

# Varieties of Latin-American Patent Offices: Comparative Study of Practices and Procedures

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**Abstract:** This paper aims to compare the practices and procedures of different Latin American Patent Office – Brazil, Peru and Mexico – and assumes the following starting points:

1. Intellectual property represents the broadest knowledge regulatory system in the current post-TRIPS world.
2. Access to knowledge, and the ways its intellectual property is enforced or not, constitutes the cornerstone for the dynamism of contemporary capitalist economies and assumes particular importance in the intermediate stages of national development.
3. However, through the analysis of the national patent offices' practices and procedures, and its institutional framing, it is possible to reveal relevant differences between them, allowing the concept of “varieties of patent offices”

**Resumo:** Este trabalho tem como objetivo comparar as práticas e procedimentos de três diferentes escritórios de patente latino-americanos – Brasil, Peru e México – e assume os seguintes pontos de partida:

1. A propriedade intelectual representa o mais abrangente sistema regulatório dos ativos de conhecimento no mundo pós-TRIPS;
2. O acesso ao conhecimento, e as formas pelas quais a propriedade intelectual é imposta ou não, constitui a pedra angular do dinamismo das economias capitalistas contemporâneas e assume particular importância nos estágios intermediários do desenvolvimento nacional;
3. Entretanto, através da análise das práticas e procedimentos dos escritórios nacionais de patente, e de sua estrutura institucional, é possível revelar diferenças relevantes entre eles, sugerindo o conceito de “variedades de escritórios de patentes”.

## 1. Introduction

This paper aims to compare the practices and procedures of different Latin American Patent Office – Brazil, Peru and Mexico – and assumes the following starting points:

Intellectual property represents the broadest knowledge regulatory system in the current post-TRIPS world.

Access to knowledge, and the ways its intellectual property is enforced or not, constitutes the cornerstone for the dynamism of contemporary capitalist economies and assumes particular importance in the intermediate stages of national development.

However, through the analysis of the national patent offices' practices and procedures, and its institutional framing, it is possible to reveal relevant differences between them, allowing the concept of “varieties of patent offices”.<sup>1</sup>

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<sup>1</sup> As far as this particular appropriation of the concept of varieties is concerned, as a biological metaphor, we are referring to the

The article proposes the following hypothesis:

In spite of a process of normative isomorphism<sup>2</sup> instituted by TRIPS, patent offices have their own institutional cultures and histories worth studying.

This institutional culture is transformed over time but incorporates conflicting tendencies – of the historical moment, of political economic direction and the Patent Office Directory approach.

Aside from the patent offices' historical and institutional specificities, the country's legal framework and its normative functioning constitute another element of differentiation that should be taken into consideration. In other words, the juridical order, especially by way of the jurisprudence resulting from its decisions on patent conflicts, is an actor in the constitution of patent regimes.

The role of national diplomacy in the global forum (or in global governance institutions), notably at WIPO (World Intellectual Property Organization) and WTO (World Trade Organization), constitutes another relevant aspect in understanding the current patent regime (however, this will not be an object of analysis in this text)<sup>3</sup>.

And, finally: a) in spite of the fact that the process of analyzing and issuing patents follows a relatively similar international norm, b) that is, moreover, converging with the introduction of a set of automation tools developed by the European Patent Office (EPTOS – Electronic Patent and Trademark Office System)<sup>4</sup>, c) and which follows in the same direction as the greater internationalization of search processes and the evident project in databases, one can still assert that there is ample variety among patent offices, and a patent office contain a high degree of autonomy and differentiate themselves by their capacity to undertake the patent exam and by their “rate of patent issue”.

The lack of soundness of the patents granted on the onset of an environment prone to uncertainty can be detrimental to the generation and transfer of technology and, potentially, could disturb the technological catching-up processes of developing countries. This conceptual flaw is the reason for the statement that a better definition of the criteria for novelty, inventive activity and utility are among the priorities for a possible positive agenda for patent examinations. Thus, developing countries are concerned with the possibility that TRIPS harmonization would limit their ability to contest patent protection restrictions and also the incorporation of their companies in the relevant international innovation networks. The idea of descriptive sufficiency also deserves some attention. It is self-evident that, in the case of developing countries at least, it would seem advantageous to draw the greatest possible amount of information from the process of granting patent privileges.

In this context, it can be useful to reveal the nature of the research for precedence and examination processes for patents, verifying the extent of the research universe, the interpretation accorded to each criterion and the organization of the interaction between the depositing company and the patent office. It is hoped to ascertain the manner in which each of these offices determines the scope of the patents granted. But on the other hand,

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patent offices as a particular *species* which shares a social constructed normative isomorphism after TRIPS (Agreement on Trade-Related Intellectual Property Aspects) but also reveals national particular uniqueness.

<sup>2</sup> Dimaggio, Paul J. and Powell, Walter W. Editors, *The New Institutionalism in Organizational Analysis*, The University of Chicago Press, Chicago.

<sup>3</sup> In the Brazilian case, one must also note GIPI (Inter-ministry Group on Intellectual Property), which discusses the direction of the government's intellectual property policies as well as its participation in international fora. The Brazilian government, one could say, keeps a relatively eclectic position toward intellectual property, apparently respecting conflicts of interest within the State and guaranteeing the institutional autonomy of each one of these spheres, notably INPI, the Ministry of Culture, the Ministry of Health, as well as agencies such as ANVISA.

<sup>4</sup> In practice, these tools configure a uniform system established in different offices with consistent behaviors, though with specific requirements for each one of these offices.

it is possible to conjecture that some patent offices, in Latin America or elsewhere, do not enroll in examination processes for granting patents, taking into consideration patent examination done abroad.

In open economies, intellectual property (IP) becomes a key issue in knowledge generation and technology diffusion. In such a context, effective intellectual property governance appears to be a necessary step for catching up. The “technology gap” of Latin America is well known, so her lagging behind in patenting and in IP governance capacities should not be surprising. In South East Asia, the number of residents’ patents is growing at a higher rate than that of non-residents, while in Latin America and the Caribbean, non-residents’ patenting leads the scene. In this scenario, patenting systems are a powerful tool in the hands of foreign companies: commercialization of foreign produce is facilitated, while in most of the cases, local technological capabilities can be inadequately protected.

As will be pointed out in this article, national patent offices, responsible for implementing legal-institutional frameworks for intellectual property at the national level (especially in the case of industrial property), are singular and varied organizations. Moreover, patent examiners hold a high level of discretionary power, in spite of the uniformity observed in patent exams, for example, between the Brazilian INPI, the Peruvian INDECOPI and the Mexican Patent Office IMPI.

One of the few studies conducted about patent examiners, in this case on USPTO (the North American patent office), states that “The key insight from our qualitative analysis is that ‘there may be as many patent offices as patent examiners’.”<sup>5</sup>

In a contrary perspective, Peter Drahos’ “The Global Governance of Knowledge” focuses on the interaction amongst patent offices and sees an “invisible” process of harmonization as a consequence of TRIPS implementation.<sup>6</sup> However, although we generally agree with the existence of harmonization processes as a tendency, a closer look inside Drahos’ book can show different results.

Drahos says,

Patent offices have a tremendous de facto power over the interpretation of patent standards because they have to establish practicable routines for the day-to-day application of these standards. ... One exercise in which the three offices examined some hypothetical cases involving the patentability of DNA fragments showed the offices getting to roughly similar results but for different reasons.

Another study which looked at actual results for non-PCT applications for 1990-95 that had been granted in the US and the EPO found ‘significant disharmony’ of outcomes across the offices. JPO in particular had rejected 7,024 patents that had been granted by the USPTO and EPO. The study was not able to explain what accounted for these differences of outcome but it suggests that even where patent offices converge in the same standards, there is no guarantee that a common interpretation of the standards will follow.<sup>7</sup>

We may state that: 1. the relationship between patents granted as a share of applications in different national patent offices varies according to three patterns – around 50%, around 25% and around 75% – and this relates to the existence and the quality of the patent exam; 2. The rate of patents issued by patent examiners in different Latin-American patent offices varies, depending upon the patent office’s institutional culture and political orientation, which changes over time and is not independent from the government’s economic and technological policies; the type of patents that he or she analyzes; the examiner’s tenure – in other words,

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<sup>5</sup> Cokburn, I.M.; Kortum, S.; Stern, S. – Are all Patent Examiners Equal The Impact of Examiner Characteristics on Patent Statistics and Litigation Outcomes. NBER Working Paper No. 8980. June 2002. Jel No. 03,K3, L3.

<sup>6</sup> Drahos, P. – The Global Governance of Knowledge. “Patent Offices and their Clients”, Cambridge University Press, Cambridge UK, 2010.

<sup>7</sup> Drahos, op. cit., pages 51 and 52. The article mentioned is Jensen, P.H. et al. – “Patent Allocation Outcomes across the Trilateral Patent Offices”, Melorne Institute Working Paper No. 5/05, 2005,

how long he or she has worked at the patent office –; the examiner’s training; and, finally, the individual examiner’s beliefs regarding the public importance of issuing patents.

Together with the changes in the micro-behavior of actors, partly also pushed by the emergence of the new technological paradigms, there has been an emerging willingness in the public sector and in the government to look at IP as a tool for knowledge governance, inducing a more coordinated approach towards IP with the science, technology and innovation strategy of the country, and in line with the policies to support industrial development. The use of patents to protect relevant advances in scientific and technological applications with industrial utility is supported by a series of instruments of the national technology policy, such as a series of demand-oriented subsidies and grants for supporting the firm during the filing process. Intellectual Property systems are a complex governing arena whose running mechanisms are not easily understood. Effective IP governance requires proper infrastructure, institutions and prepared actors, as well as suitable legal architecture and a pro-active attitude in the international arena.

The increasingly rejected principle of “one size fits all” finds a fascinating example here in which, notwithstanding the whole infrastructure created to reinforce convergence, the solutions found continue to exhibit varied national traits. In this way, the conceptual perspective under development, which treats intellectual property as a dimension of knowledge governance, but not the only one, and patent offices as an element of the property regime of knowledge assets, but not the only one, seems to shed more light on the varied ecology that regulates knowledge production, circulation, protection and appropriation.

We have organized this article in four sessions: after the introduction, we present a set of statistics on the relationship between patent applications and grants issued in different groups of countries. A short history follows of Brazilian (INPI), Peruvian (INDECOPI) and Mexican (IMPI) patent offices and their institutional structures, with general statistics about their operation. The fourth part of this work presents some methodological concerns on the field work and their results to INPI Brazil, INDECOPI Peru and IMPI Mexico, which consisted of interviews with patent examiners. Finally, our conclusions will reexamine the hypotheses in light of the case studies.

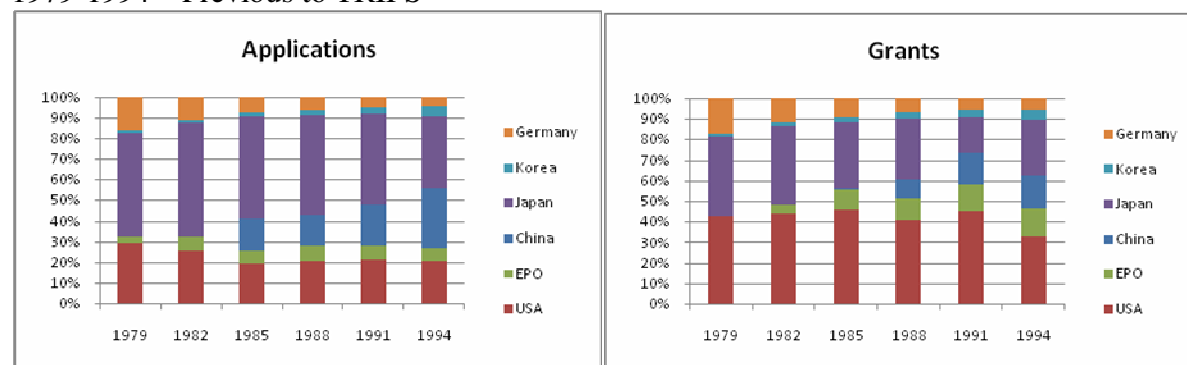
## 2. Stylized Facts and some measures

Statistics published by the WIPO website are the primary source for the Figures below. In order to study differences and common patterns, as far as granting patents is concerned, the Patent Offices of different countries had being divided in two groups, as mentioned below, and two periods (1979 to 1994 and 1994 to 2009, pre and post TRIPS). The discussion follows after the presentation of the Figures.

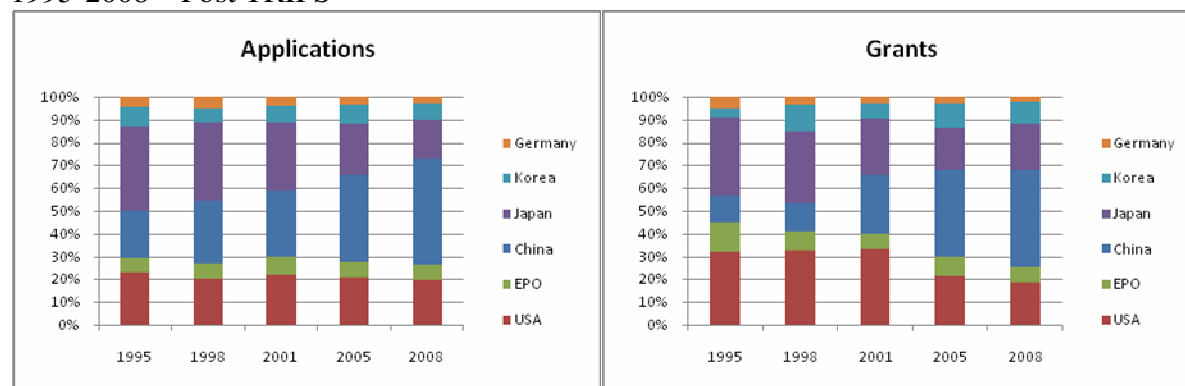
**Group 1: United States (USPTO), European Patent Office (EPO), China, Japan (JPO), Germany, Korea.**

**Figure 1. Applications and grants by countries as a share of the total applications and grants of Group 1 (1979-1994 and 1995-2008)**

1979-1994 – Previous to TRIPS



## 1995-2008 – Post TRIPS



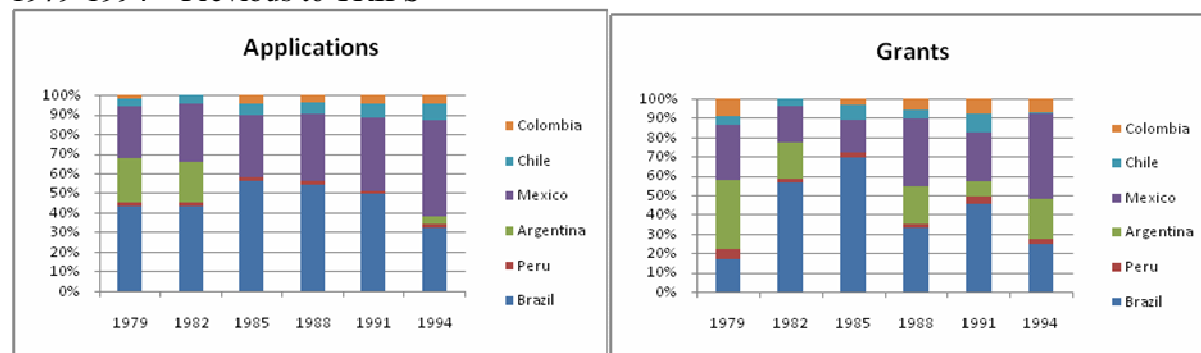
Source: WIPO, prepared by the authors

In the pre-TRIPS period, especially until 1990, Japan and the United States were dominant – Japan in terms of applications and the USA in terms of patents granted. In the post-TRIPS period, the presence of China becomes predominant in terms of applications but Japan and the United States still represent around 30% of the total of applications and grants. In 2008, China represents more than 40% of patents granted while the participation of the USA and Japan are around 20% of the patents granted in this group of countries.

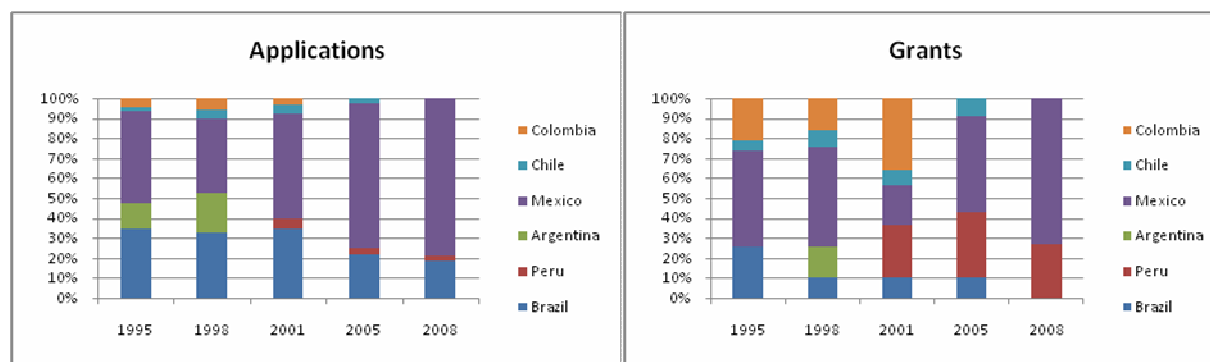
## Group 2: Argentina, Brazil, Chile, Colombia, Mexico and Peru

## Figure 2. Applications and grants by countries as a share of the total applications and grants of the Group 2 (1979-1994 and 1995-2008)

## 1979-1994 – Previous to TRIPS



## 1995-2008 – POST TRIPS



Source: WIPO, prepared by the authors

Figure 2 shows the participation of the six selected countries from Latin America. Due to the lack of data in some years, especially from Argentina, the information might be distorted.

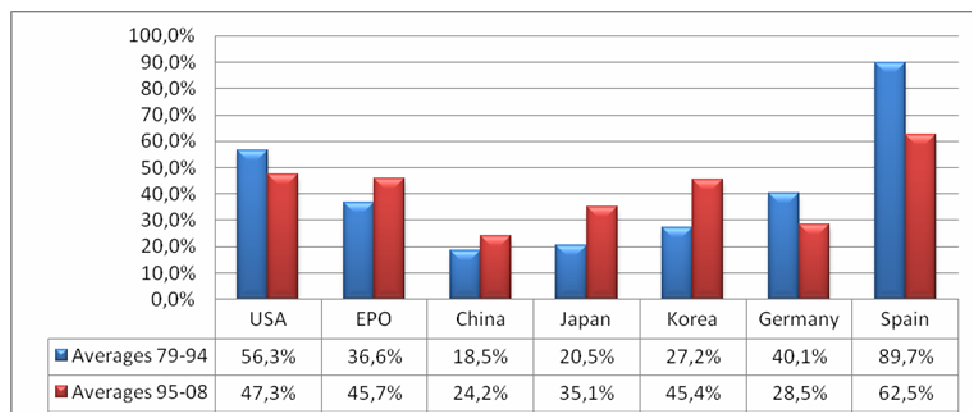
In the first period, we can see that Colombia, Chile and Peru keep a small share both in applications and grants. Colombia has on average 3.3% of shares in applications and 4.3% in grants, whilst Peru has 1.7% in applications and 2.6% in grants and Chile has an average of 4.9% of share in both applications and grants.

Brazil starts with around 40% in applications and jumps up to more than 55% in 1985, due to the lack of data from Argentina, but later loses its share, ending with a little more than 30%. In grants, although more volatile, Brazil also has a rise in its share until 1985, which then falls back to end with an average of 40%. Mexico starts with around 25% in applications, and this number keeps rising until the end of the period, culminating at 49.5% of the total. The share of Mexico in grants is also quite volatile, having decreased until 1985 and then increasing until 1994, with an average of 25.6%. Lastly, Argentina has a little more than 20% of applications at the start of the period, and it is not shown in the next years due to the shortage of data, but in the last year, the participation is 3.5%. In relation to its grants, Argentina starts with a high percentage of 36%, which later decreases, ending up with an average of 22.6%.

In the period after TRIPS, we have the same results. Colombia, Chile and Peru remain with a low percentage of applications (on average 3.5%, 3% and 3.2% respectively). Mexico's figures keep rising, starting with 46% and ending with 79%, partially due to the lack of data from the other countries. Brazil, due to several reasons analyzed afterwards, falls from 35% to a little less than 20%. Finally Argentina, in the two years where it is shown in the graphics, has percentages of 13% and 20% but, due to the absence of figures for the next years, it is not possible to establish a trend. As far as grants are concerned, the figures of the countries are quite variable. We should highlight Mexico, which despite the falling of 2001 has had a strong participation in the post TRIPS period.

### Patent granted as a percentage of patent application

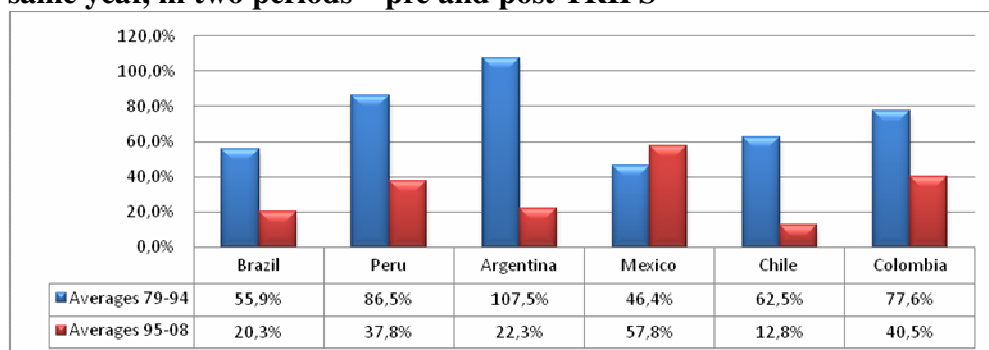
**Figure 3. Group 1 – Averages of the relationships between patents granted and patent application in the same year, in two periods – pre and post TRIPS**



Source: WIPO, prepared by the authors

This graph shows the average of the relation between grants and applications of each country of Group 1 in the two periods, before TRIPS and after TRIPS (this number was reached by calculating the ratio between grants and applications for every year and then the average for the period). The behavior of the countries was quite variable. EUA, Germany and Spain had lower averages post TRIPS than pre TRIPS. In EPO, China, Japan and Korea, this relation is higher in the second period compared with the first. With the exception of Spain, all the countries in both periods have a rate of patent issue below 50%. China, Japan and Germany belong to the group around 25%.

**Figure 4. Group 2 – Averages of the relationship between patents granted and patent application at the same year, in two periods – pre and post TRIPS**



Source: WIPO, prepared by the authors

All countries from the second group had experienced a significant drop in the averages of patents granted over patent application in the post TRIPS period, with the exception of Mexico. Taking only this period into consideration, Colombia, Mexico and Peru belong to the around-50% pattern, whereas Brazil, Argentina and Chile are part of the group around 25%. The average between patents granted and patent application has dropped by more than 80% in Argentina between the first and the second period. It is probable that these results are a consequence of whether the patent exam is done domestically or abroad.

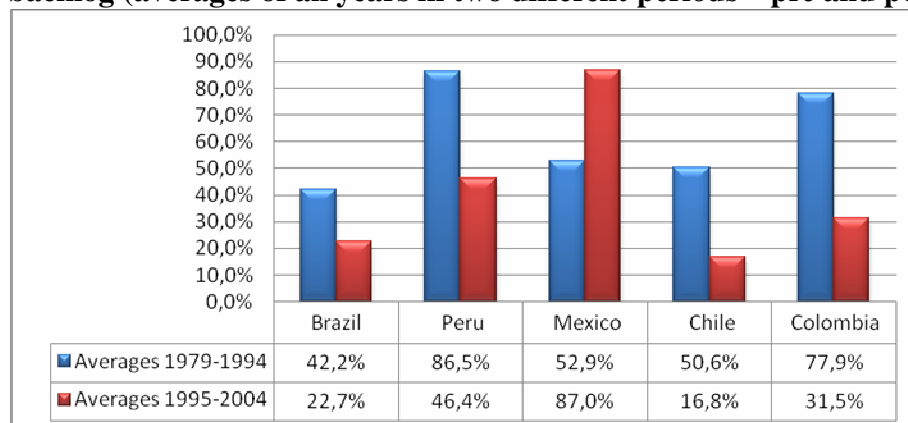
Actually, although it is not possible to prove, we could have four different patterns instead of three, defined by the combination of two by two variables – instead of relying on the rate of patenting: countries that do or do not do the patent exam (or rely on patent exams done abroad); countries that have a higher (more than 50%) or lower (less than 50%) rate of patenting. Let us take the case of Brazil: the patent exam is done in house and Brazil has a relatively low rate of patenting.

The Figures 3 and 4 assume that the relationship between patents granted and patent application in the same year and the averages of all years of the two different periods, pre and post TRIPS, would normalize the

known existence of a backlog between applications and grants. Figure 5 takes into consideration the average of four years of backlog (between different classes of patents) and compares applications in the year t-4 with grants issued in the t period.

As far as the final conclusions are concerned, and for the post TRIPS period, Brazil and Chile remain in the same around-25% group, now with the presence of Colombia. Peru keeps its position in the around-50% pattern, whereas Mexico shows a major difference, entering in the group of around 75% (where Spain leads). As we will see in the country case analysis, the IMPI relies on patent exams done by EPO.<sup>8</sup>

**Figure 5. Relationship between patents granted and patent application taking into account a four-year backlog (averages of all years in two different periods – pre and post TRIPS)**



### 3. Interviews in three different Latin-American patent offices

#### 3.1. Some Methodological Concerns: Tacit and explicit knowledge in patent office decision processes<sup>9</sup>

As far as the field research depends on interviews with patent examiners, it is important to take into account some methodological concerns. There are a series of elements of a quantitative and qualitative order in a study assessing patent offices that are relevant to the comprehension of the decision-process history and its effect. From the quantitative aspect, it seems obvious that historical patent data – including the resident/non-resident ratio, amongst others – should be studied. On the other hand, qualitative data requires a special methodology for assimilation. This proves somewhat harder. Interviews naturally constitute the central element of the methodological structure. However, interviews may become complex issues when trying to resolve the conundrum of the distinct periods of an institution's existence. In this context, the selection of interviewees becomes important and demands the sound prior knowledge of the research team. Concentrating interviews to people having former strategic and key posts is fundamental but might be inadequate. Gathering an institution's past from its technicians, collaborators, clients and other participants help restore combined dispersed and balkanized knowledge. Two major challenges stand out: preparing personalized interviews and choosing the correct sources. Another issue helps to understand the perception process of the institutional activity as seen by its technicians, managers and others. This consists in prior knowledge – by

<sup>8</sup> We did the same exercise for the three groups of countries, but the differences were not significant as the averages “normalize” the series taken into consideration.

<sup>9</sup> We thank Cláudia Chamas for these methodological concerns and for her advice during the elaboration of the case studies. However, the authors are responsible for the ideas expressed in the article.



means of data, documents and secondary sources – of the milestones, historical decisions and the major impediments experienced by the patent office. It should be stressed that much may have been lost over time because institutions of developing countries frequently do not have the structures required for recording institutional legacy. Some of the documents may be stored confidentially adding to other hindrances.

The use of interviews assumes that it is possible to gather part – although admittedly not all – of the relevant information. There is a tacit component that may never come to light. Regrettably, human memory is rather unreliable. Certain facts are simply forgotten. The researchers of applied social sciences dispose of a few resources to correct these lapses. However, there are other reasons that explain the tacit aspect inherent to gathering information concerning the decision processes of strategic government agencies: (i) the actors are not always willing to disclose certain information for a series of possible reasons; (ii) the actors are not always fully aware of the institutional reasons for their former actions because many simply fulfilled duties imposed by the senior management.

The tacit components are frequently related to issues of a political nature. This leads to some pertinent questions: Is the external influence of practices deeply ingrained in the patent offices of developed countries relevant to the decision processes of the patent offices of developing countries? How relevant and to what extent? Is the external influence relevant to the development of norms for patent examination by the patent office? Does the training of patent office examiners from developing countries by patent office examiners of developed countries have consequences? What would be the optimal method for developing the internal capacity for the examination and the granting of patents in a manner as to avoid importing/copying standards inappropriate to the local situation?

Therefore, it is apparent that the research should consider this tacit aspect as being inherent to any research assessing patent offices and as forming one of the probable limitations without, however, impairing the study or rendering it unfeasible. The researcher must encounter new sources of information, mainly beyond the direct context of the patent office, enabling some well-founded inferences forming an accurate picture based on reliable data and analysis.

### **3.2. Institutional Culture, differences according to generation and patent type, and the role of training and education: Findings**

As is well known, the quality of the patents issued by different offices and the greater (or lesser) level of legal security they bring, can have positive (or negative) consequences for the transfer of technology, according to each case, and may disturb developing nations' process of catching-up. If this is true, a better definition of the criteria of novelty, inventive step and utility are among the priorities of a positive agenda for patent analysis.

As a result, and according to interviews that were carried out, the patent examiner must: 1.) evaluate if the application is clear and well-written; 2.) restrict the scope of the claim of the patent document – even as the patent claimant will always wish to broaden it; 3.) verify the degree of innovation of the patent claimed; and 4.) guarantee the descriptive sufficiency, in a way that a competitor with reasonable knowledge of the field is able to reproduce the invention, while the party claiming the patent will prefer to conceal more than reveal his or her product or process.

It can be useful in this context to disclose the nature of research for antecedents and the process of patent analysis, examining the range of research, the interpretation of each criterion, and the interaction between the company filing and the patent office. How each office determines the scope of a patent that is issued is a matter of analysis.

Intellectual property becomes a key question in generating knowledge and circulating technologies in open economies. In such a context, the effective governance of intellectual property is a crucial step for the technological outfitting of more developed countries. Latin American countries' technological gap is well known (though it does not occur in all fields of knowledge) so that their delay in patenting and managing the

issue of patents is not surprising. In this scenario, the patent system appears to be a tool in the hands of multinational companies: the commercialization of products is made easier while local technological capacity does not necessarily generate value.<sup>10</sup>

The tacit components are frequently related to issues of a political nature. This leads to some pertinent questions: is the external influence of practices deeply ingrained in developed countries' patent offices relevant to decision-making processes of patent offices in developing countries? How relevant and to what extent? Is the external influence relevant to the development of norms for patent examination by the patent office? Does the training of patent office examiners from developing countries by patent office examiners of developed countries have consequences? What would be the optimal method for developing the internal capacity for examination and issuing patents in a way that avoids simply copying standards inappropriate to the local context?

As a result, our research considered these concerns and this tacit aspect as inherent to any research assessing patent offices and as one of the probable limitations without, however, impairing or rendering the study unfeasible.

In this way, twelve interviews were conducted with Brazilian INPI's patent examiners, fifteen with INDECOPI's patent examiners and fifteen in Mexican IMPI. In each country's case, interviewees were divided into three groups: more senior patent examiners, examiners who have been in the position for around five years, and a third generation that joined the institutions most recently. In the Brazilian case, the first generation was labeled "generation PNUD", because of the training process that had occurred which we will discuss later. The second generation took the civil service exam between 1998 and 2004, and, finally, the third generation was admitted through more recent exams. Another criterion for the selection of interviewees was the diversity of the class of patents they examine.

### **4.3. Comparative findings**

The same questionnaire (interview scripts) was used in the three countries. The questions referred to the interviewee's history, how he or she entered the institution, his or her academic and professional training profile prior to the position, how he or she handled and examined a patent application, the perception of institutional policies and the degree of autonomy in making decisions. We sought to choose examiners from different technical areas and with different experiences.

#### **Brazil - INPI**

All of the interviews were held at INPI at different times during the course of 2008 and 2009.

#### **Peru - INDECOPI**

The interviews were held from 1 to 5 September 2008 and from 20 to 23 January 2009. The first series of interviews were held before the patent office's reorganization by Law 1033, which brought up interesting questions on whether the new organization had produced a change in the procedures followed in patent examinations.

#### **México – IMPI**

The interviews were held at IMPI in September 2010.

#### **Brazil**

##### *Pathway into INPI and examiner background.*

An overwhelming majority of the patent examiners interviewed joined the agency through the civil service exam. For Brazilian patent examiners, joining the ranks of this career happened by chance. The public exam attracts professionals from technical areas, though these professionals were not necessarily familiar with the

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<sup>10</sup> Peter Draho stresses this point in his recent book on Patent Office.

field of intellectual property prior to taking it. Although at the very beginning of the INPI history, patent examiners first worked as outside, contracted patent examiners, this arrangement has become rare or even non-existent in recent years. The work environment was declared very pleasant, the senior colleagues were cooperative, and their experience was duly passed on without conflicts.

The examiners' background varied according to their generation. The majority have degrees from the best universities, generally public ones, such as UFRJ (Federal University of Rio de Janeiro) and UFF (Federal Fluminense University), but also from renowned private universities such as PUC (Pontifical Catholic University).

The first generation, here called "generation PNUD", joined in the 1970s and was trained by foreign experts, mainly Germans, with courses taken in Brazil and abroad. Professionals from the areas of civil, electrical and mechanical engineering dominate among the examiners interviewed in this generation, partly because pharmaceutical patents were not issued and chemical patents were only in their infancy.

The second generation, which joined INPI between 1998 and 20014, has a more varied training background. This generation's training process happened within INPI itself through a mostly practical training process supervised by more senior examiners who passed on their experiences and knowledge.

Finally, the most recent generation possesses strong academic credentials already before recruitment, frequently including graduate studies at the master's and doctoral levels. They were also subject to an internal training process within INPI. The areas of their training are quite diverse and the examiners are encouraged to periodically attend courses at home and abroad.<sup>11</sup>

## Peru

### *Pathway into DIN*

In Peru, joining the ranks of the patent-examiner career happened by chance. The public exam attracted professionals from technical areas, though these professionals were not necessarily familiar with the field of intellectual property prior to taking it. In the Peruvian case, it could happen that the patent examiners first worked as outside contracted patent examiners.

However, the majority of interviewed examiners joined DIN (previously OIN) through a civil-service exam. Only in one case, no exam was taken; a position opened and the examiner learned about it through an employee. Interviews were held, and the position was awarded.

The examiners interviewed came out of the University of San Marcos, the Agrarian University, the University of Lima and the National Engineering University. These are considered serious universities with adequate levels of quality and requirements, retaining a certain prestige in Peru. Only one patent examiner studied abroad and has a master's degree.

In most cases, at the moment they joined DIN, knowledge about intellectual property in general, and patents specifically, was null. Although in almost all cases, they knew INDECOPI through its consumer-rights work, the interviewees did not know that it was also the agency responsible for managing and registering the different kinds of intellectual property. There were three exceptions: in two cases, this last fact was known as a result of a general university-level course and in the third case, the person had worked at an office specialized in patent-research services.

The entirety of the interviewed examiners agreed that DIN's work environment was remarkable and that they had received support and information from colleagues when they began working there. In general, examiners were surprised by the level of organization found in a public agency of that kind.

## Mexico

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<sup>11</sup> INPI has sought to train its professionals in a multidisciplinary perspective.

### *Pathway into IMPI and examiner background*

As in the Brazilian case, the majority of the patent examiners interviewed joined the agency through the civil-service exam. The examiners' background varied according to the area they belong to. The patent examiners from chemical, biotech and pharmacy departments have an academic background and carried out their MSc or PhD research at the University before they joined IMPI. The patent examiners from electrical and mechanical departments have an undergraduate degree and are not linked to academic research.

According to Mexican law, the civil-service exam may be applied to one or two job positions, and in the Mexican case, there have been two major exams when the patent examiners recently joined the institution as means of an expansion of activities, and many other exams for positions that have been vacant because the patent examiner retired or left the institution or to attend an increasing demand in some specific area – usually biotech or pharmacy (we will come to this point again in training and capacity building).

As in the Peruvian and Brazilian cases, joining the ranks of this career happened by chance in the Mexican case. Some patent examiners mentioned the lack of opportunities in the academic field and the possibility of a job where knowledge challenges were expected to be a constant, despite the bureaucratic activity. In most cases, patent examiners were not familiar with the field of intellectual property prior to taking it. In the Mexican case, there are no contracted patent examiners.

Mexican patent examiners emphasize the pleasant and cooperative work environment, and the receptiveness of more senior patent examiners when they joined the institution. As a matter of fact, there is a formal practice that each patent examiner is tutored by a senior one during his/her first year in the institution as a means of training on the job, besides the formal one-month capacity-building period, which we will come to in the next session.

## **Brazil**

### *Training and courses at home and abroad.*

As was pointed out before, the first generation of examiners received training as a result of an agreement established between INPI and PNUD. The so-called “PNUD Project” was a result of a partnership between INPI's first administration, led by President Thedim Lobo from 1970 to 1973, with the United Nations' Development Program. The partnership's goal was to train a permanent technical staff to perform patent classification, research and analysis, with an initial deadline of five years. Although it was supposed to begin in April 1973, the initial program was not implemented. The project was only implemented starting in 1977. UFRJ participated in this effort through COPPE (Engineering Graduate Programs).

The account given by the first generation's examiners is that the training they received was very important in understanding the mission they were to perform. This group of informants presented, on average, a solid and extensive understanding of the public importance of the process of patent-issuing and of the importance of the technology-transfer contracts that prevailed at the time.

Having worked at INPI longer, they had enjoyed the opportunity to take part in several courses abroad, financed by WIPO, EPO, USPTO and JPO. In more recent times, INPI itself has organized training courses for the Latin American region and these examiners have participated as students and instructors.<sup>12</sup>

Later, in 2006 and 2007, a new training and research program was conceived, organized and implemented based on a partnership between INPI, CCJE (Center for Law and Economic Sciences at Federal University of Rio de Janeiro) and the Institute of Economics at the same university: the Research Laboratory on Innovation and Intellectual Property Management. This interdisciplinary program proved to be a pioneering effort combining training activities and research in intellectual property. As a result, it stimulated academic

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<sup>12</sup> INPI's role in regional training and collaboration between Latin American offices was highlighted by the Peruvians.

production by both students and professors who had not necessarily been acquainted with intellectual property's relevant themes, but already had solid foundations in the subjects of innovation and development. The Research Lab on Innovation and Intellectual Property Management contains a non-degree Postgraduate Course (Institute of Economics) and research activities organized by the Center for Law and Economic Sciences (CCJE), spread over eight thematic groupings.<sup>13</sup> These groups, which combined instructors and course participants, also defined the scope of the disciplines taught. Some of the program's former students, who were patent examiners, were interviewed. Their vision, compared with patent examiners who did not take the course, were broader and more consistent. Without a doubt, differences in worldviews affect the quality of patent-examination work.

The Lab was responsible for the management and creation of two new graduate programs with significant potential, which can be attributed in some measure to the initial program's success. In 2007, INPI created the Academy of Intellectual Property and Development<sup>14</sup>. That year, it also received CAPES' approval and authorization to establish the Professional Master Degree in Intellectual Property and Development. In 2008, the Institute of Economics created the Graduate Program in Public Policy, Strategies, and Development. Within this program, a concentration in Innovation, Intellectual Property, and Development was established offering an academic master's and doctoral program, perhaps the only interdisciplinary doctorate in intellectual property of its kind in Latin America.

As can be discerned from the discussion above, patent examiners' training processes proved to be an extremely relevant factor, whether to differentiate between different generations or to improve the quality of the work they perform. On the other hand, training is not restricted, or should not restrict itself, to patent examination. Training encompasses a range of possibilities that extends from professional qualification prior to joining the institution – which was revealed to be inversely related to seniority, in other words, younger staff were generally better qualified technically or academically, while older employees better understood patents' public role – to multidisciplinary courses that allow patent examiners to broaden their perspectives.

## **Peru**

### *INDECOPI - Training and courses at home and abroad*

There is no specific training program at DIN for examiners who join the agency. Examiners learn on their own through each case they receive. Nor is a senior examiner assigned to guide the new examiners through the first few months. In practice, the technical director and the examiners perform this function in some ways. Some examiners take the online courses WIPO offers of their own accord.

Otherwise, every year a number of courses abroad are financed, mainly by WIPO, EPO, OEPM, USPTO and JPO. However, these courses are isolated and are not part of a general training program. In the majority of cases, these are standard basic or intermediate-level courses. Additionally, participation by DIN staff in these courses is random and dependent on the amount of technical assistance INDECOPI receives in a given year. On the other hand, participation in a course abroad by an examiner follows a handful of general criteria that are not systematized in any internal guidelines (seniority in DIN, area of expertise, participation in previous training courses); and in many instances, these courses are used as a kind of bonus to the examiner. One of interviewees expressed that although these courses are meant for patent examiners, on occasion the Peruvian

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<sup>13</sup> In addition to teaching activities, the Lab was organized into eight research groups: (i) Globalization of the Intellectual Property System; (ii) Management of Intellectual Property, Technical Standards, and Technology Trade; (iii) Structure and Trade on the International Technology Market; (iv) Micro, Small and Medium-Sized Firms' Access to Technological Information; (v) Intellectual Property in Biotechnology and Pharmaceutical Industries; (vi) Intellectual Property in Information Technology and Military Technologies; (vii) Promotion of Geographic Indication and Protection of Traditional Knowledge; (viii) Protection and Infracture of Copyright.

<sup>14</sup> In recent years, with the organization of the Intellectual Property Academy, a great part of training activities was done indoors.

government sends other technicians (not examiners) to participate in the training program abroad. External examiners participate in these courses rarely and only when a position cannot be filled by an in-house examiner.

There is also – although less and less – general training or courses on specific subjects held at INDECOPI by foreign examiners who work in the world's larger patent offices (EPO, OEPM). These courses are usually scheduled every two years, though the last visit was in 2006. Usually, the instructors have a great deal of work experience and discuss how a specific technical problem is handled at his or her office. The advantage of these courses is that the entire DIN staff can participate without losing work time. The disadvantage is the pressure made to follow his or her office's standards, without regard to the distinct legislation and/or level of local industrial development. In this sense, the South-South cooperation, for instance with Brazilian INPI, is especially important. This type of course depends on DIN's request, when international technical assistance allows it.

Moreover, as pointed out by the INDECOPI staff, the South-South collaboration undertaken by the Brazilian INPI is very much welcome as the standards and realities are more similar to those of Peru and other Latin American countries. In any case, these types of courses are not offered at the rate that Latin American patent offices would like.

## Mexico

### *IMPI- Training and courses at home and abroad*

When the patent examiner joins the institution, he/she is submitted to a one-month capacity-building program, developed and led by senior IMPI patent examiners. After this period, he/she is assigned to a senior patent examiner as his/her tutor for a minimum period of one year. This tutor must not only perform the training on the job activities, but also check all the patent-claim exams this new examiner does.

Despite the geographic and economic proximity with the USA, Mexican IMPI presents a major cooperation in capacity-building with EPO. Most Mexican patent examiners have attended more than one training period at EPO, and the senior ones have been formed according to this office's examination criteria. Therefore, Mexican IMPI procedures have been strongly influenced by the EPO perspective. Patent examiners have also been trained by WIPO, besides USPTO and Japanese Patent Offices, but the influence of and cooperation with EPO must be specially referred to.

There is also a common practice of distance education (mainly related to WIPO programs) and special programs led by EPO, USPTO and also WIPO professionals that are carried out in Mexican IMPI. This type of training offers a major opportunity for IMPI examiners to discuss their procedures and challenges and is welcomed by Mexican professionals, whilst the programs abroad offer the opportunity to meet patent examiners and practices from other countries.

Mexican patent examiners claim, however, that in the last two years, due to economic restrictions and to the world financial crises, the international trainings have diminished, but they keep doing teleconference meetings mainly with EPO specialists, for discussing specific points, mainly referring to the biotech, chemical and pharmacy areas.

The Mexican patent office also has a central position in training and consulting smaller Caribbean countries, similar to the one of Brazilian INPI for South American ones. But apparently, there is hardly any cooperation or connection between them.

As can be discerned from the discussion above, patent examiners' training proved to be an extremely relevant factor, not only to improve the quality of the work they performed, but mainly to determine the patentability criteria which will be referred to in the next session.

## Brazil

### *Patentability criteria*

The patent examination procedure begins with the receipt of a patent application that has already been subject to a formal preliminary exam. Applications are classified according to the patent's object. The first stage then consists in evaluating the patents' claims and composition. Several of the interviewed patent examiners said that this first stage results in a higher number of returned applications so that applicants can improve their claims and work on the composition. In many cases, applications do not return to the patent office since, depending on the backlog and type of patent examined (for example, information technology), the application simply loses its novelty or its purpose.

Once the application's claims and composition are evaluated, a research strategy is developed consisting of choosing databases. This stage has been made easier by improvements in the access to and databases themselves. The fulfillment of patent requirements (novelty, non-obviousness or the inventive step, industrial utility and descriptive sufficiency) is then evaluated. A technical opinion is issued with the patent approval, the application's rejection or a report on further requirements.

In spite of the fact that the process is the same, here begin the differences between examiners and patent offices. The Andean Community, for example, with financial support from WIPO, published in 2003 and confirmed in 2004 the Andean Patent Manual, which established a practical guide for examining patents and regularized processes in the Andean region. One of the manual's advantages was its suitability to standards already in effect, the community's jurisprudence and what was practiced at national agencies. Another advantage was that it established what could and could not be patented.

A clear example of this was the ban on second-use and polymorph patents. However, the Free Trade Agreement signed by Peru's government with the United States (one of the documents was signed exactly at the time of the second stage of interviews) changed some of the conditions that had been established previously by the Andean Community, such as the case of second use. Despite it being a not necessarily falsifiable statement, a few informants stated that they continued to deny second-use patents claiming the lack of or only a reduced inventive step.

Unlike the Peruvian case, several interviewers at INPI complained of the lack of exam guidelines, with the exception of the area of biotechnology. Another specific complaint was the lack of clarity regarding what is and what is not patentable. There are several problems concerning the concession of patents that generate anxiety for an examiner, especially in the case of second-use and polymorphs. Legal instability is created as a result. Here space exists for an individual examiner's own criteria. Another controversial issue, which has given rise to important litigation in the case of pharmaceutical patents, is the attempt to extend patent duration based on the pipeline mechanism.<sup>15</sup>

Interviewers also highlighted that younger examiners tend to be, as far as the exam is concerned, more rigorous and stringent, whether because of the greater use of technology they deploy or because their training has reinforced this requirement.

In INPI's case, and this is of extreme relevance, the examiner's own rate of patent appears to vary greatly and is, normally, low around 25%, with considerable variation according to patent class. Data presented in the second part of this article supports this statement. However, the most common reason for this result is the lack of clarity in patent applications.<sup>16</sup>

In general, Brazilian informants considered the patent exam to be rigorous. However, when asked if obtaining a patent is difficult, the typical answer is that obtaining a patent is not. This contradicts both the idea that the exam is extremely rigorous and the finding that each examiner has a low rate of issuing patents,

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<sup>15</sup> The pipeline issued retroactive patents for pharmaceuticals in Brazil. The duration would be from the patent's original issue date and not its issue date in Brazil. This had led to litigation increasingly eliminated by the Superior Court of Justice's second division, whose decisions, initially, had granted extensions to patent durations, but now systematically rejects and denies all claims.

<sup>16</sup> We recognize that sufficient empirical evidence does not exist yet to confirm or deny this proposition. Nevertheless, we state it here as a general observation.

which seems to be the case. One explanation that would reconcile this apparent paradox is the general lack of non-obviousness or the inventive step in patent applications.

Definitely no pressure exists for patent examiners to issue patents. The pressure is to perform the exam in time and fulfill the quotas set by the agencies, which in the majority of cases are extremely difficult to reach. Nor did the examiners report conflicts with applicants. In reality, patent conflicts are resolved by INPI at another stage. Perhaps this is a fundamental difference between the Brazilian and the Peruvian patent offices.

## Peru

### *Patentability criteria*

With the financial support of WIPO, the Andean Community, published the Andean Patent Manual in 2003 (2<sup>nd</sup> edn in 2004). The purpose of this document was, on the one hand, to provide a practical patent-examination guide and, on the other hand, to reconcile processes and practices in patent proceeding in the Andean region. It was developed on the foundation of Andean norms, community jurisprudence and the practices of national offices. Experts from WIPO, EPO, IMPI and the corresponding Andean offices participated in its development. Therefore, the manual contains, among others, guidelines on the criteria and standards to be followed in examining a patent application. DIN examiners normally use the manual.

When a patent application is first submitted, the examiner checks it for the minimum requirement in order to assign it a presentation date. Afterwards, the application undergoes an examination of the formal requirements. Many applications are not sufficiently clear. In general, the problem is translation, but the necessary explanations are requested of the applicant. Once these are made (if not, the application is considered abandoned) the claimed invention is examined for its fulfillment of patentability criteria. The first step is to perform a search of antecedents. Technical documents close to the invention in question are sought and then immediately begin to be compared with the application document. During the search, previous searches performed by EPO and USPTO weigh considerably. On occasion, additional antecedents are sought, but generally examiners use documents already identified by the above-mentioned offices.

Of the requirements for patentability (novelty, non-obviousness or the inventive step, industrial application), every examiner interviewed concluded that the most difficult criterion is that of non-obviousness or the inventive step.<sup>17</sup>

In order to judge whether an application features an inventive step or non-obviousness, the claimed invention must be obvious to an expert in the field or have an unexpected effect if it contains a technical advantage. In other words, technical differences should not be suggested by its antecedents. On this point, several of the examiners interviewed considered that the newer examiners were stricter and more rigorous in judging whether an application fulfilled this requirement. The patent application must be reproducible in some industry as far as industrial application is concerned.

If an application presents problems in any of the patentability criteria, a report is written and issued to the applicant. After the applicant's response, a decision is made to issue or reject the patent. Reports written by outside examiners are reviewed by senior examiners. Discrepancies between them are discussed and usually a reconciled report is issued.

According to each interviewed examiner's perception, the rate at which each examiner issues patents is approximately 50%. However, it is generally recognized that in many cases, the reason for rejection is due to the lack of clarity in the patent application.

Applicants may check the status of their applications through INDECOPI's website ([www.indecopi.gob.pe](http://www.indecopi.gob.pe)), though it continues to be common to visit INDECOPI's headquarters to check the status and consult

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<sup>17</sup> In relation to novelty, a photographic innovation applies; all that is required for a previous document is to contain one characteristic, however trivial, also to be contained in the patent application, for the basis of novelty to be destroyed.



personally with examiners regarding obstacles that may arise in the process.

All of the examiners who were interviewed thought that in comparison with other patent offices in the region, DIN's examination of patent applications is rigorous. However, the majority expressed that being issued a patent was not difficult if an applicant followed the criteria set by the office. This conclusion contrasts with the opinion of some of the informants, in the sense that one cannot predict the criteria followed, neither by outside and in-house examiners, nor between examiners in general. It was thought that there should be a greater internal coordination of criteria. Monthly organization meetings have been held since this year due to organizational changes and changes in patent law in Peru, introduced as a result of the Free Trade Agreement with the United States.

All of the examiners denied any pressure from outside to complete patent exams. The only pressure that exists is to complete exams within deadlines and fulfill the performance quotas set by the Administration.

The relationship between examiners and applicants (or their legal representatives) was not congenial in the past. Applicants regarded examiners as the enemy. This attitude has been changing, although occasionally attorneys' offices ask for an examiner to be reassigned because they do not agree with the patentability criteria applied, which reflects the fact that DIN's criteria are not applied uniformly.

## México

### *Patentability criteria*

As in the Brazilian case, the patent examination procedure begins with receiving a patent application that has already been subject to a formal preliminary exam. Applications are classified according to the patent's object. The first stage then consists in evaluating the patents' claims and composition. Several of the interviewed examiners said that this first stage results in a higher number of returned applications so that applicants can improve their claims and work on the composition. In many cases, applications do not return to the patent office since, depending on the backlog and type of patent examined (for example, information technology), the application simply loses its novelty or its purpose.

Once the application's claims and composition are evaluated, the patent claims are informally divided into two groups: if the claim has already been approved by an European office and cites the international research reports (reporte de busca internacional), the IMPI patent examiners do not conduct research, but analyze if the patent object is in accordance with Mexican law, and the patent claim is approved. If the patent claim has been approved by USPTO, on the contrary, the patent examiner will proceed a research in databases (normally free-of-charge ones) before analyzing it. Fulfillment of patent requirements (novelty, non-obviousness or the inventive step, industrial utility and descriptive sufficiency) are considered in the analysis. A technical opinion is issued with the patent approval, the application's rejection or a report on further requirements.

According to Mexican law, since 2005, a patent examiner can issue only four requirements per patent claim (two related to formal aspects and two related to the analysis itself).

Special attention must be given to patent claims applied by Mexican companies, universities or research centers. According to patent examiners from all areas of IMPI, approximately 50% of these applications are denied in the formal-aspects exam. The rate of patenting for these applications is very low, and therefore IMPI carries out a varied number of strategies to improve the patent rating of Mexican inventions.

IMPI has a cooperative relation with law firms, in order to clarify criteria and diminish problems in patent analysis. It also helps universities through training programs and free consultancy services for researchers and research centers throughout the country. And besides these activities, it offers free attendance to patent claimants at IMPI offices so that they can elaborate their claims appropriately.

IMPI patent examiners also mention the lack of a formal exam guideline (mainly in the biotech area, as did Brazilian patent examiners), which is partially worked out by the extreme cooperative environment they have.

At this point, we may repeat similarities among the three agencies, as already mentioned: 1) lack of clarity in applications; 2) translation problems; 3) poorly composed patents, mainly by nationals; 3) increasing use of previous EPO and USPTO searches (except in the Mexican case); 4) of the requirements to issue patents, without a doubt the most difficult to ascertain is the existence of non-obviousness or the inventive step. The Mexican case also points out that there is a common attempt to enlarge the claims in relation to what has already been approved by other patent offices.

It is not as clear as it seems to be in the Brazilian and Peruvian cases that the Mexican younger generations are more strict in patent analysis – the interviews indicate that the difference in the own rate of patenting is more due to personal aspects, since the access to international not-free-of-charge databases still represents a problem for Mexican examiners.

As well as in the Brazilian and Peruvian cases, the project estimates a personal rate of 50% (which in the Brazilian case is lower), with considerable variation according to patent type. Data presented in the second part of this article supports this statement. However, the most common reason for these rates is the lack of clarity in patent applications, more than the patent examiners' strictness. We recognize that sufficient empirical evidence does not exist yet to confirm or deny this proposition. Nevertheless, we state it here as a general observation.

In general, the three offices' informants considered the patent exam to be rigorous. However, when asked if obtaining a patent is difficult, the typical answer is that it is not. This contradicts both the idea that the exam is extremely rigorous and the finding that each examiner has a low rate of issuing patents, which seems to be the case. One explanation that would reconcile this apparent paradox is the general lack of non-obviousness or the inventive step in applications. In the Mexican case, the European influence in patent-analysis criteria is also a possible reason for denying many applications that have been approved by USPTO, besides the problems already mentioned with applications originated by Mexican companies or universities.

Definitively, no pressure exists for patent examiners to issue patents, according to patent examiners from the three offices. The main pressure is to perform the exam in time and fulfill the quotas set by the agencies, which in the majority of cases are extremely difficult to reach.

In the Mexican case, a highly cooperative relationship has been mentioned to exist between IMPI and patent applicants, although law firms seem to be not so satisfied.

As well as INDECOPI, the Mexican agency also issues legal decisions, but up to the time of the interviews, this does not represent pressure. We mentioned the importance of judiciary power in Brazil, mainly in biotech-related sectors, and there seems to be a tendency that the Mexican case will evolve to a situation similar to the Brazilian one.

## Brazil

### *Continuity of institutional policy*

Some of the interviewed examiners noted institutional changes in INPI's last two administrations. In general, these changes have been regarded as positive: the increase in the number of examiners; improvements in the career pathway; greater concern with training and qualification; establishment of the Academy on intellectual property; the reduction in the backlog of trademarks and some patent classes; greater administrative efficiency; concern with upgrading the agency's infrastructure; and, with the exception of biotechnology, chemistry and pharmaceuticals, where most disagreements occur, there is a consensus on the improvement of patent-examination processes. However, a few subjects point to a relaxation of "rigor" in the exams, despite resistance by the more senior staff.

Another interesting result related to institutional changes and continuity was that INPI's institutional culture is more influenced by EPO than by USPTO. On the other hand, a significant number of examiners declared that TRIPS had exerted little influence on the patent-exam process itself, which can be tested by the data presented in the second session.

## Peru

### *Continuity of institutional policy*

Changes in INDECOPI's administration, as well as in DIN itself, have been limited to administrative or institutional changes. These have no implicated changes in the patentability criteria, the examination of patent applications or in the procedures of opposing or rejecting applications in general. Due to the high level of technicality in DIN's work, it is difficult for INDECOPI to influence its work (as it has succeeded in other areas operating under its aegis). The change in INDECOPI's administration can be better understood by its level of understanding of matters relating to intellectual property and, therefore, the allocation of resources to DIN.

Based on the interviews, we found that DIN's work environment is pleasant, examiners cooperate well together, the agency operates independently, the examiners' decisions on a claimed invention's patentability follow technical criteria, there is a certain stability and continuity among the examiners who work at DIN, and changes in INDECOPI's leadership have not affected DIN's daily efforts.

## México

### *Continuity of institutional policy*

Mexican patent examiners mention a continuity of institutional policy, which it is considered to be one of the main reasons for the expansion of IMPI, also in the fields referred to by Brazilian interviewees: the increase in the number of examiners; improvements in the career pathway; maintenance of the concern with training and qualification; the reduction in the backlog of trademarks and some patent types; greater administrative efficiency; concern with upgrading the agency's infrastructure; and, with the exception of biotechnology, chemistry and pharmaceuticals, where most disagreements occur, there is consensus on the improvement of patent-examination processes.

As has already been mentioned, and similar to the Brazilian case, IMPI is more influenced by EPO than by USPTO. On the other hand, a significant number of examiners declared that TRIPS exerted little influence on the patent exam process itself, what can be tested by the data presented in the second session.

## Brazil

### *Main problems found*

The main problem found is the physical infrastructure and the high level of backlog in patent examinations. The interviewed examiners noted that the ongoing need for technological upgrades, given the acceleration of progress in the state of technology, has been a difficult issue to solve. The generalist style of examiners hampers the solution of specific problems in leading-edge technological sub-areas.

There is also a need to regularize criteria and to create greater internal coordination among departments. No proper context exists to discuss the different criteria for patent examination and concession.

## PERU

### *Main problems found*

Some problems were detected or expressed openly by examiners. The following can be highlighted:

- . Lack of training.

DIN has not developed a comprehensive training program for new examiners who have no experience with patent examinations. A training program combining the job training and theoretical coursework could be very useful.

Neither is there a program for examiners who already work at the agency. Participation in studies abroad is, for the most part, random, although general criteria for participation exist. Moreover, invitations from

international or foreign donors depend (except in the case of regional programs where all Latin American countries are invited) on the amount of technical assistance INDECOPI receives for matters of intellectual property. Training workshops inside DIN with foreign examiners are sporadic, concern specific issues that present themselves over time and depend on international aid.

Outside, contracted examiners are limited to the infrequent workshops at DIN and do not enjoy access to courses abroad, even though their work is not at heart different from senior assistants or examiners. The only difference is that outside examiners' reports are submitted for approval by regular examiners.

Recently, we have learned that INDECOPI is in the process of developing a school to offer training in the subjects with which the Institution concerns itself. A course to train patent examiners is being considered among the courses the school will offer.

. Lack of criteria uniformity and internal cohesion

Though technical directors should ensure the uniformity of criteria used in patent examination, there is no space at the institutional level to regularly discuss the criteria the agency is applying to patent applications. As a result, examiners do not always follow the same patentability criteria for a given application. However, this need is being addressed in a way through regular newsletters the technical directors send to examiners summarizing the facts of a case and explaining how similar cases should be handled.

. Language skills

Patent examination is limited in many instances because examiners lack knowledge of foreign languages, finding antecedents principally in English, German and French. This prevents the state of technologically from being suitably determined. Perhaps this was what led a foreign expert to conclude a report on DIN saying that the agency protected more inventions than Germany.

. Inadequate infrastructure

DIN has had to move its offices within INDECOPI's installations several times. Some examiners expressed that DIN's infrastructure was not ideal and that they have always worked in extreme conditions. For example, outside examiners had a room set up to perform searches and examine patent applications assigned to them. Now, with the Internet allowing remote access to databases, they no longer enjoy any physical space within the agency.

Mexico

*Main problems found*

The main problem found in the Mexican agency, as well as in the Brazilian one, is the physical infrastructure and the high level of backlog in patent examinations. The interviewed examiners noted that the ongoing need for technological upgrades, given the acceleration of progress in the state of technology, has been a difficult issue to solve. In opposition to the Brazilian case, there is prevalence of a specialist profile rather than a generalist style of examiners, which helps solve specific problems in leading-edge technology sub-areas.

Also contrary to the Brazilian case, there is a growing concern regarding the discussion of homogeneity of criteria for patent examination and concession.

## **Concluding Remarks**

How different are Latin-American Patent Offices, and why does this matter?

First of all, the Latin-American Patent Offices differ in their institutional framework – built in a longer (in the case of Brazil) or shorter (in the Peruvian case) historical process. They are submitted to their own judiciary order and their principles concerned to public interest. Competition policy is a second, but independent,

dimension of the regulation of intellectual property, more present in the case of Peru, as part of the INDECOPI activities, and less in the case of Mexico. Industrial and innovation policies are behind the role of intellectual protection, as well as the presence of State in governing the economy.

Different levels of industrial development and the size of the patent office affect the rate of doing the patent exam indoors or relying on the patent exam done abroad and, by consequence, affect the rate of patents issued pre or post TRIPS agreement. TRIPS, contrary to the common sense, did not affect the patent exam in most of the countries. Harmonization was much more a matter of technical procedure than a matter of institutional culture.

It is useful to return to the beginning of this article. It has being stated that the lack of soundness for the patents granted can be detrimental to the generation and transfer of technology and, potentially, can disturb the technological catching-up processes of developing countries.

A better definition of the criteria for novelty, inventive activity and utility are among the priorities for a possible positive agenda for patent examinations. The idea of descriptive sufficiency also deserves attention. Patent examiners seem aware of the advantage to draw the greatest possible amount of information from the process of granting patent privileges.

Better patents are a positive instrument to foster innovation and development. Patent examiners are civil servants concerned with the importance of their role in granting privileges and monopolist power. Capacity-building, not only related with the technological frontier, but mainly rooted in an interdisciplinary approach, is a crucial dimension as far as a solid institutional culture is concerned.

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