdom	7.8	7.9	7.1	8.5		Argentina	4.3	3.8	4.5	4.8
7	Japan	7.6	7.4	7.2	8.2	65	Costa Rica	5.6	6.3	5.9	4.7
	Belgium	7.5	7.4	6.7	8.2	66	Croatia	4.9	5.0	5.2	4.6
	Australia	8.2	8.3	8.1	8.2		Ecuador	4.0	2.7	4.6	4.6
10	France	7.2	7.1	6.4	8.1		Thailand	5.4	4.5	7.0	4.6
	Austria	8.1	8.4	7.8	8.1	69	Tanzania	4.5	4.5	4.6	4.5
12	Switzerland	8.2	8.8	8.0	8.0	70	China	4.7	4.0	5.6	4.4
	Canada	7.9	8.3	7.5	8.0	71	Russia	4.1	3.1	4.8	4.3
14	Luxembourg	7.2	8.4	5.1	7.9		Egypt	4.6	4.6	5.0	4.3
	New Zealand	8.3	8.8	8.3	7.9		Malawi	5.3	4.2	7.3	4.3
16	Sweden	8.3	8.6	8.5	7.8		Ukraine	4.2	3.7	4.6	4.3
	Ireland	8.0	8.1	7.9	7.8	75	El Salvador	4.8	4.2	6.0	4.2
	Singapore	8.1	8.2	8.2	7.8		Latvia	5.4	5.7	6.2	4.2
19	Norway	8.3	8.5	8.7	7.7	77	Madagascar	4.2	4.3	4.2	4.1
20	South Africa	6.8	5.9	7.1	7.4		Honduras	4.4	3.6	5.6	4.1
21	Spain	6.8	6.1	7.1	7.3		Botswana	5.8	6.7	6.4	4.1
22	Israel	6.5	6.0	6.6	7.0		Dominican Republic	4.5	4.2	5.2	4.1
	Portugal	7.1	7.1	7.2	7.0	81	Jamaica	4.8	4.5	5.8	4.0
24	Korea (South)	6.8	6.3	7.3	6.8		Sri Lanka	4.6	4.0	6.0	4.0
	Iceland	8.1	8.9	8.5	6.8		Cameroon	3.8	3.0	4.5	4.0
	Italy	6.1	5.6	5.9	6.8	84	Guatemala	4.3	3.4	5.6	3.9
27	Czech Republic	6.1	6.0	5.7	6.5		Kenya	4.2	3.1	5.6	3.9
	Hungary	6.4	6.1	6.6	6.5		Mozambique	4.2	4.0	4.8	3.9
29	United Arab Emirates	6.9	6.6	7.7	6.4	87	Chad	3.2	1.8	4.1	3.8
30	Taiwan	6.5	5.9	7.3	6.3	88	Kuwait	5.6	6.3	6.9	3.7
31	Slovakia	6.3	5.6	7.1	6.2		Ethiopia	3.7	3.0	4.4	3.7
	Hong Kong	7.3	7.8	7.8	6.2		Algeria	4.0	3.7	4.6	3.7
33	Chile	6.5	6.6	7.0	6.0		Peru	4.2	3.3	5.6	3.7
	Greece	6.0	5.8	6.1	6.0	92	Nicaragua	3.6	3.0	4.2	3.6
	Uganda	4.4	3.5	3.6	6.0		Nigeria	3.5	2.6	4.3	3.6
	Malta	6.6	7.5	6.3	6.0	94	Bolivia	3.6	3.1	4.2	3.4
37	Cyprus	6.3	6.6	6.4	5.9		Indonesia	4.1	3.3	5.6	3.4
	Malaysia	6.2	5.9	6.8	5.9		Vietnam	4.4	4.4	5.5	3.4
39	Poland	5.3	5.3	4.8	5.8	97	Pakistan	4.0	2.7	6.0	3.3
40	Qatar	6.5	7.0	6.8	5.6		Nepal	3.9	3.1	5.4	3.3
41	Estonia	6.6	6.8	7.4	5.5	99	Venezuela	3.2	2.0	4.5	3.2
	Slovenia	5.6	6.6	4.7	5.5	100	Zimbabwe	3.2	2.0	4.5	3.1
	Jordan	5.9	5.6	6.6	5.5		Burundi	3.2	2.3	4.2	3.1
	Trinidad and Tobago	5.1	4.7	5.1	5.5	102	Kazakhstan	4.1	3.8	5.6	3.0
45	Colombia	4.9	3.7	5.7	5.3		Paraguay	3.5	2.7	4.7	3.0
	Burkina Faso	4.6	4.2	4.4	5.3	104	Macedonia	3.8	3.8	4.6	2.9
47	Lithuania	5.9	5.5	6.9	5.2	105	Zambia	4.0	4.1	5.1	2.8
	Bahrain	5.7	5.5	6.5	5.2		Bosnia-Herzegovina	3.3	3.9	3.3	2.8
49	India	5.6	4.9	6.7	5.1	107	Serbia	3.6	3.6	4.7	2.6
	Bulgaria	5.1	4.5	5.6	5.1		Guyana	3.2	3.7	3.3	2.6
51	Mauritania	4.8	4.0	5.2	5.0	109	Angola	2.8	3.0	3.0	2.4
	Panama	5.3	4.2	6.8	5.0	110	Moldova	3.6	3.5	5.0	2.2
	Morocco	5.1	4.4	5.8	5.0	111	Albania	3.5	3.6	4.9	2.1
	Tunisia	5.9	5.7	7.1	5.0		Bangladesh	2.5	2.8	2.8	2.1
55	Romania	4.8	4.5	4.9	4.9		Azerbaijan	3.4	3.2	5.0	2.1
	Turkey	5.3	4.8	6.1	4.9	114	Montenegro	3.9	4.1	5.6	1.9
	Uruguay	5.5	6.5	5.2	4.9	115	Armenia	3.7	3.7	5.6	1.8
	Mexico	4.8	4.1	5.4	4.9						

Regional Distribution of IPRI

**EXHIBIT 10: Average Performance by Region and Component**

REGION	IPRI	LP	PR	IPR
All Countries	5.41	5.16	5.92	5.14
North America	6.84	6.48	6.88	7.14
Latin America	4.51	4.02	5.22	4.28
Africa	4.35	3.89	4.91	4.26
Middle East / North Africa	5.81	5.80	6.35	5.28
Western Europe	7.70	7.84	7.46	7.81
CEE and Russia	4.73	4.62	5.44	4.13
Asia / Oceania	5.70	5.30	6.50	5.31

**EXHIBIT 11: Average Performance by Region**



## IPRI and Economic Well-Being

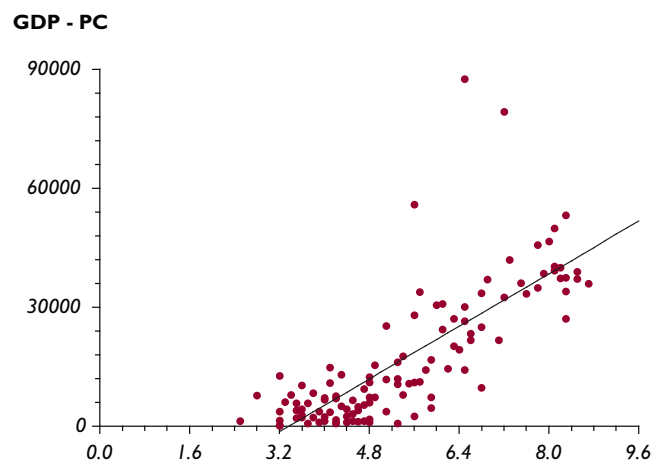
The underlining assumption of the study for the IPRI is the correlation between an effective property rights regime and its significant impact on the economic performance of a country. [Exhibit 12](#) below illustrates that according to the distribution of average income between the countries in the quintiles, the countries with stronger property right scores tend to be within the nations with higher per capita incomes and the countries with weaker property right scores within the nations with lower per capita income.

[Exhibit 13](#) presents the positive relationship between the IPRI and the GDP per capita – the IPRI ranking of each country and its GDP per capita is significantly related. The observed trend is that the countries with stronger property rights protection are among the countries with higher GDP per capita income as compared to the countries at the bottom of the IPRI ranking.

### EXHIBIT 12: Average Income by Quintile

IPRI QUARTILES	AV. GDP P.C.
Top 20 Percent	\$39,991
2nd Quintile	\$23,982
3rd Quintile	\$11,748
4th Quintile	\$4,891
Bottom 20 percent	\$4,341

### EXHIBIT 13: Relationship between IPRI and GDP Per Capita (with fitted line)



In fact, using a simple regression to determine the relationship, the relationship presents a statistically significant positive relationship, with a correlation efficiency of 0.79 and explanatory power (r-squared) of 0.61. According to the relationship fitted between the two data sets using the simple regression, a one point increase in the IPRI score predicts a \$8,289 increase in GDP per capita. In fact when this same simple regression is used with the individual core component scores as the independent variable, for LP, the correlation coefficient is 0.80, for PPR 0.65 and for IPR 0.72. However, only a correlation is shown here not an unambiguously proven causality.

Exhibits 14- 16 present the relationship between the individual core components; LP, PPR and IPR, and GDP per capita.

## **SPECIAL COUNTRY CASES**

The top performing country in 2009 is Finland with a score of 8.7, which is a 0.1 increase from last year. The country with the weakest score is Bangladesh with a score of 2.5, which is a decline of 0.4 from last year.

This year the authors have decided to pick countries randomly representing different regions of the world and present them in relation to protection of property rights with a special focus on intellectual property rights. The authors believe that intellectual property rights is an area which could improve significantly in many of the countries in the index. Recognizing, establishing and enforcing intellectual property rights could save billions of dollars that are lost to legitimate owners, copyright and patent holders in film, music, software and health industries. The recognition of patent, copyright and trademark legislations, the establishment of systems and mechanisms to enforce IPR indicate the existence of an effective and a strong IPR regime.

A prosperous economy should have strong enforcement of private and intellectual property rights. The 2009 IPRI has some of the highest ranked countries from Europe. However, Europe (both Eastern and Western Europe as a whole) include countries where the struggle for the protection of intellectual property still continues. In this region, there is especially a great need for enforcement against counterfeiting and piracy.

### **SWEDEN /ITALY /CZECH REPUBLIC**

All three countries presented were selected due to each of their significance – both Sweden and Italy are prominent members of the European Union (EU) and Czech Republic is set to assume the Presidency of the EU in 2009. These three countries are presented in relation to the furtherance of IPR.

Up until 2006, one of the largest global sellers of pirated films and music files was sold by a company based in Sweden – PirateBay. The site still exists despite raiding and Swedish government's action against some of the offenders this year. However, appropriate action against the offenders highlights initiative to protect copyright-protected films and music. As with many the Central and East European countries, the Czech Republic has a well organized market selling pirated and counterfeit products. There is mounting international pressure on Czech Republic to take firm enforcement action against offenders. Italy is considered to have one of the highest piracy rates in Western Europe.<sup>20</sup> However, Italy's IPR score improved from 6.5 in 2008 to 6.8 this year. This perhaps marks Italy securing senior-level support for IPR enforcement.<sup>21</sup>

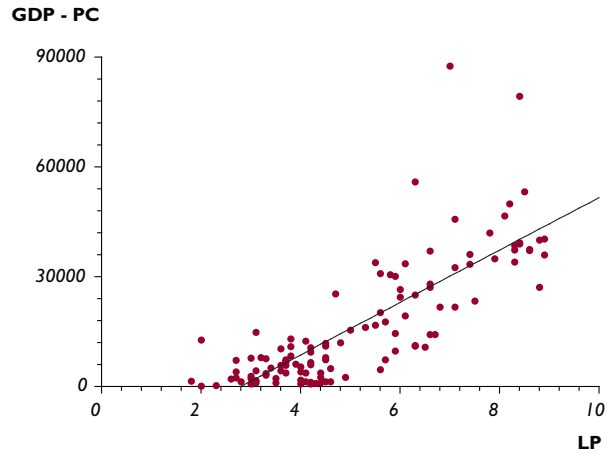
In the IPRI 2009, all three countries have improved their score and ranking as compared to 2008. Sweden is ranked at 4<sup>th</sup> with a score of 8.3 while both Italy and the Czech Republic are ranked 37<sup>th</sup> with a score of 6.1.

### **INDIA/CHINA/PAKISTAN**

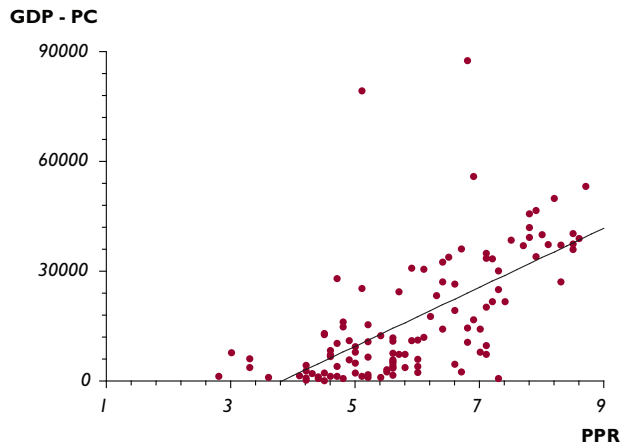
These three countries are rapidly growing economies in the world, especially in the case of China and India.

India is ranked 46<sup>th</sup> this year with an IPRI score of 5.6 while China and Pakistan ranked 62<sup>nd</sup> and 93<sup>rd</sup> with a 4.7 and a 4.0 IPRI score respectively. In the case of all these countries, there is a need for improvement in the area of protection of private and intellectual property rights. Of the three countries, India has the highest IPR (5.1) and PPR (6.7). One significant factor is that among the three countries Pakistan has the lowest score (2.7) in the core component of legal and political environment. This year, Pakistan has slightly improved the overall IPRI score and climbed up the ranking. However, for the greater improvement of the protection of property rights, the authors believe that the legal and the political environment is a main contributory factor.

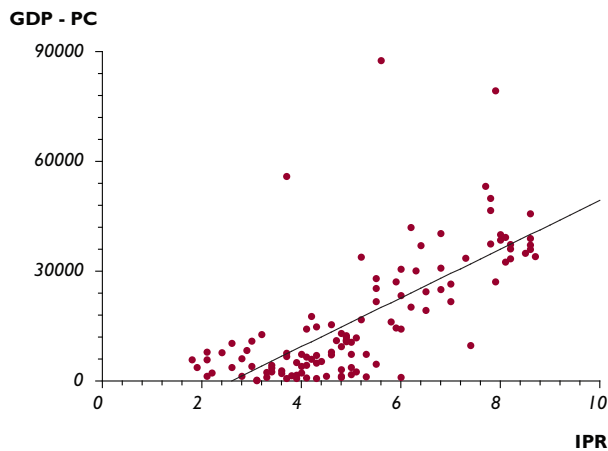
**EXHIBIT 14: Relationship between LP and GDP Per Capita**



**EXHIBIT 15: Relationship between PPR and GDP Per Capita**



**EXHIBIT 16: Relationship between IPR and GDP Per Capita**



It should be noted that China has one of the largest whole sale markets of pirated and counterfeit products. Additionally, one of the biggest problems that affect consumer health is the manufacture of counterfeit pharmaceuticals which takes place in many Asian countries including China and India. These actions directly relate to property rights and from the point of protection of property rights, there is need for improvement.

### **ARGENTINA/PARAGUAY/VENEZUELA**

This set of countries is of importance for several reasons – both Argentina and Paraguay (together with Brazil) are geographically connected to the region referred to as 'Tri-border region' which is a buzzing area of pirated and counterfeit products. Venezuela has one of the weakest IPR regimes in Latin America. This year Venezuela is ranked 109<sup>th</sup> with an overall IPRI score of 3.2.

In the 2009 IPRI, both Argentina and Paraguay marked a slight increase in certain components and decrease in others. Paraguay is ranked 104<sup>th</sup> from 109<sup>th</sup> last year with a slightly improved score of 3.5 this year. Argentina's overall IPRI score for 2009 is 4.3 and is ranked 80<sup>th</sup> in this year's Index. While IPR has improved slightly this year, Paraguay is among the countries with the lowest score in the legal and political component. Of the three countries, Venezuela possesses the lowest score (2.0) for legal and political environment.

All three countries are from Latin America, a region that has a high piracy rate. These countries are in need of immediate action in the area of intellectual property rights. But a significant factor in the improvement of property rights is the legal and political environment. As shown from the cases presented, it is evident that many of the countries with weak property rights scores and IPR infringements also have some of the lowest scores for legal and political environment.

### **CONCLUSION**

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The 2009 IPRI is presented at a time of uncertainty for the world economy with the threat of a global recession affecting the US and other major economies. However this study finds that among the 115 countries included in the 2009 IPRI there are changes and also some growth in the area of property rights especially in countries in the second, the third and the fourth quintiles.

Chapter IV presents the reader with the IPRI outcomes in relation to the protection of private property rights globally. The results presented indicate that there is a positive relationship between the protection of property rights and a country's economic well-being. In fact, the outcome of the results indicates that countries with a robust legal and political system embodies a strong system of property rights and are among the countries with higher GDP per capita. Additionally, the results suggest that the countries at the top end of the IPRI ranking with strong property rights protection are mostly industrialized countries enjoying a GDP per capita income of more than nine times higher than their counterparts at the lower end of the ranking.

A study such as this affords the opportunity to study factors that affect economic development and creates an opportunity to focus on policies aimed at poverty eradication and economic well being of countries.

Thus the three papers presented here, provide policy makers, researchers and governments excellent insight in to how positive, poverty eradicating changes have been brought on by land titling programs and sheds light into issues leading to possible policies and laws concerning geographical indications in the area of intellectual property rights. While the papers presented relate to protection of property rights, the present study indicates that a sound legal and political environment is a necessary factor which provides a platform for ongoing economic well being. Finally, the reader is advised that the conclusions drawn are primarily based on data prior to changes in the global economy.

## CHAPTER V: IPRI AND GENDER EQUALITY

This chapter presents the importance of gender equality with regard to property rights. The purpose of a separate component covering gender equality with special focus on women is due to the crucial role women play in the economic development of a country. Women's equal rights to the free possession, enjoyment and disposal of property are a universal human right recognized by international human rights treaties including the *Universal Declaration on Human Rights (UDHR)*.<sup>22</sup> In fact, the recognition of "the same rights for both spouses in respect of the ownership, acquisition, management, administration, enjoyment and disposition of property, whether free of charge or for a valuable consideration"<sup>23</sup> and "to have access to agricultural credit and loans, marketing facilities, appropriate technology and equal treatment in land and agrarian reform as well as in land resettlement schemes" are universally considered as part of elimination of all forms of discrimination against women.

### THE CONCEPT

Studies have found that women form more than 70% of the world's poor and this is largely due to unequal opportunities.<sup>24</sup> Women's rights, with regard to property, are regularly taken for granted in industrialized countries but are often non-existent in developing countries (both in practice and now and again in written statute). To account for the aspect of gender equality, this report integrates an idea to extend the standard IPRI measure with a measure of gender equality (GE) concerning property rights. The general formula of this modified index (IPRI(GE)) that considers gender aspects is the following:

$$\text{IPRI(GE)} = \text{IPRI} + 0.2 * \text{GE}$$

The weight of 0.2 for the gender equality measure was chosen somewhat arbitrarily by the authors and the reader is invited to change this weight according to his/her preference. The construction of the GE measure is based on the five indicators displayed in Exhibit 17.

#### EXHIBIT 17: Structure of the Gender Equality Component (GE)

- Women's Access to Land
- Women's Access to Credit
- Women's Access to Property Other Than Land
- Inheritance Practices
- Women's Social Rights \*

\*This indicator is a composite of five other variables combined to represent "women's social rights."

## THE VARIABLES

### **Women's Access to Land/Women's Access to Property Other than Land/Women's Access to Credit**

These three variables are integrated in the GE component as they indicate the quality of women's ownership rights with respect to three aspects: women's access to bank loans, their right to acquire and own land, and the right to own property other than land. IPRI 2009 has updated data for the three variables. The rating on these factors indicates the extent of restrictions or the size of the female population for which restrictions are relevant. However, some restrictions may only be relevant for a woman in a specific stage of her life (e.g. married women). **Source:** *OECD Gender, Institutions and Development Data Base (GID)*.

### **Inheritance Practices**

This factor covers inheritance practices, ranking countries on the degree to which regulations preference male heirs. In other words, this variable indicates to which extent bequests are equally shared between male and female offspring. The IPRI 2009 presents updated data for this variable. **Source:** *OECD Gender, Institutions and Development Data Base (GID)*.

### **Women's Social Rights**

Women's Social Rights is the only variable that covers broader aspects of women's equality. In 2007, the data for this variable was taken from the Cingranelli-Richards Human Rights Data set. However, since this source was not updated since 2004, last year the authors created a composite social rights variable that mirrored the 2007 source so that GE scores between years would be comparable and a consistently updated source could be employed. The data for this variable is from the same source as the other variables, but is composed of a simple composite of the following measures: Repudiation, Parental Authority, Female Genital Mutilation, Freedom of Movement, and Ration of Female-to-Male Adult Literacy. **Source:** *OECD Gender, Institutions and Development Data Base (GID)*.

## METHODOLOGY

The methodology of the GE component is identical to the one used to construct the IPRI. The final GE score is also an index based on the average of equally weighted variables, which ranges on a scale of 0 to 10. This, a score of 0 signifies complete discrimination against women, while a 10 is given to countries with fully developed equal rights of ownership between the sexes. Given that all the factor's basic data sets were constructed as indices, we simply normalized the data to the 0-10 scale.<sup>25</sup>

Consequently, for the final IPRI (GE) ranking, a 0-12 scale results due to the 0.2 weighting for GE.

## RESULTS AND COMPARISON

Exhibit 18 presents the results of the IPRI integrating the gender equality (GE) variables. This year presents the results for 90 countries. This is due to data constraints in some of the variables. The updated variables this year present data for additional countries, however, due to data constraints in *women's social rights* which contains five data measures, the authors have decided to present results for the 90 countries only.

This year, the top performing country is Finland (10.7) and there are two countries at the bottom with a score of 3.5 – Bangladesh and Chad. In the GE score, Bangladesh is ranked 72<sup>nd</sup> (moving up seven places as compared to last year) and Chad at the bottom of the ranking with 90<sup>th</sup>. The final IPRI (GE) resembles a similar pattern to that of the IPRI ranking which is due to the relatively low weight of 0.2 given to the GE component.

Exhibit 19 presents the ranking by the GE score. One will also notice a heavy grouping of countries at the top with a score of 10.0 in the GE component. This is the result of a somewhat generous measure employed in the underlying data source (the GID). This unfortunately eliminates a great deal of potential variance which might have been used to create

**EXHIBIT 18: By IPRI(GE) Ranking**

Rank	Country	IPRI (GE)	GE	Rank	Country	IPRI (GE)	GE
1	Finland	10.7	10.0		Brazil	6.7	10.0
2	Denmark	10.5	10.0		China	6.7	9.9
	Netherlands	10.5	10.0		Colombia	6.7	9.0
4	Germany	10.3	10.0	49	India	6.6	5.1
	New Zealand	10.3	10.0		Malawi	6.6	6.6
	Norway	10.3	10.0		Botswana	6.6	4.0
	Sweden	10.3	10.0	52	Philippines	6.5	10.0
8	Australia	10.2	10.0	53	Honduras	6.4	10.0
	Switzerland	10.2	10.0		Vietnam	6.4	9.8
10	Austria	10.1	10.0	55	Argentina	6.3	10.0
11	Ireland	10.0	10.0		Morocco	6.3	6.0
12	Canada	9.9	10.0	57	Egypt	6.2	7.8
13	United Kingdom	9.8	10.0		Mauritania	6.2	7.0
	United States	9.8	10.0		Peru	6.2	10.0
15	Japan	9.6	10.0		Ukraine	6.2	10.0
16	Belgium	9.5	10.0	61	Dominican Republic	6.1	8.0
17	France	9.2	10.0		Russia	6.1	10.0
18	Portugal	9.1	10.0	63	Ecuador	6.0	10.0
19	Spain	8.8	10.0	64	Indonesia	5.9	8.8
20	Estonia	8.6	10.0		Madagascar	5.9	8.5
	Malta	8.6	10.0	66	Sri Lanka	5.8	5.8
22	Hungary	8.4	10.0	67	Armenia	5.7	9.9
	Korea (South)	8.4	8.0		Mali	5.7	4.7
24	Chile	8.3	9.0	69	Benin	5.6	4.4
	Israel	8.3	8.8		Bolivia	5.6	9.9
26	Czech Republic	8.1	10.0		Burkina Faso	5.6	5.0
	Italy	8.1	10.0	72	Paraguay	5.5	10.0
28	South Africa	8.0	5.8	73	Nicaragua	5.4	9.0
29	Malaysia	7.9	8.5		Tanzania	5.4	4.3
30	Tunisia	7.8	9.6	75	Uganda	5.3	4.5
31	Mauritius	7.7	10.0	76	Algeria	5.2	6.1
32	Costa Rica	7.6	10.0		Venezuela	5.2	10.0
	United Arab Emirates	7.6	3.6	78	Kenya	5.1	4.7
34	Uruguay	7.5	10.0		Mozambique	5.1	4.3
35	Thailand	7.4	9.9	80	Nepal	5.0	5.4
36	Kuwait	7.3	8.7	81	Pakistan	4.9	4.4
	Poland	7.3	10.0	82	Cameroon	4.7	4.7
38	Bulgaria	7.1	10.0		Zambia	4.7	3.6
	Turkey	7.1	9.0	84	Albania	4.5	4.9
40	Jordan	7.0	5.6		Ethiopia	4.5	4.1
41	Panama	6.9	8.0	86	Nigeria	4.3	3.8
42	El Salvador	6.8	10.0	87	Angola	3.9	5.5
	Mexico	6.8	10.0		Zimbabwe	3.9	3.7
	Romania	6.8	10.0	89	Bangladesh	3.5	5.0
45	Bahrain	6.7	4.8		Chad	3.5	1.7

**EXHIBIT 19: By GE Score**

Rank	Country	IPRI (GE)	GE	Rank	Country	IPRI (GE)	GE
1	Argentina	6.3	10.0		Thailand	7.4	9.9
	Australia	10.2	10.0	47	Vietnam	6.4	9.8
	Austria	10.1	10.0	48	Tunisia	7.8	9.6
	Belgium	9.5	10.0	49	Chile	8.3	9.0
	Brazil	6.7	10.0		Colombia	6.7	9.0
	Bulgaria	7.1	10.0		Nicaragua	5.4	9.0
	Canada	9.9	10.0		Turkey	7.1	9.0
	Costa Rica	7.6	10.0	53	Indonesia	5.9	8.8
	Czech Republic	8.1	10.0		Israel	8.3	8.8
	Denmark	10.5	10.0	55	Kuwait	7.3	8.7
	Ecuador	6.0	10.0	56	Madagascar	5.9	8.5
	El Salvador	6.8	10.0		Malaysia	7.9	8.5
	Estonia	8.6	10.0	58	Dominican Republic	6.1	8.0
	Finland	10.7	10.0		Panama	6.9	8.0
	France	9.2	10.0		Korea (South)	8.4	8.0
	Germany	10.3	10.0	61	Egypt	6.2	7.8
	Honduras	6.4	10.0	62	Mauritania	6.2	7.0
	Hungary	8.4	10.0	63	Malawi	6.6	6.6
	Ireland	10.0	10.0	64	Algeria	5.2	6.1
	Italy	8.1	10.0	65	Morocco	6.3	6.0
	Japan	9.6	10.0	66	South Africa	8.0	5.8
	Malta	8.6	10.0		Sri Lanka	5.8	5.8
	Mauritius	7.7	10.0	68	Jordan	7.0	5.6
	Mexico	6.8	10.0	69	Angola	3.9	5.5
	Netherlands	10.5	10.0	70	Nepal	5.0	5.4
	New Zealand	10.3	10.0	71	India	6.6	5.1
	Norway	10.3	10.0	72	Bangladesh	3.5	5.0
	Paraguay	5.5	10.0	73	Burkina Faso	5.6	5.0
	Peru	6.2	10.0	74	Albania	4.5	4.9
	Philippines	6.5	10.0	75	Bahrain	6.7	4.8
	Poland	7.3	10.0	76	Cameroon	4.7	4.7
	Portugal	9.1	10.0		Kenya	5.1	4.7
	Romania	6.8	10.0		Mali	5.7	4.7
	Russia	6.1	10.0	79	Uganda	5.3	4.5
	Spain	8.8	10.0	80	Benin	5.6	4.4
	Sweden	10.3	10.0		Pakistan	4.9	4.4
	Switzerland	10.2	10.0	82	Mozambique	5.1	4.3
	Ukraine	6.2	10.0		Tanzania	5.4	4.3
	United Kingdom	9.8	10.0	84	Ethiopia	4.5	4.1
	United States	9.8	10.0	85	Botswana	6.6	4.0
	Uruguay	7.5	10.0	86	Nigeria	4.3	3.8
	Venezuela	5.2	10.0	87	Zimbabwe	3.9	3.7
43	Armenia	5.7	9.9	88	United Arab Emirates	7.6	3.6
	Bolivia	5.6	9.9		Zambia	4.7	3.6
	China	6.7	9.9	90	Chad	3.5	1.7

more dispersion among the GE rankings. However, the final IPRI(GE) scores and rankings accurately reflect the relative strength of each country along the criteria of this particular score.

It is the authors' desire to present this year's IPRI as a tool to researchers and policy makers not only as a study which measures the protection of property rights and economic development of a country, but also as a study which presents current significant issues in relation to property rights. An understanding of these issues would aid policy makers in the international arena to propose and introduce policies and laws that best address these.

The following paper discusses the significance of ensuring women's property rights and women's role in economic development.

## CASE STUDY: WOMEN'S RIGHTS TO PROPERTY AND ECONOMIC DEVELOPMENT

By **Clarissa Augustinus**, Ph.D, Chief, Land, Tenure and Property Administration Section, Shelter Branch, UN-HABITAT and **Åsa Jonsson**, Human Settlements Officer, Land, Tenure and Property Administration Section, Shelter Branch, UN-HABITAT

Equal property rights of women and men are fundamental to social and economic gender equality. Equal property rights are clearly established under international human rights principles and the ratification of numerous human rights treaties. Despite legal progress on women's rights women's access to land and security of tenure still remains very low in many parts of the world. It is estimated that only 2% of women in developing countries own land<sup>26</sup>. Little comparative data is available on women's general secure tenure and more gender disaggregated data is necessary to complete this picture.

Research shows that despite progress on women's equal rights to property, land and housing in laws and policies, actual implementation of these often differs due to numerous obstacles, ranging from patriarchal attitudes and cultural practices to a general lack of political will and resources<sup>xxvii</sup>. While some countries treat land as a human right to be enjoyed equally by women and men, many others allow market forces or customary and traditional laws to determine who has access to land. Social customs or patriarchal tenure systems often mean that women exercise only subordinate rights vis-à-vis husbands or male relatives, vulnerable to breakdowns in relationships, divorce or to the changing priorities of male landowners.

The heterogeneity of women in the context of property rights needs to be fully appreciated, noting that women suffer from discrimination and injustice under various disguises. Conflict and HIV/AIDS has disproportionately affected women's land rights in many contexts. Women living in informal settlements and slums, indigenous women, the disabled, elderly and widows and refugees are also frequently marginalized. Women or child-headed households—representing a high proportion of the poorest living in informal settlements, and on the increase in the context of HIV/AIDS—are particularly vulnerable as they may lose their rights not only to land but housing and other assets after the death or desertion of an adult male.

Within the context of lacking rights to property, many women are unable to utilize the economic benefits of such rights and to secure their livelihoods. There is a strong positive association between women's right to property and poverty reduction. As women generally have a broader household management role, their control of land assets has proven to enhance overall household welfare, including increased spending on food, children's health and education. Secure land rights for female farmers and businesswomen can improve investment, access to sources of credit and better land use and productivity, with women frequently regarded as at lower risk of credit default than men.

Achieving economic development based on rights to property is nonetheless complex. The benefits and limitations of different tenure options need to be carefully reviewed within various contexts to ascertain their specific advantages for women. The benefits of new schemes also need to be evaluated against those of pre-existing land rights, which may, in certain situations have had particular social and economic benefits for women and be at risk of being eroded.

Context-specific assessments of different tenure options are likely to result in the largest economic benefits for women as well as men. Research has shown that providing women, or men, with individual land titles not automatically results in economic benefits for them<sup>28</sup>. Growing evidence suggest that the impact of land titles on access to credit, whether for women or men, is limited<sup>29</sup>. The right to property needs to be put in the context of other bottlenecks for women, including patriarchal social structures, illiteracy, technological barriers, lack of access to information about their rights, and restrictive bank regulations that can limit the successful operationalization of a title. In many parts of the world, women are the de facto head of the household, responsible for general family welfare. In these cases, they may be less willing to consider an individual loan against their 'title', particularly when many financial institutions will heavily discount the value of that 'title' when negotiating the loan (ie, less than 50% of its real market value).

For the foreseeable future, intermediate tenure options that are easier to obtain, as well as collective forms of tenure such as long-term leases of land titles to community cooperatives, may provide more realistic models for securing women's land rights and for leveraging these land rights for other social or economic priorities. For women-led savings and credits groups, for example, such as the Women's Bank in Sri Lanka or organisations operating under the umbrella of Slum/Shackdwellers International (SDI), group tenure arrangements have proven to deliver social stability, economic leverage and financial risk management strategies for many women and their households.

UN-HABITAT is facilitating a global network, the Global Land Tool Network (GLTN), which is promoting, among other things, the mainstreaming of gender in scaled up land tools.

## CHAPTER VI: CASE STUDIES

The papers presented in this chapter focus on issues and development in the areas of private and intellectual property rights.

### PRIVATE PROPERTY RIGHTS

## CASE STUDY: CASE STUDY OF EL SALVADOR'S PROPERTY FORMALIZATION PROGRAM

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### INTRODUCTION

The present article is an invitation for the reader to, through the conduct of the Salvadorian case, turn his or her attention towards that great universe that is the extralegal world. A world which, despite its magnitude and giddy growth, is located on the fringes of the legal system and what protection it affords, and excluded from the benefits of a modern and inclusive economy.

The extensive extralegality in developing countries makes it evident that the problem at hand is significant. According to the Final Report of the Commission on Legal Empowerment of the Poor (CLEP), launched on June 2008, "(...) at least four billion people (70% of the world's population) are excluded from the rule of law. It means that (...) it is the minority of the world's people who can take advantage of legal norms and regulations. The majority of humanity is on the outside looking in, unable to count on the laws' protection and unable to enter national, let alone global markets" <sup>30</sup>

It is also clear that despite the initiatives undertaken and the institutional reforms designed and implemented during the course of the two last decades, in most developing countries the legal system has not yet managed to provide all the mechanisms needed to generate the main effects that all modern legal property systems should provide. As a result, the *property rights of most people (...) are not protected, contracts are not enforced, and registries and other institutions required to protect property function poorly or not at all*. <sup>31</sup>

There is no doubt that the challenges ahead require integral and effective solutions, and that comprehensive and far reaching reforms are required in order to facilitate the inclusion of huge sectors of the population that have traditionally been relegated or excluded from the formal world. Said reforms should have to be focused on facilitating both formalization and capitalization of extralegal assets, providing their owners with legal means that enable them to "*add an economic dimension (to their assets) that permits – if they want to – to use the representation of property not only to safeguard their rights but to generate multiple economic functions which go beyond possession, linking them with the financial and capital world*" <sup>32</sup>

We intend, therefore, to make the most of this space in sharing the experience of the Property Formalization Program of El Salvador, in the hope that its dissemination will help the reader understand the magnitude and main causes of extralegality, as well as the main obstacles towards the formalization and capitalization of real estate assets. We look, in addition, to reflect on the importance of the reforms implemented during the last decades and on their impact in the betterment of the living standards of the poor majorities, as well as on their effect in the consolidation of the processes of national pacification, the reconstruction of populations affected by natural disasters, the prevention circumstances of violence, and the provision of greater public safety, among other benefits. Finally, it invites us to reflect on the scope of the agenda for the passage towards a modern and inclusive market economy.

## A BRIEF HISTORY

In 1990, El Salvador was in the last gasps of a decade-long, bloody civil war and the aftermath of two devastating earthquakes.

At the time, there had been no attempt at property reform since 1980, when an effort at agrarian reform was launched that affected some 30% of the country's lands. The reform, however, failed to create property owners; instead it imposed a collective system of property and land exploitation divorced from the realities of the Salvadoran agriculture. Hundreds of cooperatives were created and another hundred norms were legislated that actually hindered and even impeded the parceling out of the land – which fact did not preclude, nonetheless, that in the subsequent 10 years more than half of these were parceled out de facto. In addition, the expropriation processes were never finalized, which meant that distributed property titles were defective, their registry rendered impossible. Moreover, the great majority of property titles awarded to cultivators could not be registered in the existing Real Estate Registry (*Registro de la Propiedad Raíz e Hipotecas*) - created in 1881 on the basis of a century-old Spanish model and governed by norms dating back more than a hundred years - due to complex and burdensome administrative proceedings and requirements.

The lack of legal institutions that would give the great majority of Salvadorans relatively easy access to legal rights to their land and cut the costs of staying in the legal system exacerbated the lack of security that most people already felt and undercut their sense of personal, familiar, and national responsibility. The government's failure to respond was arguably one of the fundamental causes of the civil war that began in 1980. Following a protracted, murderous struggle for more than 12 years, and as a vital precondition for the consolidation of peace throughout the country, the Government of El Salvador (GoES), led by President Cristiani, launched a series of institutional reforms to restructure the state and build a market economy. The President was well aware of the importance of reforming those institutions pertaining to property.

It was in the wake of these reform initiatives that the GoES signed a Technical Cooperation Agreement with the *Institute of Liberty and Democracy* (ILD), in October 1990. The program's purpose, according to President Cristiani, was to:

*turn El Salvador into a country of property-owners and to warrant the incorporation of those most in need into the national economic and social development process, providing access to the legalization of urban and rural property and, in turn, endowing them with a legal framework which allows for - in a quick, efficient, and secure manner - the legal recognition of the property rights of the least favored rural and urban social sectors of the country.*<sup>33</sup>

In February 1991, Decree Number 17 (Decreto No. 17) stipulated both the creation of the Special Program "El Salvador, Country of Property-owners" and the institution of the *Institute of Liberty and Progress* (Instituto Libertad y Progreso, ILP), which would operate as a public and decentralized unit attached to the Presidency of the Republic, with the object of designing, promoting and implementing the new legal system for granting access to property rights and registration to low-income Salvadorans holding their real estate assets extralegally in urban and rural areas. The ILD-GoES Agreement, which was to be extended to the period 1991-1992, comprised the investigation, design, and start-up of the new Real-Estate Formalization and Registry System. The execution was bankrolled with funds originating from USAID-El Salvador and from the GoES.

## MAIN FEATURES OF THE NEW REAL ESTATE FORMALIZATION AND REGISTRY SYSTEM

There were, in turn, four components to the design and implementation of the Property Formalization Program:

Component 1: **Integrating diverse extralegal systems into one solid and uncontroversial legal property system**, which included the following:

- Identifying and classifying extralegal real estate assets as well as extralegal norms and practices governing the assignment, recognition, proof and protection of property rights; (See figure 1)

**Figure 1****TYPES OF REAL ESTATE EXTRALEGALITY IN EL SALVADOR**

- **Illegal occupations of parcels of land and buildings**, on state-owned or privately-owned lands
- **Unauthorized subdivisions and buildings**, on urban and rural areas
- **Ownership titles with restrictions due to restrictive rent laws**
- **Parcels of land allocated by the Estate under the Agrarian Reform Program without property titles or with restricted titles** (e.g. limitations to use, rent, sale, mortgage) **or defective titles** (i.e. due to unfinished expropriation procedures, overlapping of titles regarding the same plots, etc)
- **Real estate with confuse tenure status** (e.g. unregistered transfers of property, undivided inheritances, disputed property rights)

- Identifying the principal institutional obstacles to transforming extralegally held real estate assets into more productive property.

**A NEW APPROACH TO THE TOPIC OF EXTRALEGALITY**

It has traditionally been thought that extralegality only affected “the marginals”, those individuals who invade terrains and inhabit hovels. Attention did not reach that great universe of owners who, despite having acquired their holdings through legal means, and despite having invested in them, have been unable to remain in formality due to the excessive obstacles and costs imposed by the current juridical order. This circumstance prevents them from taking full advantage of the benefits inherent to property rights. Nor was the extralegal universe linked to those property-owners who, despite having registered their rights, do not enjoy full legal security as a result of the deficiencies that plague the registry system. This generates a series of risks, such as having multiple owners with registered rights to one same property, superposition of areas between registered holdings, the proliferation of counterfeit documents and fraudulent transactions – some of which involve the forgery of land owners’ signatures and the use of fake identification documents. Nor was an eye turned upon those owners who, due to a series of unjustified prohibitions and limitations, cannot exchange their real-estate assets in the market, and hence cannot optimize their use-value.

Thanks to a new and comprehensive approach to the topic of extralegality championed by the ILD we were able to confirm that in El Salvador as well as in a majority of developing countries, extralegality comprises, to a greater or lesser extent, a significant portion of real-estate assets. These assets need to be identified and classified according to their degree of extralegality, and to the causes that motivate such condition. Only from such a diagnosis it will be possible to design a reform oriented towards the formalization and capitalization of this universe of extralegal assets.

Component 2: **Building a new legal order on well-established local practices that ordinary Salvadorans, including the poorest among them, would identify with and respect**, which comprised the following:

- Establishing simplified and massive scale property formalization procedures to address the various types of informality, which included the re-engineering of the record keeping organizations and registration processes;
- Removing administrative and legal obstacles;
- Consolidating disperse legislation into a single law;
- Providing low-cost and simplified mechanisms for the resolution of disputes that may arise during the formalization process;
- Establishing mechanisms to facilitate access to credit by simplifying procedures to create mortgages; and
- Providing beneficiaries of all property formalizations programs with the necessary legal tools for choosing the kind of tenure that most suits their needs and interests; (See figure 2)

**Figure 2**

**MAIN LEGAL SECURITY PROGRAMS  
FOR REAL-ESTATE PROPERTY RIGHTS  
(1992-2006)**

- *El Salvador, a Country of Property Owners Program*
- *The Land Transfer Program*
- *The Rural Legal Security Program (PROSEGUIR)*
- *The Earthquake Reconstruction Program*
- *The Violence Prevention Program and the Vulnerability-reduction Program against natural disasters - where property formalization was a fundamental component*

Component 3: **Creating special public entities to manage the formalization program and register property rights - in a way that has eluded traditional public offices**, which involved the following:

- Implementing education and publicity campaigns throughout the country to encourage both the support and participation of main stakeholders
- Designing a field operation strategy to carry out the formalization process with the support of beneficiaries and main stakeholders, which included the following:
  - Implementing co-ordinations mechanisms among public and private entities involved in the formalization and registration process (e.g. *Institute for Liberty and Progress, Municipalities, Ministries of Housing & Urban Development, Justice and Agriculture, National Center of Registries, Legislature Assembly, financial entities, NGO's, private owners, private professionals and grassroots organizations*) <sup>34</sup>;

- Holding public assemblies within each community in order to explain the benefits of the formalization program to its members and to encourage their participation during the implementation of the program;
  - Organizing and training field teams to work in each community;
  - Implementing simplified and low-cost procedures for systematic and large-scale property formalization;
  - Establishing simplified and low-cost procedures to survey the areas to be formalized, to collect and examine existing maps and to prepare new ones;
- Organizing public ceremonies to hand out registered titles to beneficiaries - where leaders and members of each community and government authorities were invited to participate.
- Establishing a new registration system (*The Social Property Registry System- RSI*)<sup>35</sup> to be applied gradually, with simplified and low-cost procedures that facilitate and thereby encourage not only first registrations but also registration of transactions involving formalized assets. Main features of the RSI are the following:
    - It has a geographically-based real folio registration system with cutting-edge technology that integrates the legal and technical information on real estate assets, eliminating the risk of boundaries overlapping and redundant registrations regarding the same asset.
    - It keeps information on registered real estate rights up-to-date and allows the automation of registration procedures;
    - It is provided with low-cost and simplified procedures that decentralize registry activities and eliminate unnecessary legal and technical double-checks by different public offices;
    - It is provided with accurate storage, maintenance and retrieval facilities for keeping a record of the transactions. The information contained in the new registration system can be carried out via personal and real estate indexes, and information concerning real registered rights can be made readily available;
    - It eliminates registration requirements that do not have a direct bearing on ownership.
  - Providing feedback mechanisms to adapt existing laws and regulations to the new circumstances encountered during the execution of the formalization process.

Component 4: **Establishing an easy-to access inventory of private and State-owned land, which provides accurate information on lands available for urban expansion that could be offered to Salvadorans in need of housing alternatives.** Said inventory allowed the GoES to develop programs —such as the New Organized Settlements (*Nuevos Asentamientos Organizados - NAOS*)— for relocating people inhabiting high-risk areas, rights of way, tourist and reserve sites, and illegally occupied public and private lands, who voluntarily, globally, and in an organized way would have chosen to move, thereby complying with the peace agreements.

## MAIN ACHIEVEMENTS

The property reform that resulted from the GoES-ILD Agreement created for the first time in El Salvador easily accessible gateways to property rights for those who had been previously “marginalized” in both urban and rural sectors, opening the doors towards a property title that was to be firm, secure, and registrable, whatever the model of property or how they had chosen to exploit their land. A technico-legal clearing title procedure for marginal communities was created, establishing avenues for the participation of the community and financial mechanisms to promote the transference of real-estate property in favor of their occupants. Legal mechanisms were also introduced to regularize illegal or pirate subdivisions in urban and rural areas, as well as to simplify the administrative proceedings to fit out terrains for purposes of urbanization. Moreover, the program established simplified mechanisms to deliver registered titles to the beneficiaries of the Agrarian Reform Program, as well as the norms necessary to allow the cooperative rural associations created by the Agrarian Reform to freely choose the property and exploitation system that they deemed to be the most appropriate to their interests.

In fact, the Salvadorian Property Formalization Program and the Re-engineering of the Real Estate Registries yielded impressive results:

- As of 2004, 550,000 Salvadorans had become legal property owners <sup>36</sup>
- 1.2 million real-estate units – 68% of all parcels in the country - were in the process of being incorporated to the new geographically based real folio registration system for efficient ownership definition <sup>37</sup>
- All existing real estate registries and registration processes were re-engineered, setting the foundations for the development of a mortgage credit market:

Thanks to the application of the new formalization system and to the re-engineering of the existing real estate property registries, El Salvador was able to carry out important donation and credit programs making it easier for ordinary people to acquire parcels of land and housing, to improve existing housing, and to cover the costs of legalizing their real estate. As of 2004, 122,025 families had benefited from credit and contribution programs carried out by the National Fund for Housing (FONAVIPO) and more than US\$ 190 million had been provided in financing.<sup>38</sup>

The implementation of the above-mentioned reforms has also had a significant impact on the development of the Salvadorian mortgage market, which has been able to grant more than \$800 million in mortgage-backed loans.

- 27,000 former wartime combatants and poor people affected by the war received duly formalized real estate property rights, consolidating the peace agreements signed in 1992:

The implementation of the property formalization program in El Salvador not only allowed the GoES to bring the poor inside the rule of law, but also provided the Government with a fundamental legal tool to pacify the country and consolidate the peace agreements signed in 1992. For example:

- During the first few years of the application of the system, some 35,000 titled and registered lots were transferred to former Farabundo Martí National Liberation Front (FMLN) combatants, demobilized members of the Armed Forces of El Salvador (FAES), and landholders in former combat zones through the Land Transfer Program (*Programa de Transferencia de Tierras - PTT*). Upon request from the beneficiaries, 84% of these lots were transferred under a collective ownership scheme.<sup>39</sup>
- In 1998, with the aim of increasing economic and financial options for beneficiaries, this same system made it possible for almost 100% of the beneficiaries to voluntarily move from a system of collective property to a system of individual property. As a result, some 27,000 lots were individualized and registered through the Rural Legal Security Program (*Programa de Seguridad Jurídica Rural-PROSEGUIR*) managed by the ILP and financed by USAID and the GoES (US\$15.7 million).<sup>40</sup>

- 25,000 dwelling units destroyed by the 2001 earthquakes were formalized and rebuilt:

The 2001 earthquakes destroyed close to 170,000 dwellings, 53% (90,000) of which belonged to poor families. Most of these homes were rebuilt thanks to the implementation of the system for formalizing property in the affected areas. This system not only facilitated reconstruction, but for one third of the poor families affected (26,000), property formalization was the only way possible to gain access to the required financing. In effect, the Reconstruction Program with the most impact in El Salvador, run by the ILP and financed with funds from USAID<sup>41</sup> – US\$ 167 million – required that the properties be duly titled and registered to the beneficiaries. Before the new formalization and registry system, that would have been impossible. As a result, as of July 2004, more than 25,000 properties destroyed by the 2001 earthquakes had been formalized and rebuilt.<sup>42</sup>

## THE INSTITUTIONAL REFORM AGENDA: MAIN CHALLENGES AND CONCLUSIONS

One of the main ILD recommendations contained in the 1992 final report submitted to the GoES at the end of the ILD-GoES Agreement was to be aware that the consolidation of the Government's short-term achievements was contingent on continuing with the institutional reforms.

Thirteen years later, the ILD had the chance to get closer to the Salvadoran experience once again. Early in 2006, the Inter-American Development Bank (IDB) contracted the ILD to map informality and dead capital in 12 Latin American countries, El Salvador included. An ILD team of researchers moved to El Salvador to investigate the Government's main achievements – and persistent problems – in making it easier for the majority of Salvadorans to be able to capitalize their real estate and business assets. To that end, they analyzed the characteristics of the informal or "extralegal" sector, as well as the main institutional obstacles to access to property rights and business formalization in the country.

The IDB-ILD study revealed that despite the significant legal and institutional reforms designed and implemented in El Salvador during the course of the previous fifteen years, it was clear that the legal system had not yet managed to provide all the mechanisms needed to generate the six effects that all modern legal property systems should provide. (See Figure 3)

**Figure 3**

### THE SIX FUNCTIONS OF A PROPERTY SYSTEM

- *Fix the economic potential of assets by describing their value on paper.*
- *Integrate dispersed information into one consistent network of systematized representations.*
- *Make people accountable, linking assets to their owners and making them easily identified and localized.*
- *Make assets fungible so they can be moved, be more accessible and be given different functions.*
- *Network people by lowering the costs of connecting assets in expanded markets.*
- *Protect transactions by securing not just the assets but also transactions.*

As a result, the amount of property held outside the law in El Salvador was still massive: The ILD found that 82% of urban real-estate (1.3 million real-estates) and 74% of the rural surface (1.2 million hectares) were still extralegal, and that extralegal assets totaled US\$ 14.7 billion.<sup>43</sup> The new study also identified the main problems that were not only impeding the fulfillment of the objectives set by the original reforms, but which were also compromising the achievements already attained. ILD researchers, for example, discovered that the project to modernize the real estate registry and the cadastre launched by the GoES had prioritized surveying and mapping activities over property regularization; that costs of accessing the registry remained high; that most of registered real estate units were still lacking a real geographical base; that access to remote registry information was still limited; and that registrars still enjoyed wide discretion.

As the ILD warned in its original 1992 report, reforming the registry system should not to be seen as an isolated event, but rather as an integral part of a larger process oriented towards awarding integrated, clear, secure and transferable property rights. In this light, the great challenge facing the current institutional and legal framework in El Salvador comprises the following:

- **First**, easing the regularization of the high percentage of real-estate whose owners cannot afford to register their rights because they lack a registrable title. This demands not only drawing up cadastre maps, but also clearing the title and formalizing property rights.
- **Second**, stimulating the permanence of real-estate within formality, which requires simplifying registry procedures and lowering transaction costs.
- **Third**, providing the legal system with institutional mechanisms to allow economic use of formalized assets. It should include the development of financial mechanisms – such as credit and insurance – to facilitate transactions and improve economic outcomes.
- **Fourth**, keep providing Salvadorans with the necessary legal tools for choosing the system of property and land exploitation that best suits their needs and interests –whether individual, collective or mixed.
- **Fifth**, providing the legal system with effective mechanisms for obtaining feedback, in order to continue improving the reform and adapting existing laws and regulations to new circumstances.
- **Sixth**, rooting the reforms on those local practices that the majority of Salvadorans identifies with and respects. In other words, the reform design requires a continuous “converging analysis” between the existing legal framework and the extralegal practices, based on both a “bottom-up” and a “top-down” approach.

When Hernando de Soto refers to the reform building process for the transition towards an inclusive property system, he emphasizes that *“the law is not something that you invent in a university, the law is something that you discover. Poor people already have agreements among themselves, social contracts, and what you have to do is professionally standardize these contracts to create one legal system that everybody recognizes and respects”*.<sup>44</sup>

- **Seventh**, designing and implementing consensus building strategies among beneficiaries and main stakeholders, so as to overcome any resistance and facilitate the approval of the required legal reforms.
- **Eighth**, keeping the beneficiaries of the reform program fully involved in all phases of the reform, including the close monitoring of the results.
- **Ninth**, providing the poor majority of Salvadorans with simplified and low-cost legal housing alternatives, so as to discourage illegal occupations of privately and state-owned lands as well as other extralegal means to access to land and housing units.
- **Tenth**, setting up a consistent and integral strategy for coordinating all reform efforts, and establishing institutional mechanisms for implementing the whole set of reforms.

Certainly, building a new legal system to legally empowering the poor is not an easy task. According to CLEP's Final Report, "legal empowerment involves a complex combination of technical, institutional and political changes"<sup>45</sup>, thus four building blocks are required in order to build an inclusive property rights system: " (...) a system of rules that (clearly) defines the bundle of rights and obligations between people and assets reflecting the multiplicity and diversity of property systems around the world; a system of governance; a functioning market for the exchange of assets; and an instrument of social policy (...) When the system fully functions, it becomes a vehicle for the inclusion of the poor in the formal economy, and a mechanism for their upward social mobility (...)"<sup>46</sup>

Standing up to the above-referred challenges requires integral and definitive solutions to the problem of extralegality. Therefore, the reform agenda for El Salvador – as for most developing countries - should include efficient and effective institutional mechanisms to favor both formalization and capitalization of extralegal assets. While formalization mechanisms would be focused on reducing the costs to access to and remain within legality, capitalization ones would be concentrated on promoting the benefits that, by the way of the reforms, can be derived from the economic use of assets while serving as an incentive to remain and grow within legality. Furthermore, the institutional reforms should be sustainable over time and contain measures to ensure that the aforementioned benefits are persistent and capable of adapting to the changing dynamics that affects all societies. It is up to the GoES to stand up to these challenges.

## PRIVATE PROPERTY RIGHTS

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# CASE STUDY: THAILAND'S TITLES PROJECT SEEN FROM THE PERSPECTIVE OF ECONOMIC DEVELOPMENT

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## INTRODUCTION

Property rights are a most important fundamental requirement for capitalism. Theoretical and empirical studies show that completeness in private property rights creates fair opportunities for access to property, frees owners to exercise their rights, eases property transfer, motivates highest effective property use, and builds an effective economic system.

Property rights systems in many countries are not complete. Property rights laws in developing countries are usually enforced ineffectively, which causes slow growth for such economies with a high incidence of poverty. So, property rights systems that are complete and enforced effectively are the key to remedy the problems, although each country has unique property rights systems. The answer to how to improve the property rights system in a country should be based on a contextual understanding of the problems of that country.

This article aims to evaluate the completeness of the property rights system in Thailand and the impact of an incomplete property rights system. The method used is that of documentary research. This article focuses only on the land title system.

The framework of this article uses four components of efficient property rights structure, including universality,<sup>47</sup> exclusivity,<sup>48</sup> transferability,<sup>49</sup> and enforceability.<sup>50</sup>

## THE FORMS OF LAND OWNERSHIP IN THAILAND

There are two main forms of land ownership in Thailand, which are public and private land ownership.

### **Public Land Ownership**

Many kinds of public land ownership refer to:

- **Natural Resources:** In mountainous regions, National Forest Reserves, Conservation Areas, mineral sources, water resources for the conservation of aquatic animals, etc.
- **Public Areas:** This land is reserved by the State for the combined benefit of the general public. Land of this type is, for example, grassland, cemeteries, brook and river bank areas, highways, lakes, etc.
- **Government Property:** This is land which belongs to the government. Government property is owned for government benefit.
- **Other Land:** Such as, Crown Property, Privy Purse property, Religious Property.

**Private Land Ownership**

There are many types of private land ownership in Thailand, each of which is officially accepted by the State. These are divided into four main categories according to specific land title documentation (Department of Lands, 2008c).

**Preemptive Certificate: NS-2**

It accepts that a person holding preemptive certificate has a right to gain any benefits from a certain piece of land for a certain period. The condition for gaining benefits from the land is that the person who receives a preemptive certificate needs to work on the land and begin to earn benefit from it within six months. This must be done within a three year period and requires that at least 75 percent of the land be used.

**Certificate of Utilization: NS-3, NS-3K**

The Certificate of Utilization is a formal certificate guaranteeing an owner's utilization of the land. However, this type of ownership guarantees only an owner's right of possession, not their right of ownership, this being their right to use, sell, rent, and use the land as mortgage collateral. The land owner also has the right to present a certificate of utilization in order to request a land title deed. If a land owner leaves his or her land without any beneficial use having been made of that land, and will instead allow other persons to possess the land openly and with intention to own it for more than one year continuously, the owner will have no right to sue and reclaim their right of possession to that land. This is what we call adverse possession.

**Land Title Deed: NS-4**

A Land Title Deed is a certificate for the ownership of land released per the Land Code. The title deed has been issued by using GPS to set the area and boundaries of the land, which is a very accurate method. The owner who owns a Land Title Deed document earns the completeness of land ownership, for example, the right to make a benefit from the land, the right to let other people rent the land, the right to sell the land, the right to prevent anyone using the land illegally, and the right to use the land as mortgage collateral, etc.

**SPK 4-01**

SPK 4-01 is a document title deed which the Land Reform Committee allocates to people. During the first step of the Agricultural Land Reform project, the State would buy private land for the hire-purchase of agriculturists. Later, the State department would collect degraded forest land and release it for use free of charge. SPK 4-01 limits the benefits to only agriculturists who do not own their own land, and to anyone who wants to be an agriculturist. Land will be allocated to them at no more than 50 rai (or 0.08 square kilometers) per family.

**Thailand's Structure of Land Ownership**

Thailand has a total area of around 320.7 million rai or 513,115.02 square kilometers. Of this, 52.62 percent is owned by the public sector, and another 47.83 percent is private property (estimated in February, 2008).

For public land, most is National Forest Reserves, with 85.31 percent of all public land or around 44.90 percent of the total country area (Table 1).

For privately documented land title deeds, land ownership counts as 60.46 percent of the total private ownership or about 28.64 percent of the total land in the country (as per table 2). The continuous growth of completed private sector land ownership is observable with more land title deeds in use, compared to fewer types of other land title documents (Table 3).

**THE COMPLETENESS OF THAILAND'S LAND PROPERTY RIGHTS**

An analysis of each type of land title found that private land provides more complete property rights than public land does (Table 4).

**Table 1: Public Property**

Types of Land	Square Kilometres	Percent of total public property
National Forest Reserve	230,370.39	85.31
Public Area *	11,680.83	4.33
Government property **	20,065.60	7.43
Others **	7,905.53	2.93
Total	270,022.35	100.00

Note: \* Information as of March 31, 2008

\*\* Estimated number

Source: Royal Forest Department (2008), Department of Land (2008a) and Thai Appraisal Foundation (2004)

**Table 2: Number of land title documents and their areas in Thailand, February 2008**

Land Title Documents	Number of Plots	Area	
		(Sq Km)	(Per cent of total private property)
Preemptive Certificate (NS-2)	161,418	2,307.23	0.95
NS-3	1,185,279	16,541.71	6.80
NS-3K	3,938,677	31,072.42	12.78
Title Deed (NS-4)	25,566,355	146,965.36	60.46
SPK 4-01*	2,280,601	46,205.95	19.01
Total	33,132,330	243,092.67	100.00

Note: \* Information as of April 30, 2008

Source: Department of Lands (2008b) and Agricultural Land Reform Office (2008)

**Table 3: Areas with some type of land title documents in Thailand, 1995 – 2008 (Sq Km)**

Land Title Documents	1995	2001	2008
Preemptive Certificate (NS-2)	6,591.47	5,838.56	2,307.23
NS-3	30,529.15	25,764.11	16,541.71
NS-3K	78,391.35	60,852.76	31,072.42
Title Deed (NS-4)	66,143.00	113,186.11	146,965.36
SPK 4-01	n.a.	4,026.56	46,205.95
Total	n.a.	209,668.10	243,092.67

Source: Department of Land (2008b) and Agricultural Land Reform Office (2003)

### **The completeness of public land property rights**

Almost all public land lacks completeness of property rights due to unclear land ownership boundaries, especially for National Forest Reserves. The scale of the map of National Forest Reserves is often 1: 50,000, which is a cause for high deviation with 1 millimetre on the map equivalent to 50 metres of National Forest Reserves by real area. Likewise, government property still has unclear land ownership boundaries, only 12.04 percent of total government property having already been surveyed. By contrast, Public Areas have quite clear boundaries, with 85.73 percent of their total area having already been surveyed (Table 5).

**Table 4: The completeness of each type of land ownership**

Type of Land	Universality	Exclusivity	Transferability	Enforceability
<b>1. Public Property</b>				
National Forest Reserve	Many areas are not accepted	No	No	Ineffective
Public Areas	Most places have clear boundaries	To make social benefit	No	Ineffective
Government Property	Most places have unclear boundaries	To make government benefits	No	Ineffective in some places
Others	Yes	To make a specified benefit	Some places can transfer to private sector	Yes
<b>2. Private Property</b>				
Preemptive Certificate (NS 2)	Yes	There is limitation on the period of land use	Can be inherited. Can ask for land title deed or certificate of utilization	Yes
NS – 3	The boundary of ownership is unclear	Yes. But cannot be mortgage collateral	Yes	Ineffective to others from benefiting from the owner's property
NS – 3K	Yes	Yes	Yes	Yes, can have adverse possession within one year
Title Deed (NS 4)	Yes	Yes	Yes	Yes, can have adverse possession within ten years
SPK 4-01	Yes	For agricultural purposes only	Only as an inheritance	Yes

The incompleteness of public land property rights also results from limitations to benefit earning, for example, where it is forbidden for individuals to make profit from National Forest Reserves. Public areas provide benefits only for society, while government property can provide benefits only for the government. In addition, the incompleteness of public property is also due to its non-transferability.

#### **The completeness of private land property rights**

The documentation of private land title completeness, from the most to the least property rights can be described as follows: Land title deeds provide the most complete property rights. The next in completeness is NS-3K, because it provides the same property rights as the Land Title Deed, but the adverse possession of NS-3K land takes only one year while a Land Title Deed takes ten years. NS-3 is the third, because property rights under NS-3 are the same as for NS-3K, though if no official area records exist, the land will be unable to be used as mortgage collateral.

NS-2 provides almost the least property rights, less than NS-3, due to the benefit possession period limitation and non-transferability to others exempt by heritage. However, NS-2 can be used to request a land title deed or certificate of utilization. SPK 4-01 provides the least property rights as land used only for agriculture and transferable only by inheritance.

**Table 5: Number and areas of some types of public property in Thailand, March 31st, 2008**

	Type	Public Area	Government Property
Total	Amount (plot)	107,994	More than 157,146
	Area (Sq Km)	11,680.83	20,065.60*
Officially surveyed	Amount (plot)	98,386	28,284
	Area (Sq.Km.)	10,014.18	2,416.81
	Percent as per the total area	85.73	12.04
In process / haven't had official survey	Amount (plot)	9,608	More than 128,862
	Area (Sq.Km.)	1,666.65	17,648.79
	Percent as per the total area	14.27	87.96

Note: \* Estimated number as of December 31st, 2002

Source: Department of Land (2008a), and Thai Appraisal Foundation (2004)

## THE IMPACTS OF INCOMPLETE PROPERTY RIGHTS ON ECONOMIC DEVELOPMENT

Incomplete property rights for both public and private land causes impacts on Thailand's economic development, as follows:

### **Poverty among agriculturists**

Most of the poor in Thailand are agriculturists. In 2004, there were 4.28 million poor agriculturists in Thailand, or 61% of all poor people (NSO, 2003).

The cause of poverty among agriculturists is their lack of property rights, with 40% of poor agriculturists not owning their own land, and with agriculturists who rent the land having less labour income than those who own the land.

Agriculturists tend to lack land ownership more, as we can see from a decreased quantity of land owned by agriculturists (Table 6) and from agricultural farms that are averagely smaller, having shrunk from 0.0423 sq. km. per household in 1986 to 0.036 sq. km. per household in 2005. This record is consistent with the research of some human rights groups who found that the north of Thailand has more farmers who lack land and that this group of farmers is poorer and must depend on others more (Cohen, 1983; Ganjanapan, 1984).

The economic structure of Thailand has changed from its emphasis on the agricultural sector to that of the industrial sector and the service sector, which give more GDP output and more employment, whereas, the agricultural sector gives less GDP output and less employment.

Poor agriculturists who lack land or who have to rent land have no choice but to invade forest or public areas. Some move from upcountry areas to the city and become a labour source for industry or services. However, this causes a new poverty problem in the city and slums.

### **Property rights clustered in the hands of the rich**

Though the government tries to solve the problem of poverty among agriculturists by allocating land to agricultural households, the agriculturists cannot keep that ownership. Mostly, they sell their rights to capitalists. This problem always happens to land having incomplete ownership rights, especially SPK 4-01 which has many limitations, as mentioned above. It is estimated that around 10% of the total SPK 4-01 land has been possessed by capitalists (Matichon, 2002). In addition, there are many SPK 4-01 land plots that are larger than what it is limited by law, which is 50 rai (0.08 sq km) per family. More than 24 % of the total SPK 4-01 is larger than 60 rai, or 0.096 sq km (Table 7).

**Table 6: Type of farm holding land in Thailand**

Year	Farm Holding Land		Owned		Others	
	(Sq km)	(%)	(Sq km)	(%)	(Sq km)	(%)
1994	211,965.71	100	174,909.51	82.52	37,056.20	17.48
1999	210,146.21	100	172,316.92	82.00	37,829.29	18.00
2005	208,441.59	100	149,162.39	71.56	59,279.20	28.44

Source: Office of Agricultural Economics (various years).

**Table 7: The amount of plots and total area of each SPK 4-01 plot size, 2003**

Plot size (sq km)	Amount	Total Area (sq km)	Percent of total area
Below 0.064	756,020	15,922.92	56.42
0.064 – 0.096	102,909	5,520.98	19.56
0.096 and above	70,856	6,777.71	<b>24.02</b>
<b>Total</b>	<b>929,785</b>	<b>28,221.61</b>	<b>100.00</b>

Source : National Statistical Office (2003)

The major reason for selling SPK 4-01 to the black market is its land-use limitations, its usage being only for agriculture. As we know, agriculture is a high risk activity; there is a high possibility for agriculturalists to suffer a loss or to be indebted. Thus, agriculturalists need to sell their land, although it is prohibited by law, in order to pay debts. Sometimes the agriculturalist will want to borrow money from the bank, but will not be able to use SPK 4-01 land as mortgage collateral, thus, such agriculturalists will have to access a black loan with a higher interest rate.

In addition, allocating a degraded forest area as SPK 4-01 and giving it to an agriculturalist free of charge causes a moral hazard problem. Agriculturalists may assume that they can sell this land and wait for a new area to be re-allocated to them by the government, or that if they deforest or occupy those degraded forests, then the government will give them the SPK 4-01 title deed again. This easy condition to get the land would make it easy for them to sell the land as well.

### **Low Productivity**

50% of all agricultural land is without land title documentation. When agriculturists lack stable rights, it is an obstacle to land productivity because they lack the incentive to develop the land, thus resulting in lower productivity. This problem is confirmed from the Total Factor of Production (TFP) of the agricultural sector during 2002-2007. It decreased 0.6% per year, whereas the total TFP grows by 0.8% per year (NESDB, 2008). In addition, the productivity per Rai of Thailand is very low compared to the world average and the big countries of rice production Table 8).

A great number of agriculturists in Thailand since their birth, have lived and used their own land for a long time but maybe do not own a land title document of any kind, or else they own one with unclear landmarks. Later, with the announcement of government natural sanctuary areas, conflicts have resulted between people and state departments (The Thai Research Fund, 2005). The seriousness of the problem related to these conflicts hasn't been recorded officially, but according to the information of "The Assembly of the Poor," there are 87 cases of conflicts in forest areas, and 15 cases in Public Areas.

**Table 8: World Rice Yield**

Country/Region	Yield (Rough) Thousand Metric tons per hectare		
	2005/2006	2006/2007	2007/2008
World	4.08	4.07	4.08
United States	7.44	7.70	8.12
China	6.26	6.23	6.25
Iran	5.47	5.63	5.71
Pakistan	3.18	3.03	3.12
Vietnam	4.72	4.81	4.86
<b>Thailand</b>	<b>2.70</b>	<b>2.69</b>	<b>2.69</b>

Source: USDA (2008)

Another problem is where government land reform projects overlap with National Forest Reserves. Many state departments, for example, the Department of Public Welfare, and the Cooperatives Promotion Department, etc, do not coordinate when they designate land reform project areas. People cannot ask for any land title document when these state departments allocate areas to them (The Commission on Land Ownership Problem Study, 2005).

Another cause of conflict is unclear ownership boundaries, especially for natural sanctuary areas (National Forest Reserves, permanent forests, government property, national parks, and Public Areas) that are not clearly landmarked (The Commission on Land Ownership Problem Study, 2005), though official records may show them mapped. Thus, the private sector cannot request a land title document for an area close to a natural sanctuary area.

#### **Land under-utilization and soil-degradation**

More problems surround the issue of utilization from public land rather than private land. According to one survey by the Land Institute Foundation, it was found that 70.5 percent of Thailand's total private land area is fairly utilized and another 29.5 percent remains under-utilized. This is due to speculation, or alternatively is a land ownership management problem (Table 9). Another study shows that the utilization rate for public property is quite low, with one example given of government property where only 28.24 percent was in use for any purpose (Krungthep Dhurakij, 2003). Apart from that, around 1/2 of Thailand's total land area was of wasteland quality, for example, comprising of acidic, alkaline, or depleted soils, etc (Land Development Department, 2006).

The cause of this problem is unclear land marking, allowing state officers, capitalists, and local influential persons to enter an area and make profit from it. In some cases, when any one person owns too much land, some of it will be abandoned and remain useless. Not only that, most private property is subject to speculation, and the owners do not intend to use the land.

The major reason why many public lands are not utilized is that there is a lot of public land, but a shortage of state officers. Thus, there are insufficient people to take care of all of Thailand's public land. Another reason is a lack of clear ownership, especially for Public Areas, which people can use together. For this reason, there is no motivation to care for local public area maintenance. Besides, Thailand's Country Planning Law (City Planning Law) and Land Development Law cannot effectively force (Land Institute Foundation, 2001) or result in land misuse or inappropriate land efficiency, for example, the selling of topsoil, requests for mining permission, and sand pumping in public areas, which causes land degradation.

**Table 9: The utilization rate from some types of land title documentation**

Type of Land	Utilization rate (Percent per total land type area)
NS-3	72.50
NS-3K	68.40
Land Title Deed	66.21
Total of private property	70.50

Source: Land Institute Foundation (2001).

**Table 10: Public Property intruded**

Type of Land	Intruded areas (Sq Kms)	Percent of total land type
Government property	3,340.10	16.65
National Forest Reserves	2,769.19	1.20
Public Area	1,704.56	14.59
National Parks	910.06	21.44
Others	785.19	21.44
Total	9,509.10	3.52

Source: The Ministry of Interior (2008).

### ***The problem of trespass***

State property intrusion has become a major trespass problem, for example, with the property of the State Railway of Thailand. Among other state departments, the State Railway of Thailand owns the most land, especially land located on railway sidings. Many people invade this area, and build houses, creating slum areas on railway sidings. In addition, the illegal issuing of land title deeds for overlapped railway land is a rumored problem in Thailand.

Another problem is the intrusion into natural sanctuary areas, for example, National Forest Reserves, Conservation Forests, etc. Some may bribe state officers to issue an NS-3K document for land located in natural sanctuary areas (Post Digital, 2008), or else they may intrude into such a forest area and deforest it until it becomes a degraded forest area. Such people will then work with state officers to issue title deed documents, before being able to sell these areas or use them as mortgage collateral with the bank.

A survey of illegal intrusions found that over a total land area of 9,509.10 square kilometers, intrusions had taken place on 80,707 public plots in 59 provinces, with 337,557 intruders responsible for these acts of intrusion. Government owned areas were most intruded, to the amount of 16.65 percent of all government property (Table 10).

Intrusion is a problem for one major reason that landmarks are unclear and uncontrollable when it comes to forbidding people from making profit from the land. This is because much land has been declared off-limits by the state; being areas deemed impossible for thorough state management (National Economic and Social Development Board, 2004).

Other reasons include corrupt civil servants who will issue title deed documents of any kind for land where its status is unclear, whether public land, or degraded forest land deforested by people who have no personal work zone.

## CONCLUSION AND SUGGESTIONS

### Conclusion

From all the studies and analysis above, these conclusions may follow:

- Thailand lacks a unified system of land management; land ownership information is incorrect, and corrupt civil servants abound.
- Private land has more complete property rights than has public property. Land title deeds supply the most complete property rights and this type of documentation is being issued more and more.
- Most public land is unclear with regard to its land ownership, for example, with overlapped land boundaries, unclear landmarks, etc. This causes many problems, including conflict, land trespass, and land under-utilization.
- Land with complete property rights will have less management problems.
- Limitations of land use cannot be enforced effectively, for example, for SPK 4-01, it is prohibited by law to sell or transfer the land to others, however this is inapplicable as people illegally sell the land to capitalists.

### Suggestions:

According to problems with the incompleteness of property rights, I would like to propose some suggestions, as follows:

**Integrated land management** The departments involved should cooperate with each other to solve the overlapped area problem, and should also work together to correct any integrated map and development data based on land ownership. Making official records requires technology for more precision. Making clear landmarks is another required factor that needs to be done. Lastly, it is necessary for people to access the data base easily.

**Changing all land title documents to be the same type** This can be done by changing every type of land title document for private property to be countrywide land title deeds. This will allow everyone equal rights to the land that they possess. In addition, it will cause land management to be more effective and will reduce problems due to the incompleteness of land ownership (The Thailand Research Fund, 2006).

There are many arguments for changing SPK 4-01 to be a land title deed. On the objection side is fear that this will even allow more land to fall into the hands of capitalists (Ganjanapan, 2000). Then, agriculturalists will intrude into forest areas again. However, with limitations to holding SPK 4-01, in inability to sell and intransferability, the land will not be able to be sold at a good price since capitalists will be aware of this limitation. Besides, those in possession of SPK 4-01 will lack freedom to earn a living and it will be difficult for them to find a cheap loan because they cannot bring their land into use as mortgage collateral (Prachachart Thurakij, 2002). This is why it is difficult for agriculturalists to earn a better living. Regarding the problem of forest intrusion, there is less worry about this because most agriculturalists' children are turning to other occupations.

**Reforming land taxation** This can be done by changing the method to calculate taxation, from income-based to asset-based assessment, or by calculating the estimated land price. However, some other factors need to be considered as well, for example, the amount and size of the owned area, the characteristics of land use, etc. This is to prevent land concentration and land speculation.

Land taxation reform will require updated data based on land ownership. This will help to evaluate the land concentration situation, and will help for the examination of characteristic land use as well (with satellite pictures able to be used). This will also link together and process data from many departments.

**Establishing a National Land Bank** (Land Institute Foundation, 2001). There are around 811,871 families in Thailand that don't have a workplace area and there are 1–1.5 million agriculturalist families that need to rent a work place area (Wathanyu, 2001). The National Land Bank will reallocate empty or abandoned land to the poor, for example, buying abandoned land from the private sector and elsewhere and allocating it to poor people, thus the land is able to be brought to profitable use, instead of being left idle.

**Land innovation development** Land title deeds can be issued for public areas where the community can together receive benefit under the name of a community land title deed. This would reduce conflict over the use of public areas and would also prevent influential people from taking over public areas as though it is their own property (Prachadhrama Press, 2001). This method would result in responsible people rising up to manage and maintain the public area. Another land management innovation is to build a network, which includes the State, the community, and NGOs in order to develop a management system for the natural sanctuary area (Mahatthanawisan, 2000). These networks could work together for the management, examination, and maintenance of the natural sanctuary area.

The completeness of land property rights is the most effective system in reducing the conflict due to the ownership over the certain land, causing the highest land utilization, highest benefit earning for possessor, and making the owner free to earn their livings and using the land.

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## INTELLECTUAL PROPERTY RIGHTS

# CASE STUDY: PROTECTION OF GEOGRAPHICAL INDICATION IN INDIA – CASE STUDY ON ‘DARJEELING TEA’

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## INTRODUCTION

Protection of Geographical Indication (GI) has, over the years, emerged as one of the most contentious IPR (Intellectual Property Rights) issues in the realm of the WTO's Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS). TRIPS defines GI as any indication that identifies a product as originating from a particular place, where a given quality, reputation or other characteristics of the product are essentially attributable to its geographical origin. Also a geographical indication (GI) gives exclusive right to a region (town, province or country) to use a name for a product with certain characteristics that corresponds to their specific location.

The Geographical Indications of Goods (Registration and Protection) Act, 1999 protect the GI's in India. Registration of GI is not compulsory in India<sup>54</sup>. If registered, it will afford better legal protection to facilitate an action for infringement.

## NEED FOR LEGAL PROTECTION OF GI

Given its commercial potential, legal protection of GI assumes enormous significance. Without suitable legal protection, the competitors who do not have any legitimate rights on the GI might ride free on its reputation. Such unfair business practices result in loss of revenue for the genuine right-holders of the GI and also misleads consumers. Moreover, such practices may eventually hamper the goodwill and reputation associated with the GI.

## INTERNATIONAL PROTECTION FOR GI UNDER TRIPS

At the international level, TRIPS sets out minimum standards of protection that WTO members are bound to comply with in their respective national legislations. However, as far as the scope of protection of GI under TRIPS is concerned, there is a problem of hierarchy. This is because, although TRIPS contains a single, identical definition for all GI, irrespective of product categories, it mandates a two-level system of protection: (i) the basic protection applicable to all GI in general (under Article 22), and (ii) additional protection applicable only to the GI denominating wines and spirits (under Article 23).

This kind of protection is challenging, if Article 22 fails to provide sufficient intellectual property protection for the benefit of the genuine right-holders of a GI. A producer not belonging to the geographical region indicated by a GI may use the indication as long as the product's true origin is indicated on the label, thereby free-riding on its reputation and goodwill.

## HISTORY OF THE TRIPS PROVISIONS ON GI

*The Uruguay Round of the GATT negotiations began in 1986, precisely when India's development policy making process was at a watershed. By the time India launched its massive economic reforms package in 1991, marking a paradigm shift in its policy, the Uruguay Round negotiations were well under way, paving the path towards Marrakesh in 1994 and the establishment of the WTO. India remained a cautious and somewhat passive player during the initial years of the Uruguay Round negotiations, given its long legacy of inward looking development strategy and protectionist trade policy regime.*

However, at Doha India wanted to extend protection under 'geographical indication' (GI) beyond wine and spirit, to other products. A number of countries<sup>55</sup> wanted to negotiate extending this higher level of protection to other products as they see a higher level of protection as a way to improve marketing their products by differentiating them more effectively from their competitors and they object to other countries "usurping" their terms. Some others opposed the move, and the debate has included the question of whether the Doha Declaration provides a mandate for negotiations.<sup>56</sup>

Those opposing extension argue that the existing (Article 22) level of protection is adequate<sup>57</sup>. They caution that providing enhanced protection would be a burden and would disrupt existing legitimate marketing practices. India, along with a host of other likeminded countries pressed an 'extension' of the ambit of Article 23 to cover all categories of goods. However, countries such as the United States, Australia, New Zealand, Canada, Argentina, Chile, Guatemala and Uruguay are strongly opposed to any 'extension'. The 'extension' issue formed an integral part of the Doha Work Programme (2001). However, as a result of the wide divergence of views among WTO members, not much progress has been achieved in the negotiations and the same remains as an 'outstanding implementation issue'.

## THE INDIAN GI ACT

India has put in place a *sui generis* system of protection for GI with enactment of a law exclusively dealing with protection of GIs. The legislations which deals with protection of GIs in India are 'The Geographical Indications of Goods (Registration & Protection) Act, 1999' (GI Act), and the 'Geographical Indications of Goods (Registration and Protection) Rules, 2002 (GI Rules). India enacted its GI legislations for the country to put in place national intellectual property laws in compliance with India's obligations under TRIPS. Under the purview of the GI Act, which came into force, along with the GI Rules, with effect from 15 September 2003, the central government has established the Geographical Indications Registry with all-India jurisdiction, at Chennai, where right-holders can register their GI.

Unlike TRIPS<sup>58</sup>, in the GI Act does not restrict itself to wines and spirits<sup>59</sup>. Rather, it has been left to the discretion of the central government to decide which products should be accorded higher levels of protection. This approach has deliberately been taken by the drafters of the Indian Act with the aim of providing stringent protection as guaranteed under the TRIPS Agreement to GI of Indian origin. However, other WTO members are not obligated to ensure Article 23-type protection to all Indian GI, thereby leaving room for their misappropriation in the international arena.

The definition of GI included in Section 1(3) (e) of the Indian GI Act<sup>60</sup> clarifies that for the purposes of this clause, any name which is not the name of a country, region or locality of that country "shall" also be considered as a GI if it relates to a specific geographical area and is used upon or in relation to particular goods originating from that country, region or locality, as the case may be. This provision enables the providing protection to symbols other than geographical names, such as 'Basmati'.

### Registration

While registration of GI is not mandatory in India, Section 20 (1) of the GI Act states that no person "shall" be entitled to institute any proceeding to prevent, or to recover damages for, the infringement of an "unregistered" GI. The registration of a GI gives its registered owner and its authorized users the right to obtain relief for infringement<sup>61</sup>. The GI Registry with all India jurisdictions is located in Chennai with the Controller-General of Patents, Designs and Trade Marks is the Registrar of GIs, as per Section 3(1) of the GI Act. Section 6(1) further stipulates maintenance of a GI Register<sup>62</sup> which is to be divided into two parts: Part A and Part B. The particulars relating to the registration of the GIs are incorporated in Part A, while the particulars relating to the registration of the authorized users are contained in Part B (Section 7 of the Act).

A GI may be registered in respect of any or all of the goods, comprised in such class of goods as may be classified by the Registrar. The Registrar is required to classify the goods, as far as possible, in accordance with the International classification of goods for the purposes of registration of GI (Section 8 of the Act). A single application may be made for registration of a GI for different classes of goods and fee payable is to be in respect of each such class of goods<sup>63</sup>.

In India a GI may initially be registered for a period of ten years, and it can be renewed from time to time for further periods of 10 years<sup>64</sup>. Indian law place certain restrictions in that a registered GI is not a subject matter of assignment, transmission, licensing, pledge, mortgage or any such other agreement.

### **Rights of Action Against Passing-Off**

The GI Act in India specifies that nothing in this Act “shall” be deemed to affect rights of action against any person for passing off goods as the goods of another person or the remedies in respect thereof. In its simplest form, the principle of passing-off states that no one is entitled to pass-off his/her goods as those of another. The principal purpose of an action against passing off is therefore, to protect the name, reputation and goodwill of traders or producers against any unfair attempt to free ride on them. Though, India, like many other common law countries, does not have a statute specifically dealing with unfair competition, most of such acts of unfair competition can be prevented by way of action against passing-off. Notably, Article 24.3 of TRIPS clearly states that in implementing the TRIPS provisions on GIs, a Member is not required to diminish the protection of GIs that existed in that Member immediately prior to the date of entry. This flexibility has been utilised by India in the GI Act (Section 20(2)) in maintaining the right of action against passing-off, which has been a part of the common law tradition of India, even prior to the advent of the TRIPS Agreement.

Any lawsuit relating to infringement of a registered GI or for passing of an unregistered GI has to be instituted in a district court having jurisdiction to try the suit. No suit shall be instituted in any court inferior to a district court [Section 66 of the Geographical Indications of Goods (Registration and Protection) Act, 1999].

### **STATUS OF GI REGISTRATIONS IN INDIA**

Around 65 GI's of Indian origin have already been registered with the GI Registry. These include GI like Darjeeling (tea), Pochampalli, Ikat (textiles), Chanderi (sarees), Kancheepuram silk (textiles), Kashmir Pashmina (shawls), Kondapalli (toys), and Mysore (agarbattis).

GI's registered during 2007-08 include 'Muga Silk' from Assam, 'Madhubani paintings' from Bihar, 'Malabar pepper' and 'Alleppey Green Cardamom' from Kerala, 'Cora Cotton' from Tamil Nadu, 'Allahabad Surkha' from Uttar Pradesh, 'Nakshi Kantha' from West Bengal, 'Monsooned Malabar Coffees' from Karnataka and Kerala. There is many more Indian GI in the pipeline for registration under the GI Act.

### **CASE STUDY – DARJEELING TEA**

Tea is India's oldest industry in the organized manufacturing sector and has retained its position as the single largest employer in this sector. Around 30 per cent of the world's tea is produced in the country. India is also the world's largest consumer of tea. However, on the export front India is facing huge competition from other key tea producing countries, such as Kenya, Sri Lanka and China.

'Darjeeling' tea is a premium quality tea produced in the hilly regions of the Darjeeling district West Bengal—a state in the eastern province of India. Among the teas grown in India, Darjeeling tea offers distinctive characteristics of quality and flavour, and also a global reputation for more than a century. Broadly speaking there are two factors which have contributed to such an exceptional and distinctive taste, namely geographical origin and processing. The tea gardens are located at elevations of over 2000 meters above sea level.

#### **History**

The history of Darjeeling tea dates back to the 1840's, when India was a British colony. Before the arrival of the British, the forests of the region were known as Darjeeling today was inhabited by the Lepcha tribes. In 1828, while visiting this region located in the backdrop of the snow-clad Himalayan range, a young British called Captain Lloyd discovered the possibility of converting the region into a hill station or a sanitarium. In 1839, Darjeeling was handed over to Dr. A. Campbell, a civil surgeon, who got transferred from Kathmandu to Darjeeling to become the first Superintendent of the Darjeeling district, a position which he held for the next twenty two years<sup>65</sup>. In 1841, Dr. Campbell brought the seeds of China variety of tea from Kumaon hills of North India and planted them near his residence in his Beech wood garden in Darjeeling, 2134 meters above the mean sea level. Seeing the success of Dr. Campbell's experimental tea nursery, the British Government decided to put out tea nurseries in the region in the year 1847. Even after the Indian independence from British rule in 1947, the British ownership continued in many tea gardens of Darjeeling. By the end of the 1970's, most of the tea gardens of Darjeeling were in the hands of Indian owners. The major portion of the annual production of Darjeeling tea is exported, the key buyers being Japan, Russia, the United States, and the

United Kingdom and other European Union (EU) countries such as France, Germany and the Netherlands<sup>66</sup>. In order to ensure the supply of genuine Darjeeling tea in February 2000, a compulsory system of certifying the authenticity of exported Darjeeling tea was incorporated into the Indian Tea Act of 1953. The system makes it compulsory for all the dealers in Darjeeling tea to enter into a license agreement with the Tea Board of India on payment of an annual license fee.

### **Why Protect “Darjeeling Tea” as Geographical Indication**

An adequate legal protection is necessary for the protection of legitimate right holders of Darjeeling tea from the dishonest business practices of various commercial entities. For instance, tea produced in countries like Kenya, Sri Lanka or even Nepal has often been passed off around the world as ‘Darjeeling tea’. Appropriate legal protection of this GI can go a long way in preventing such misuse.

Without adequate GI protection both in the domestic and international arena it would be difficult to prevent the misuse of Darjeeling Tea’s reputation, wherein tea produced elsewhere would also be sold under the Darjeeling brand, causing damage to consumers and denying the premium price to Darjeeling tea industry. The industry is now waking up to the fact that unless Darjeeling Tea is properly marketed and branded, the survival of the industry may be at stake and GI protection along with stringent enforcement can go a long way in helping the industry to improve its financial situation.

### **Evolution of Legal Protection**

The first attempt on the part of the Tea Board of India towards protection of the ‘Darjeeling’ brand was undertaken way back in 1983, when the ‘Darjeeling’ logo was created. The Tea Board obtained home protection for the Darjeeling logo as a certification trade mark under the Indian Trade and Merchandise Marks Act 1958 (now the Trade Marks Act, 1999). The registration was granted in class 30 in the name of the Tea Board in 1986. In the same year, the logo was registered as a trademark in several other countries [Refer Annexure A] like the UK, the USA, Canada, Japan, Egypt, and under the Madrid Agreement covering Germany, Austria, Spain, France, Portugal, Italy, Switzerland and former Yugoslavia<sup>67</sup>.

In the absence of a separate law dedicated exclusively to GI’s in India during that time, the word ‘Darjeeling’ was also registered under the Trade and Merchandise Marks Act 1958 in class 30 in the name of Tea Board in 1998. When the Geographical Indication Act in India was enacted in September 2003, the Tea Board applied for GI protection of ‘Darjeeling’ in October 2003. In October 2004, Darjeeling was granted the GI status in India to become the first application to be registered in India as a GI.

### **Enforcement Steps Taken by The Tea Board of India**

In order to prevent the misuse of ‘Darjeeling’ and the logo, the Tea Board has since 1998 hired the services of Compumark, a World Wide Watch agency. Compumark is required to monitor and report to the Tea Board all cases of unauthorized use and attempted registration<sup>68</sup>. Pursuant to Compumark’s appointment, several cases of attempted registrations and unauthorized use of ‘Darjeeling’ and Darjeeling Logo have been reported.

The tea board tried to prevent unauthorized use or attempt or actual registration of Darjeeling word/ logo that were brought to its notice. [Refer Annexure B] Some disputes relating to Darjeeling tea have been settled through negotiations undertaken by the tea board of India with the foreign companies<sup>lxix</sup>. For example Bulgari, Switzerland agreed to withdraw the legend ‘Darjeeling Tea fragrance for men’ pursuant to legal notice and negotiations by the Tea Board. The Tea Board has fought almost 15 cases in the last four years against infringement and misuse of the word Darjeeling Tea worldwide which includes Russia, USA, Japan, France, Germany, Israel, Norway and Sri Lanka etc.

## **CONCLUSION**

While the Tea Board has made strides in its quest for international recognition of Darjeeling tea as a trademark, recognition of Darjeeling Tea as a Geographical Indicator in the international arena is still to be achieved, primarily due to the fact that Article 23 of TRIPS gives good protection to Wines and Spirits, but currently not for other products. The lack of a multilateral system of notification and registration for products like Darjeeling Tea which is available for wines and spirits, is jeopardizing the international protection that would offer adequate protection. It is there important for India i to seek extension of GI protection to other products by amending Article 23 of the TRIPS.

## ANNEXURE A

[Source Tea Board of India: [www.teaboard.gov.in](http://www.teaboard.gov.in)]

### List of Registrations for **DARJEELING** word and logo marks as on **October 23, 2006**

No.	Country	Nature and subject matter of registration	Application / Registration No.	Date of Application	Date of Registration	Validity
1.	Australia	Certification Mark for DARJEELING logo	998593	20.04.2004	17.11.2005	20.04.2014
2.	Benelux Registration – Belgium, Netherlands, Luxembourg	Collective Mark for DARJEELING Logo	444511	11.03.1988	11.03.1988	11.03.2008
3.	Canada	Official Mark for DARJEELING logo	0903697	15.03.1989	15.03.1989	Valid until voluntarily abandoned or expunged pursuant to a court order.
4.	EU member countries	Community Collective Mark for DARJEELING word	004325718	07.03.2005	31.03.2006	07.03.2015
5.	Egypt	Trademark for DARJEELING Logo	103072	29.09.1996	08.04.1999	28.09.2016
6.	International Registration –Germany, Austria, Spain, France, Portugal, Italy, Switzerland and former Yugoslavia.	Collective Mark for DARJEELING logo	528696	09.09.1988		09.09.2008
7.	India	Copyright registration for DARJEELING logo	A-67292/2004	08.08.2003	11.05.2004	Valid Registration
8.	India	Certification Mark for DARJEELING logo	532240	09.10.1986	09.10.1986	09.10.2007
9.	India	Certification Mark for DARJEELING word.	831599	10.12.1998	10.12.1998	10.12.2015
10.	India	DARJEELING word as a geographical indication	1	27.10.2003	27.10.2003	27.10.2013
11.	India	DARJEELING logo as a geographical indication	2	27.10.2003	27.10.2003	27.10.2013
12.	Japan	Trade Mark for DARJEELING logo	2153713	08.07.1986	31.07.1989	31.07.2009
13.	Lebanon	Collective mark for DARJEELING word	102594	13.06.2005	13.06.2005	13.06.2020
14.	Lebanon	Collective mark for DARJEELING Logo	102595	13.06.2005	13.06.2005	13.06.2020
15.	Russia	Trademark for DARJEELING Word	249970	20.04.1999	27.06.2003	20.04.2009
16.	Russia	Trademark for DARJEELING Logo	300276	02.11.1999	16.01.2006	02.11.2009
17.	Russia	Trademark for Darjeeling Logo	289609 & 169877	15.07.1997	25.05.2005	15.07.2017
18.	U.S.A.	Certification Mark for DARJEELING logo	1632726	01.07.1988	22.01.1991	22.01.2011
19.	U.S.A.	Certification Trade Mark for DARJEELING word.	2685923	10.01.2002	11.02.2003	01.10.2012
20.	U.K.	Certification Mark for the DARJEELING logo	1307518	16.04.1987	11.10.1996	16.04.2008
21.	U.K.	Certification Mark for DARJEELING word.	2162741	30.03.1998	03.08.2001	30.03.2008

### List of Applications for DARJEELING word and logo marks

No.	Country	Nature and subject matter of registration	Application No.	Status
1.	Australia	Certification Mark for DARJEELING word	998592	Accepted but pending registration
2.	Germany	Collective mark for DARJEELING word	30456356	Under examination
3.	Japan	Collective mark for DARJEELING word	2004-32171	Rejected on grounds of non-distinctiveness. Appeal filed.

## ANNEXURE B

[Source: Operationalisation of GI Protection in India: A Preliminary Exploration By Biswajit Dhar]

### Misuse of 'Darjeeling' Opposed by the Tea Board of India

Country	Nature of misuse and product category
France	DARJEELING – perfumes, articles of clothing and Telecommunication
Germany	Device applications with Darjeeling logo
Israel	DARJEELING - agricultural & horticultural products
Japan	DIVINE DARJEELING – coffee, cocoa, tea DARJEELING with India map DARJEELING Logo - serving tea, coffee, soft drinks
Norway	DARJEELING – telecommunication
Russia	DARJEELING – Tea DARJEELING Logo – Tea
Sri Lanka	SAKIR DARJEELING TEA – Tea
U.S.A.	DARJEELING NOVEAU – Tea

## CHAPTER VII: DATA SOURCES

This chapter presents the data sources that were used in the compilation of the IPRI 2009 and the IPRI (GE) measures. In its third year, the authors have mainly carried an update of the previous data, thus using the same data sources. Following is a brief review of the data included in the indices, each data source and its data collection methodology.

### Subjective Versus Objective Data

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The majority of data included in the IPRI stems from expert survey responses. However, some factors also reflect "hard" data based on the countries' regulations, laws, and actual estimates of magnitudes (for instance, piracy). Readers might wonder why the Index consist of such a mix of objective and subjective data.

First, objective data that reflects a country's strength in property rights protection is almost impossible to obtain beyond a narrow scope of parameters, so that there are few alternatives to relying on subjective data collections. Second, rather than merely summarizing a country's *de jure* facts regarding property rights protection, IPRI aims at also capturing *de facto* outcomes and prevailing effectiveness of the property rights system. Perceptions-based measures often contain information that is not reflected by objective measures, particularly in developing countries. In fact the research for the initial IPRI in 2007 focused mainly on the latter intention, and therefore integrated a large amount of data stemming from the experience and perceptions of experts in the field. In the future, the authors will continue to consider alternative compositions of subjective and objective data.

### Data Sources

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#### **World Economic Forum (WEF) – Global Competitiveness Index**

World Economic Forum's Global Competitiveness Report supplies information regarding an economy's competitiveness for a large set of countries (131 for 2007-2008). The rankings are drawn from a combination of publicly available hard data and the results of the Executive Opinion Survey. The latter is a comprehensive survey conducted on an annual basis by the WEF together with its network of partner institutes (leading research institutes and business organizations) in the countries covered in the report.

There are four variables in the IPRI for which data has been obtained from the 2007-2008 WEF Global Competitiveness Report: "Judicial Independence," "Property Rights," "Ease of access to loans," and "Intellectual Property Protection." The specific questions that were used to elicit a response are displayed in a chart elsewhere in this report. For more detailed information on the Global Competitiveness Report, visit: <http://www.weforum.org/en/initiatives/gcp/Global%20Competitiveness%20Report/index.htm>.

#### **World Bank Institute (WBI) – Worldwide Governance Indicators:**

The Worldwide Governance Indicators stem from the World Bank Institute and draw on the most recent data available on an annual basis. That is, the most recent report (2008) actually contains data gathered from multiple years within the last decade. The World Governance Indicators reflect the perceptions on governance of a very diverse group of respondents: hundreds of variables are drawn from more than fifty sources and organizations. Several of the data sources are surveys of individuals or domestic firms with first-hand knowledge of the governance situation in their country. But the report also captures the perception of country analysts at the major multilateral development agencies, reflecting these individuals' in-depth experience working on the countries they assess. Other data sources from NGOs, as well as commercial risk rating agencies, base their assessments on a global network of correspondents typically living in the country they are rating. The variables "Rule of Law", "Political Stability" and "Control of Corruption" are drawn from this source. For more information, see: <http://info.worldbank.org/governance/wgi2008>.

**World Bank Group (WB) – Doing Business:**

The source of the “Registering Property” variable is from the World Bank Group’s Doing Business Report 2008. The Doing Business data is collected in a standardized way on an annual basis. To start, the Doing Business team, with academic advisors, designs a survey. The survey uses a simple business case to ensure comparability across countries and over time – with assumptions about the legal form of the business, its size, its location and the nature of its operations. Surveys are administered through more than 5,000 local experts, including lawyers, business consultants, accountants, government officials and other professionals routinely administering or advising on legal and regulatory requirements. For more information, see: <http://www.doingbusiness.org/>.

**Ginarte-Park (GP) – Index of Patent Rights:**

The source of the “Patent Protection” variable in the IPRI come from the Ginarte-Park Index of 2005. The GP Index is based on “macro” legal features (and not on micro-level data) and incorporates a subset of legal features in existence in each country. The information used to construct the GP Index is obtained directly from national patent laws and contains five categories: the extent of coverage of patent protection, membership in international patent agreements, provisions for loss of protection, enforcement mechanisms, and the duration of protection. The most recent data set itself was obtained directly from the authors, but for a more in-depth discussion of the index, its methodology, and older data please refer to following paper: Juan Carlos Ginarte and Walter Park, “Determinants of Patent Rights: A Cross-National Study,” *Research Policy*, Vol. 26, No. 3, October 1997, pp. 283-301.

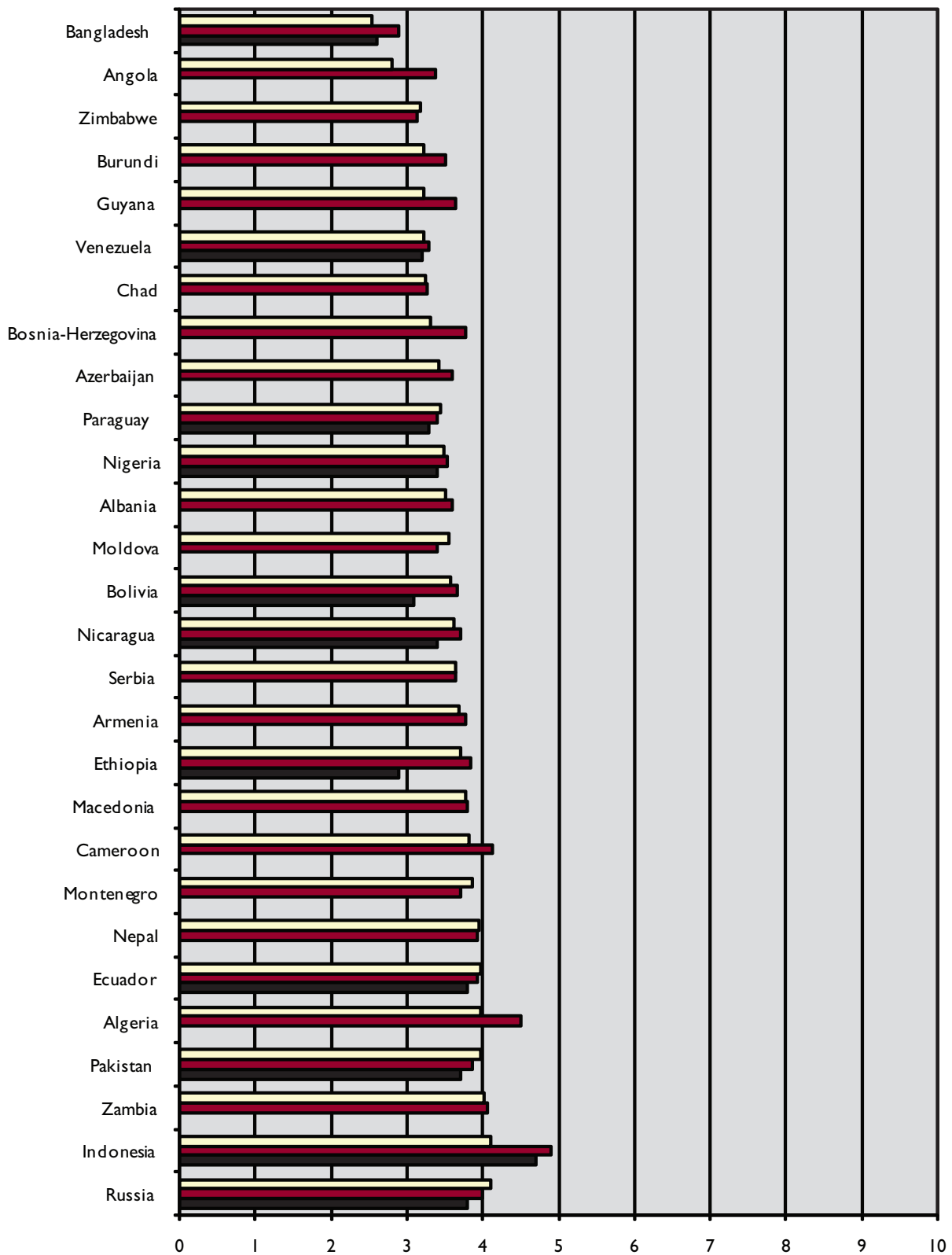
**United States Trade Representative (USTR) – 301 Watch List**

The data used for the construction of the “Copyright Piracy” factor stem from the 2008 USTR 301 Watch List, which every year is published in detail on the website of the International Intellectual Property Alliance. The data used in the IPRI reflects the estimated level of piracy in the business software, entertainment software, motion pictures, and record industries. Representative institutions of the individual industries estimate their data in different ways. It is reasonable to assume that the piracy levels reported are actually underestimated as they only capture piracy experienced by the US copyright-based industries. For more information, see: [http://www.iipa.com/2008\\_SPEC301\\_TOC.htm](http://www.iipa.com/2008_SPEC301_TOC.htm).

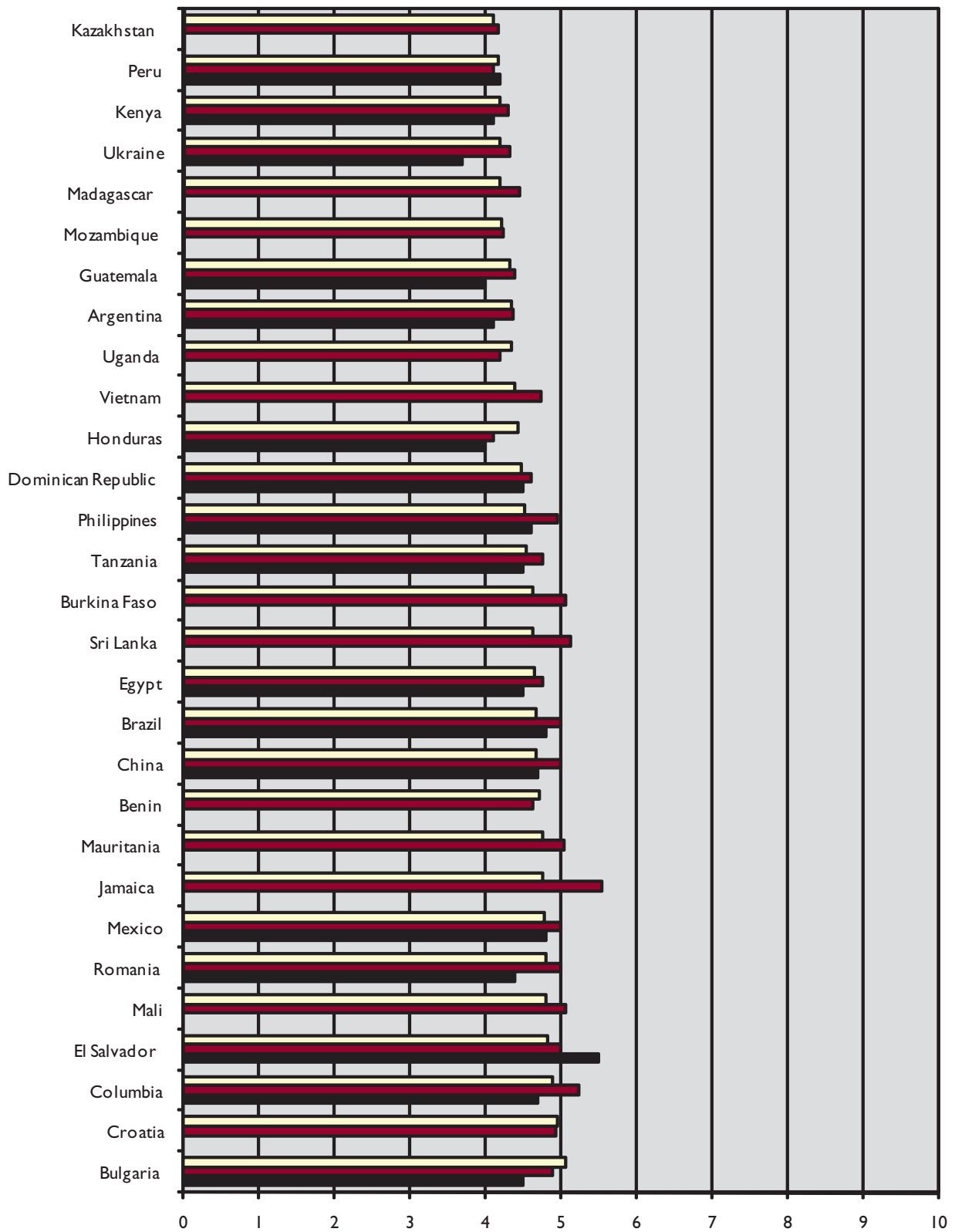
**Organization for Economic Co-operation and Development (OECD) – Gender, Institutions and Development Data Base (GID):**

The OECD GID is the sole source of data used for construction of the IPRI(GE) rankings which incorporates aspects of gender equality. The GID is a tool for researchers and policy makers to determine and analyze obstacles to women’s economic development. It covers a total of 162 countries and comprises an array of fifty indicators on gender discrimination. The nine GID variables, which are incorporated in the GE component, are related to women’s access to loans, access to land, access to non-land property, inheritance practices and social rights. These data have been compiled from various sources like BRIDGE, the Asian Development Bank, the Canadian International Development Agency, and AFROL. For more information, see: <http://www.oecd.org>.

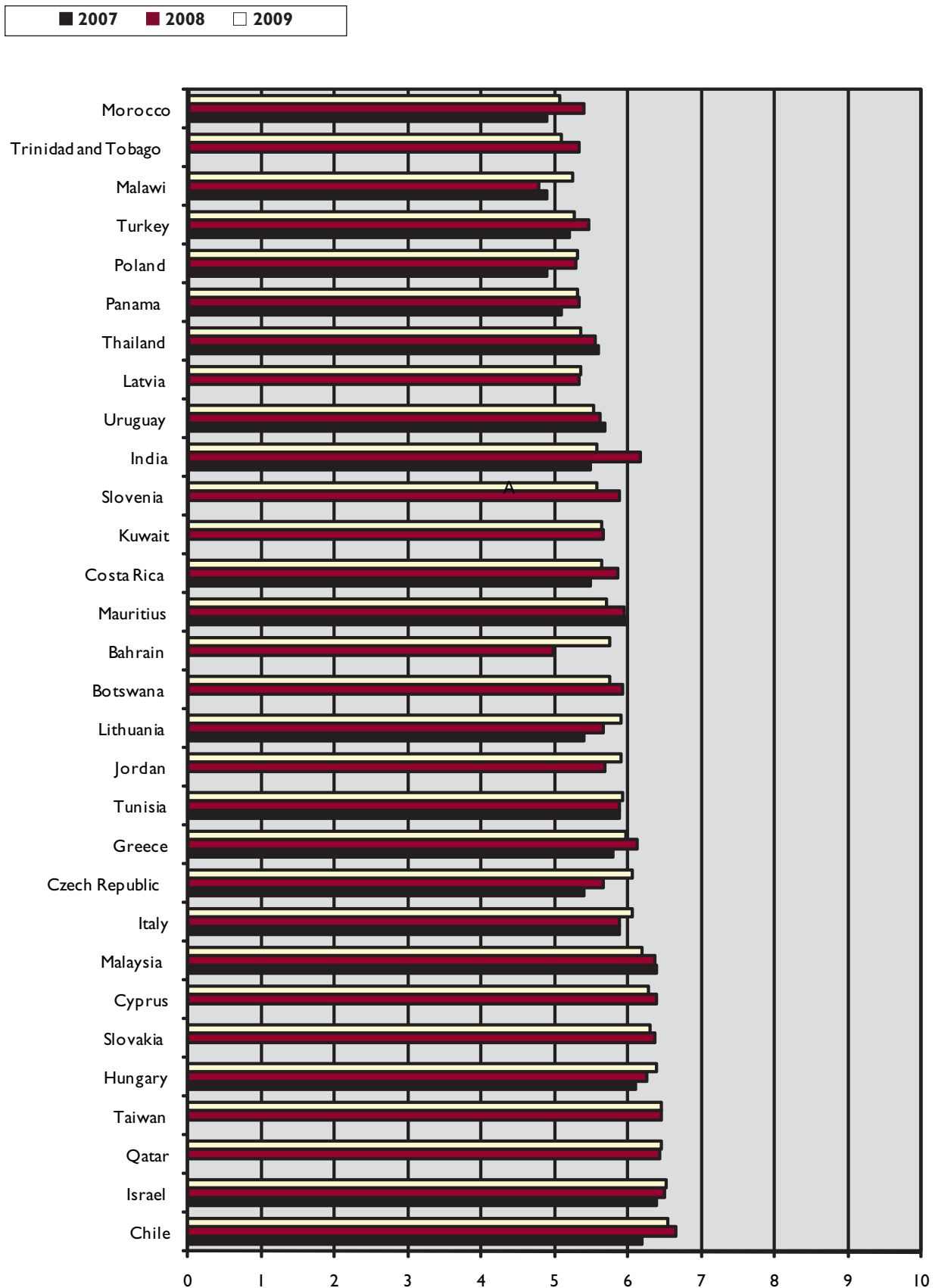
## APPENDIX I: COMPARISON OF IPRI SCORE 2007-2009



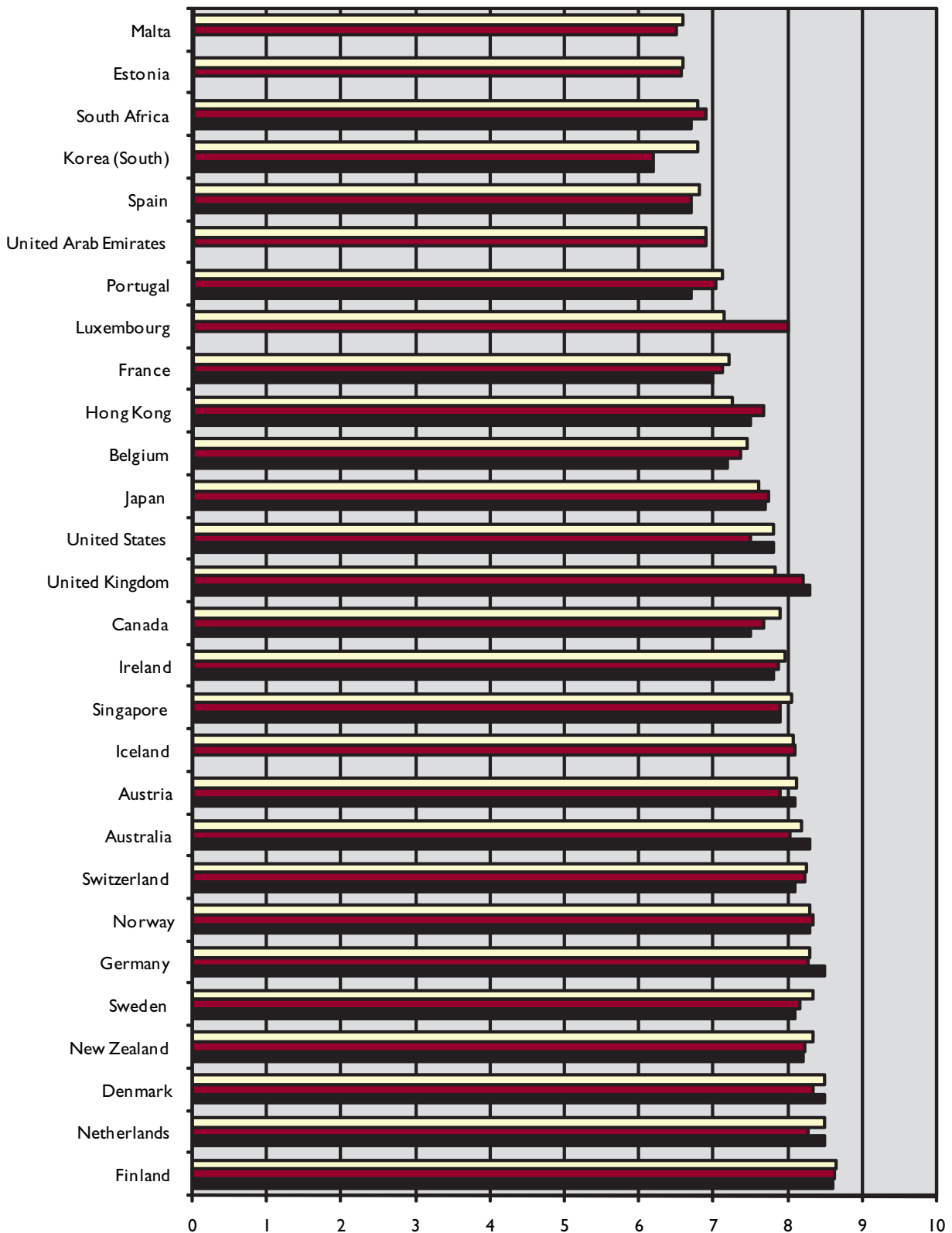
## APPENDIX I: COMPARISON OF IPRI SCORE 2007-2009



## APPENDIX I: COMPARISON OF IPRI SCORE 2007-2009



## APPENDIX I: COMPARISON OF IPRI SCORE 2007-2009



## APPENDIX II: DETAILED METHODOLOGY AND DATA SOURCE INFORMATION

### LP Sources

Variable Name in Corresponding Database	Original Scale	Rescaling Method used for IPRI	Year	Number of Countries Included in Original Database	Source	More Detailed Information About Source	Data included in 2007 Index?
Judiciary Independence	1=no, heavily influenced: 7=yes, entirely independent	The original data was rescaled to a scale of 0 - 10	2007 - 2008	131	World Economic Forum— Global Competitiveness Report	The ranking reflects experts' answers to the survey question: "Is the judiciary in your country independent from political influence of members of government, citizens or firms?"	Yes (updated)
Rule of Law	Percentage	The original data was rescaled to a scale of 0 - 10	2008	212	World Bank Institute— Governance Matters 2007: Worldwide Governance Indicators, 1996-2007 <a href="http://info.worldbank.org/governance/wgi2007/home.htm">http://info.worldbank.org/governance/wgi2007/home.htm</a>	Combines several indicators including judicial independence, respect for law in relations between citizens and the administration, property rights, confidence in the police force, enforceability of contracts, direct financial fraud, law and order, which measure the existence of the rule of law .	No
Political Stability		The original data was rescaled to a scale of 0 - 10	2008	212	World Bank Institute— Governance Matters 2007: Worldwide Governance Indicators, 1996-2006 <a href="http://info.worldbank.org/governance/wgi2007/home.htm">http://info.worldbank.org/governance/wgi2007/home.htm</a>	Combines several indicators which measure perceptions of the likelihood that the government in power will be destabilized or overthrown by possibly unconstitutional and/or violent means, including domestic violence and terrorism.	Yes (updated)
Control of Corruption	)	The original data was rescaled to a scale of 0 - 10	2008	212	World Bank Institute— Governance Matters 2007: Worldwide Governance Indicators, 1996-2006 <a href="http://info.worldbank.org/governance/wgi2007/home.htm">http://info.worldbank.org/governance/wgi2007/home.htm</a>	Combines several indicators which measure the extent to which public power is exercised for private gain, including petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.	Yes (updated)

## APPENDIX II: DETAILED METHODOLOGY AND DATA SOURCE INFORMATION

### PPR Sources

Variable Name in Corresponding Database	Original Scale	Rescaling Method used for IPRI	Year	Number of Countries Included in Original Database	Source	More Detailed Information About Source	Data included in 2007 Index?
Property Rights	1 (worst) – 7 (best)	The original data was rescaled to a scale of 0 - 10	2007 - 2008	131	World Economic Forum— Global Competitiveness Report	Survey participants were asked to comment: "Property rights, including over financial assets: (1) = are poorly defined and not protected by law to (7) = are clearly defined and well protected by law."	Yes (updated)
Registering Property	Actual Number	The "Registering Property" variable is a weighted average of the source's "Procedures to register property" and "Days to register property" data, with 30% of the weight given to the former and 70% to the latter. The standardization formula used to calculate the zero-to-10 rescaling for this component was: $10 * \frac{(V_{max} - V_i)}{(V_{max} - V_{min})}$ , with $V_{max}$ and $V_{min}$ set equal to the maximum value in the data set range and 0, respectively.	2008	178	The World Bank Group— Doing Business 2008 <a href="http://www.doingbusiness.org/">http://www.doingbusiness.org/</a>	Number of procedures legally required to register property and time spent (in days) in completing the procedures. This indicator assumes a standardized case of an entrepreneur who wants to purchase land and a building in the largest business city.	Yes (updated)
Ease of access to loans	1 (worst) – 7 (best)	The original data was rescaled to a scale of 0 - 10	2007 - 2008	131	World Economic Forum— Global Competitiveness Report	Survey participants were asked: "How easy is it to obtain a bank loan in your country with only a good business plan and no collateral? (1 = impossible, 7 = easy)".	Yes (updated)

## APPENDIX II: DETAILED METHODOLOGY AND DATA SOURCE INFORMATION

### IPR Sources

Variable Name in Corresponding Database	Original Scale	Rescaling Method used for IPRI	Year	Number of Countries Included in Original Database	Source	More Detailed Information About Source	Data included in 2007 Index?
Intellectual Property Protection	1 (worst) – 7 (best)	The original data was rescaled to a scale of 0 - 10	2007 - 2008	131	World Economic Forum— Global Competitiveness Report	Survey participants were asked to comment: "Intellectual property protection in your country: (1) = is weak or nonexistent to (7) = is equal to the world's most stringent."	Yes (updated)
Patent Protection	0 (worst) – 5 (best)	The original data was rescaled to a scale of 0 - 10	2005	122	Ginarte-Park Index (obtained from the author). For full description of data and original citation, see Walter G. Park and Juan Carlos Ginarte, "Intellectual Property Rights and Economic Growth," <i>Contemporary Economic Policy</i> , Vol. 15, Iss. 3, pp. 51-61, July 1997	A country's rank in patent strength is based on five extensive criteria: coverage, membership in international treaties, restrictions on patent rights, enforcement, and duration of protection.	Yes (updated)
Copyright Piracy Level	Percentage	Calculation per industry: $(100 - Vi)/10$ . The average of all industries' piracy level was taken to calculate final rescaled value.	2008	61	Special 301 Report (International Intellectual Property Alliance) submitted to the United States Trade Representative <a href="http://www.iipa.com/2007_SPEC301_TOC.htm">http://www.iipa.com/2007_SPEC301_TOC.htm</a> .  Additional data was obtained from IIPA member associations including Business Software Alliance and Motion Picture Association of America	Special 301 is an annual review process used in fighting international copyright piracy. It starts with the submission of public comments, of which IIPA's annual report is one of the most extensive and useful in terms of data.	Yes (updated)
Trademark Protection	1 (worst) – 5 (best)	The original data was rescaled to a scale of 0 - 10	1998	40	International Trademark Association: Trademark Protection Survey <a href="http://www.inta.org/index.php">http://www.inta.org/index.php</a>	The data is obtained from the survey that was sent to 230 INTA members with knowledge of the level of trademark protection available in the 40 countries in the study. The survey consists of 13 questions covering registration, maintenance, and enforcement of trademark rights.	Yes

## APPENDIX II: DETAILED METHODOLOGY AND DATA SOURCE INFORMATION

### GE Sources

Variable Name in Corresponding Database	Original Scale	Rescaling Method used for IPRI	Year	Number of Countries Included in Original Database	Source	More Detailed Information About Source	Data included in 2007 Index?
Women's access to land	0 (best) 0.5(average) 1 (worst)	The original data was rescaled to a scale of 0 - 10	2008	107	OECD Gender, Institutions and Development Data Base (GID) <a href="http://www.oecd.org/dev/gender/gid">http://www.oecd.org/dev/gender/gid</a>	The Gender, Institutions and Development Data Base (GID-DB) represents a new tool for researchers and policy makers to determine and analyse obstacles to women's economic development. It covers an array of 60 indicators on gender discrimination. The data base has been compiled from various sources.	Yes (Updated)
Women's access to bank loans	0 (best) 0.5(average) 1 (worst)	The original data was rescaled to a scale of 0 - 10	2008	107	OECD Gender, Institutions and Development Data Base (GID) <a href="http://www.oecd.org/dev/gender/gid">http://www.oecd.org/dev/gender/gid</a>	The Gender, Institutions and Development Data Base (GID-DB) represents a new tool for researchers and policy makers to determine and analyse obstacles to women's economic development. It covers an array of 60 indicators on gender discrimination. The data base has been compiled from various sources.	Yes (Updated)
Women's access to property other than land	0 (best) 0.5(average) 1 (worst)	The original data was rescaled to a scale of 0 - 10	2008	107	OECD Gender, Institutions and Development Data Base (GID) <a href="http://www.oecd.org/dev/gender/gid">http://www.oecd.org/dev/gender/gid</a>	The Gender, Institutions and Development Data Base (GID-DB) represents a new tool for researchers and policy makers to determine and analyse obstacles to women's economic development. It covers an array of 60 indicators on gender discrimination. The data base has been compiled from various sources.	Yes (Updated)
Inheritance practices	0 (best) 0.5(average) 1 (worst)	The original data was rescaled to a scale of 0 - 10	2008	107	OECD Gender, Institutions and Development Data Base (GID) <a href="http://www.oecd.org/dev/gender/gid">http://www.oecd.org/dev/gender/gid</a>	The Gender, Institutions and Development Data Base (GID-DB) represents a new tool for researchers and policy makers to determine and analyse obstacles to women's economic development. It covers an array of 60 indicators on gender discrimination. The data base has been compiled from various sources.	Yes (Updated)
Women's social rights (ad hoc)	0 (best) – 1 (worst)	This component of the gender equality indicator is a simple composite of five variables in the GID. The original data of each variable was rescaled to a scale of 0 - 10 and then averaged to determine the score for "women's social rights."	2006	107	OECD Gender, Institutions and Development Data Base (GID) <a href="http://www.oecd.org/dev/gender/gid">http://www.oecd.org/dev/gender/gid</a>	The five components to the "women's social rights" component are: Repudiation, Parental Authority, Female Genital Mutilation, Freedom of Movement, and Ratio of female to male adult literacy.	No

## APPENDIX III: REGIONAL DIVISION OF COUNTRIES

Region	Country
Africa	Angola
Africa	Benin
Africa	Botswana
Africa	Burkina Faso
Africa	Burundi
Africa	Cameroon
Africa	Chad
Africa	Ethiopia
Africa	Kenya
Africa	Madagascar
Africa	Malawi
Africa	Mali
Africa	Mauritania
Africa	Mauritius
Africa	Mozambique
Africa	Nigeria
Africa	South Africa
Africa	Tanzania
Africa	Uganda
Africa	Zambia
Africa	Zimbabwe
Asia	Bangladesh
Asia	China
Asia	Hong Kong
Asia	India
Asia	Indonesia
Asia	Japan
Asia	Korea (South)
Asia	Malaysia
Asia	Nepal
Asia	Pakistan
Asia	Philippines
Asia	Singapore
Asia	Sri Lanka
Asia	Taiwan
Asia	Thailand
Asia	Vietnam
Central And Eastern Europe	Albania
Central And Eastern Europe	Armenia
Central And Eastern Europe	Azerbaijan

## APPENDIX III: REGIONAL DIVISION OF COUNTRIES

Region	Country
Central And Eastern Europe	Bosnia-Herzegovina
Central And Eastern Europe	Bulgaria
Central And Eastern Europe	Croatia
Central And Eastern Europe	Czech Republic
Central And Eastern Europe	Estonia
Central And Eastern Europe	Hungary
Central And Eastern Europe	Kazakhstan
Central And Eastern Europe	Latvia
Central And Eastern Europe	Lithuania
Central And Eastern Europe	Macedonia
Central And Eastern Europe	Moldova
Central And Eastern Europe	Montenegro
Central And Eastern Europe	Poland
Central And Eastern Europe	Romania
Central And Eastern Europe	Serbia
Central And Eastern Europe	Slovakia
Central And Eastern Europe	Slovenia
Central And Eastern Europe	Turkey
Latin America	Argentina
Latin America	Bolivia
Latin America	Brazil
Latin America	Chile
Latin America	Colombia
Latin America	Costa Rica
Latin America	Dominican Republic
Latin America	Ecuador
Latin America	El Salvador
Latin America	Guatemala
Latin America	Guyana
Latin America	Honduras
Latin America	Jamaica
Latin America	Nicaragua
Latin America	Panama
Latin America	Paraguay
Latin America	Peru
Latin America	Trinidad and Tobago
Latin America	Uruguay
Latin America	Venezuela
Middle East/North Africa	Algeria
Middle East/North Africa	Bahrain

## APPENDIX III: REGIONAL DIVISION OF COUNTRIES

Region	Country
Middle East/North Africa	Cyprus
Middle East/North Africa	Egypt
Middle East/North Africa	Israel
Middle East/North Africa	Jordan
Middle East/North Africa	Kuwait
Middle East/North Africa	Malta
Middle East/North Africa	Morocco
Middle East/North Africa	Qatar
Middle East/North Africa	Tunisia
Middle East/North Africa	United Arab Emirates
North America	Canada
North America	Mexico
North America	United States
Oceania	Australia
Oceania	New Zealand
Russia	Russia
Russia	Ukraine
Western Europe	Austria
Western Europe	Belgium
Western Europe	Denmark
Western Europe	Finland
Western Europe	France
Western Europe	Germany
Western Europe	Greece
Western Europe	Iceland
Western Europe	Ireland
Western Europe	Italy
Western Europe	Luxembourg
Western Europe	Netherlands
Western Europe	Norway
Western Europe	Portugal
Western Europe	Spain
Western Europe	Sweden
Western Europe	Switzerland
Western Europe	United Kingdom

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- <sup>10</sup> Hernando de Soto(2000), *"The Mystery of Capital: Why Capital Triumphs in the West and Fails Everywhere Else"*, p.63, Basic Books, New York.
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- <sup>33</sup> President Alfredo Cristiani, Message to the Salvadorian Nation, Communication campaign to launch the Special Program "El Salvador, a Country of Property-Owners", San Salvador, 1991.
- <sup>34</sup> For the implementation of the formalization programs, the Institute for Liberty and Progress (ILP) opted for a centralized system for planning and coordinating, and a decentralized system for operations, so that the operations activities would be in the hands of the private sector and so that the beneficiaries could participate actively in the execution of the formalization activities and decision-making. Hence, the ILP acted as administrator to the NGOs participating in publicity and legalization activities, the private surveying firms, property owners and holders, the private notaries legalizing documents, and the registrars of the new real estate property registry.
- <sup>35</sup> The Social Property Registry (RSI) was created as the official entity in charge of registering the newly formalized properties. It initiated activities in 1992. In 1994, the Government decided to unify all the existent real estate registries in El Salvador based on RSI's registration system. It was also decided to unify the Survey Authority (*Instituto Geográfico Nacional*) with the Real Estate Registry (*Dirección Nacional de Registros*) under a new public entity called the National Center of Registries (*Centro Nacional de Registros-CNR*).
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- <sup>46</sup> CLEP (2008), page 6.
- <sup>47</sup> This is widely accepted in society where property is clearly identified by its owner and the boundary of ownership is clearly stated.
- <sup>48</sup> A property owner has absolute inviolable rights over his or her property. In addition, the beneficial gains from an owner's property ownership are for the owner only.
- <sup>49</sup> Property rights can be transferred to different owners, either voluntarily or legally.
- <sup>50</sup> This indicates the right to protect and prevent other people from gaining certain property benefits and to protect the use of property by others without the owner's permission.
- <sup>51</sup> Dr. Sudhir Raja Ravindran - Solicitor England & Wales, Patent & Trademark Agent & Attorney practising in the field of IP. Bachelor in Mechanical Engineering from the University of Madras, India and Masters in Manufacturing Systems Engineering from the Warwick Manufacturing Group, University of Warwick. A law graduate with Bachelor of Laws from the University of Bangalore, India, Masters in Law, from the School of Law, University of Warwick and Ph.D in Law from NALSAR University. Dr. Ravindran has had specialised Education in IP from World Intellectual Property Organisation (WIPO), Geneva, NALSAR University - India, IIM Lucknow - India & IIM Ahmedabad - India. He is a representative of ICC, India in the Commission on Intellectual Property of ICC, Paris, France and an Individual Observer of the Intellectual Property Constituency of ICANN.
- <sup>52</sup> Arya Mathew - Attorney, Trademark Agent and IP Consultant with Bachelor of Law from the Kerala Law Academy Law College and Master of Arts in Sociology, from the Madurai Kamaraj University. She is also obtained her Master of Law in Intellectual property laws from the Tamil Nadu Dr. Ambedkar law University securing the 1st Rank and Gold medal. She is committed towards research in the field of intellectual property and has penned articles on subjects relating to intellectual property.
- <sup>53</sup> Altacit Global Strategic Consultants for Corporate, Legal and Intellectual Property (IP) matters. [www.altacit.com](http://www.altacit.com)
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- <sup>55</sup> Bulgaria, the EU, Guinea, India, Jamaica, Kenya, Madagascar, Mauritius, Morocco, Pakistan, Romania, Sri Lanka, Switzerland, Thailand, Tunisia and Turkey.
- <sup>56</sup> GI in the WTO & Doha Negotiations by Miguel Rodriguez Mendoza presented in Worldwide Symposium on GI. [www.wipo.int/edocs/mdocs/geoind/en/wipo\\_geo\\_bei\\_07/wipo\\_geo\\_bei\\_07\\_www\\_81777.doc](http://www.wipo.int/edocs/mdocs/geoind/en/wipo_geo_bei_07/wipo_geo_bei_07_www_81777.doc)
- <sup>57</sup> Argentina, Australia, Canada, Chile, Colombia, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, New Zealand, Panama, Paraguay, the Philippines, Chinese Taipei and the United States.
- <sup>58</sup> TRIPS AGREEMENT - Article 23
- <sup>59</sup> The Geographical Indications of Goods (Registration and protection) Act, 1999 – Section 2 (e)
- <sup>60</sup> "Geographical indication", in relation to goods, means an indication which identifies such goods as agricultural goods, natural goods or manufactured goods as originating, or manufactured in the territory of a country, or a region or locality in that territory, where a given quality, reputation or other characteristic of such goods is essentially attributable to its geographical origin and in case where such goods are manufactured goods one of the activities of either the production or of processing or preparation of the goods concerned takes place in such territory, region or locality, as the case may be.
- <sup>61</sup> The Geographical Indications of Goods (Registration and Protection) Act, 1999- Section 21 (a)
- <sup>62</sup> Section 6(1) states that: For the purposes of this Act, a record called the Register of geographical indications shall be kept at the Head office of the Geographical Indications Registry, wherein shall be entered all registered geographical indications with the names, addresses and descriptions of the proprietors, the names, addresses and descriptions of authorized users and such other matters relating to registered geographical indications as may be prescribed and such registers may be maintained wholly or partly on computer.
- <sup>63</sup> The Geographical Indications of Goods (Registration and Protection) Act, 1999- Section 11(3)
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