

# **DECISION-MAKING BASED ON AN ANALYSIS OF ALTERNATIVES MEXICO AND USA IN THE ELECTION PROCESS FOR PATENTING**

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## **Abstract**

This article presents the decision-making based on, an analysis to select which is best option patent an invention. The selected countries were Mexico and United States. It is important to know the different processes that each country has to grant a patent, their costs, whether to patent in one country or more, the procedure for international protection. Something important to note is that many people do not have the information necessary to protect their inventions. The process and the time for which a patent assigned are too long or tedious for people. It is important to promote technological development of the country, but you have to identify what the needs are, involve society, private sector, and government.

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**Keywords:** Decision making, Analysis, Patents

## **Introduction**

In life, professional, personal and academic level in all areas, many decisions are taken. Usually, there is more than one choice. Decision-making usually considered a choice between alternatives, but the process is not that simple. The process has various aspects depending on the case. (Robbins, Coulter, 2005). An abrupt decision can affect the outcome because it did not take into account different scenarios. Therefore it is important making an analysis of the situation before taking a quick decision. In this article we show a major emphasis on decision-making. Decision-making is a process, then sequentially steps shown in Figure 1 below. (Canós, Pons, Valero, Mahuet, 2012:4)

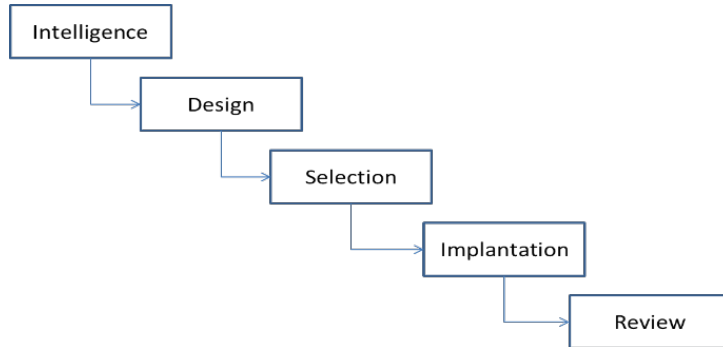


Figure 1: Stages of decision making  
 Source: (Canós, Pons, Valero, Mahuet, 2012:4)

Based on an analysis “ distinction and separation of parts of a whole in order to know their principles or elements” (Planeta, 1991:70). The inventor makes the decision to select the country that is most convenient for him. He considers the following: the protection of the invention, the time to grant the patent, costs and which country will get a better economic benefit. In the next figure 2 it is shown the generic patent analysis workflow. (Abbas, 2014)

There a list of patent analysis techniques such as text mining approaches and visualization approaches. (Abbas, 2014) In the next figure 3 the taxonomy of techniques for patent analysis.

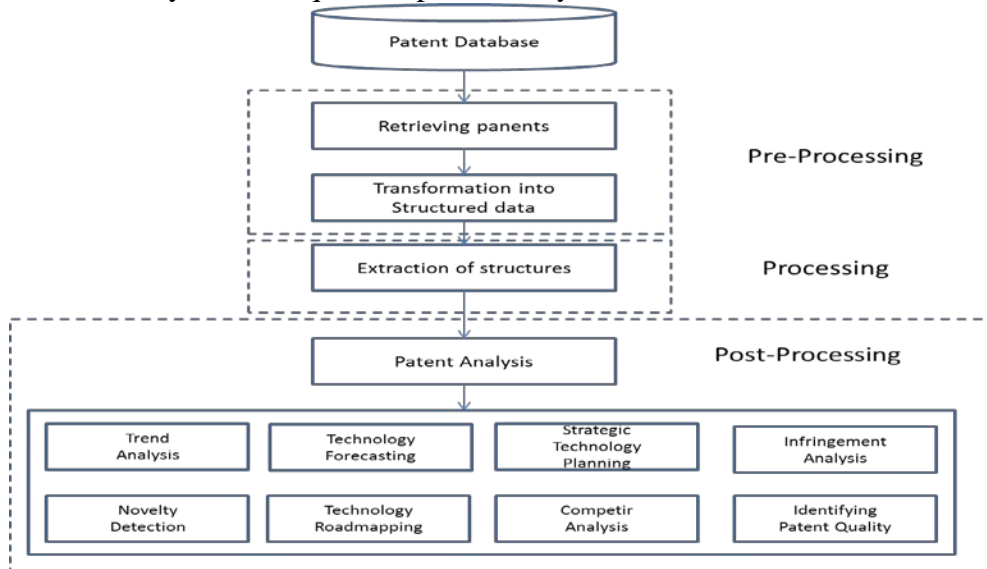


Figure 2: Generic patent analysis workflow  
 Source: (Abbas, Zhang, Khan, 2014)

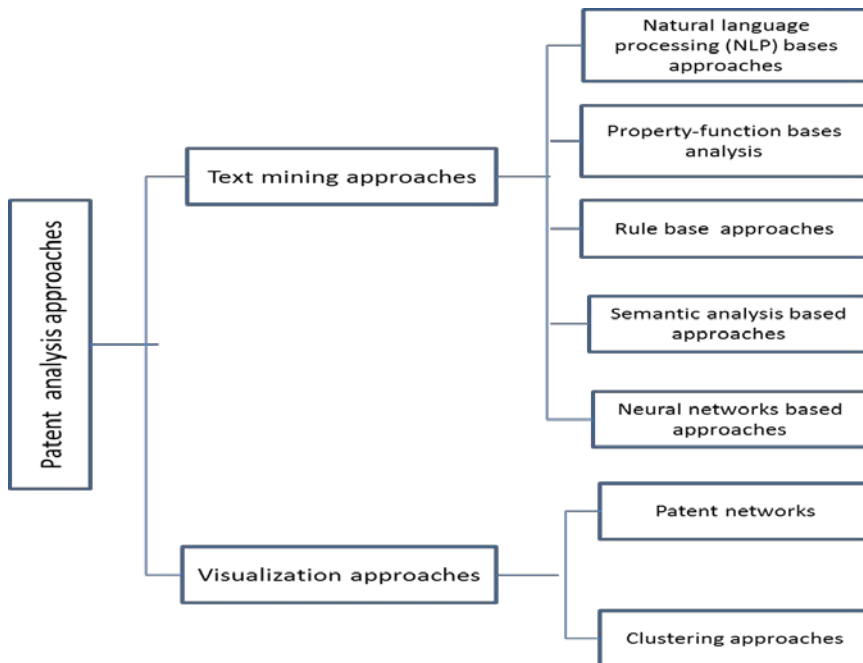


Figure 3: Taxonomy of techniques for patent analysis.

Source: (Abbas, Zhang, Khan, 2014)

“The patent, represents an invention in a particular field of technology, and also previous studies show that a considerable part of the information presented in patents is new relatively” (Abbas, Zhang, Khan, 2014:1)

It is important the number of applications, and the granting of patents in a country is an indicator that is innovating internally, besides it is not totally dependent on technology from other countries. Based on information from the Organization for Economic Co-operation and Development (OECD) and the World Intellectual Property Organization (WIPO). The flow of the number of patent applications in an economy is classified into three:

- Domestic (Nationals)
- No Domestic (transnational corporations from other countries)
- Foreign (Domestic companies applying for patents abroad) (Aboites, 2012)

The objective of this article are to show the administrative processes in each country to patent inventions, which government offices and websites people can refer to for information. Based on the information, investigators or people can have more tools to make a better decision to choose where to patent, or in what countries they will do it. A survey was conducted to seek the views of different people to know if they know the process of patented in Mexico. If it is important the protection, patented in other countries is a priority for them, the information easily accessed the term of a patent.

## Patents in México

“The legal regulations that protect industrial property in Mexico are the Law Industrial Property (LPI), Regulations and rules for submission applications to the IMPI. The institution responsible for its implementation is the Institute Mexican Industrial Property.” (Intelectual I. M., 2013).

There are certain requirements to patent an invention. The holder of the invention should cover for an exclusive use: (i) The invention meets the requirements to patented, (ii) The invention not prohibited. (Miranda, 2010)

In Mexico, the law of industrial property does not regard as inventions:

- Theoretical principles or scientific.
- Schemes, plans, rules, methods for performing mental acts, playing games or business, and mathematical methods.
- Computer software.
- Esthetic creations and artistic or literary works.
- Suitable methods for treatment and repair or diagnosis. (Industrial, 2012)

The following list shows that is not considered patentable by law in Mexico:

- Essentially biological processes for the production and propagation of plants and animals.
- The biological and genetic material as found in nature.
- Animal breeds.
- The human body and live parts that compose it
- Plant varieties. (Industrial, 2012)

In México, the only way to apply for a patent is a written form. There is no electronic registration in the website, [www.impi.gob.mx](http://www.impi.gob.mx). The term of the patent is 20 years. The length of the paperwork, upon application, 18 months, and the total length is 4.5 years. (Industrial, 2012)

The following documentation must be submitted to apply for a patent:

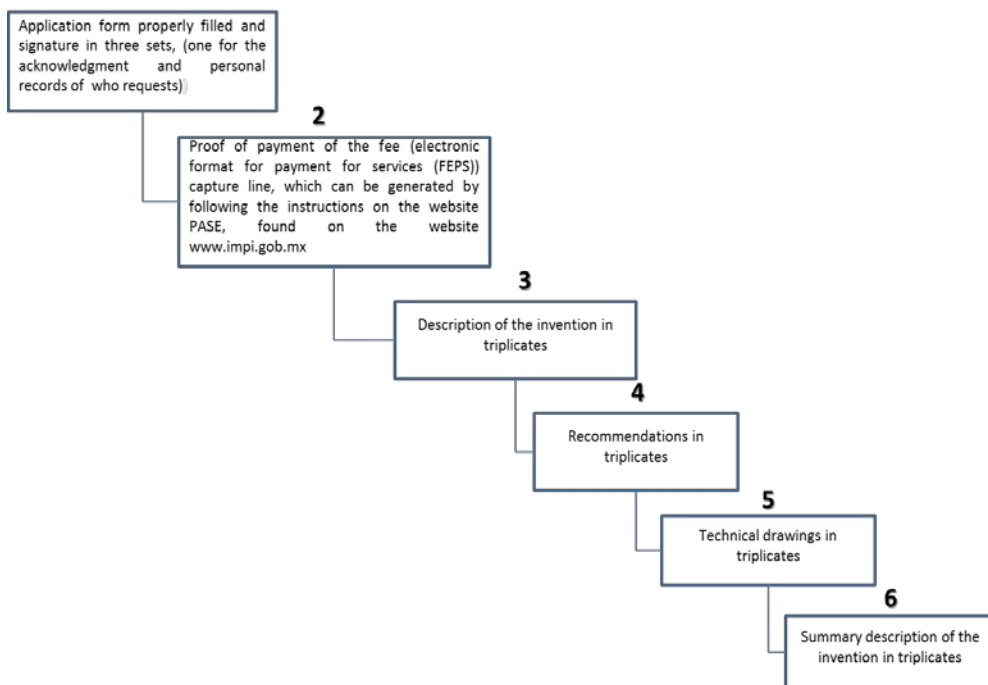


Figure 3: The basic documents for the submission of applications.  
Source: (Intelectual I. M., 2013)

The following table 1 shows the fees for patents in Mexico:

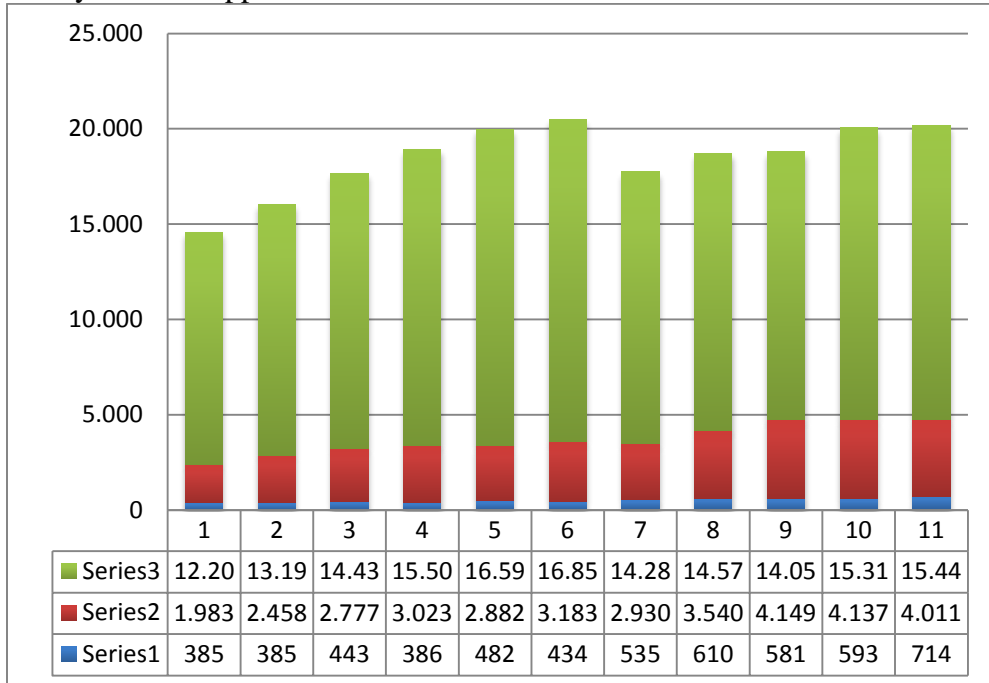
The prices shown here are in Mexican Pesos, US Dollars, Euros and do not include VAT (IVA)

		Patents		
		Under Title II of the Law		
Article	Concept	Fee Mexican Pesos	US Dollars	Euros
1	For services provided by the Institute for patents, the following fees are payable:			
1 a	By submitting patent applications, as well as services that Article 38 of the Law refers to,	\$7,172.92	469.35	420.52
1 d	Early publication of the patent application;	\$1,084.72	70.97	63.59
1 e	For the issuance of letters patent	\$2,911.88	190.52	170.70
2	Each annuity maintenance of rights conferred by a patent, the following fees shall be paid			
2 a	From the first to the fifth, for each	\$1,055.18	69.04	61.86
2 b	From the sixth to the tenth, for each,	\$1,282.78	83.99	75.20

Table 1: Fees for patents in Mexico  
Source: (Intelectual I. M., 2013)

To protect a patent internationally, is required to make processed in different countries interested in protecting it. It is required that the application be filed in each country. Using the PCT (Patent Cooperation Treaty). (Industrial, 2012)

In the following graph 1, shows the Patents, Industrial Designs and Utility Models Applications in México from 2003-2013



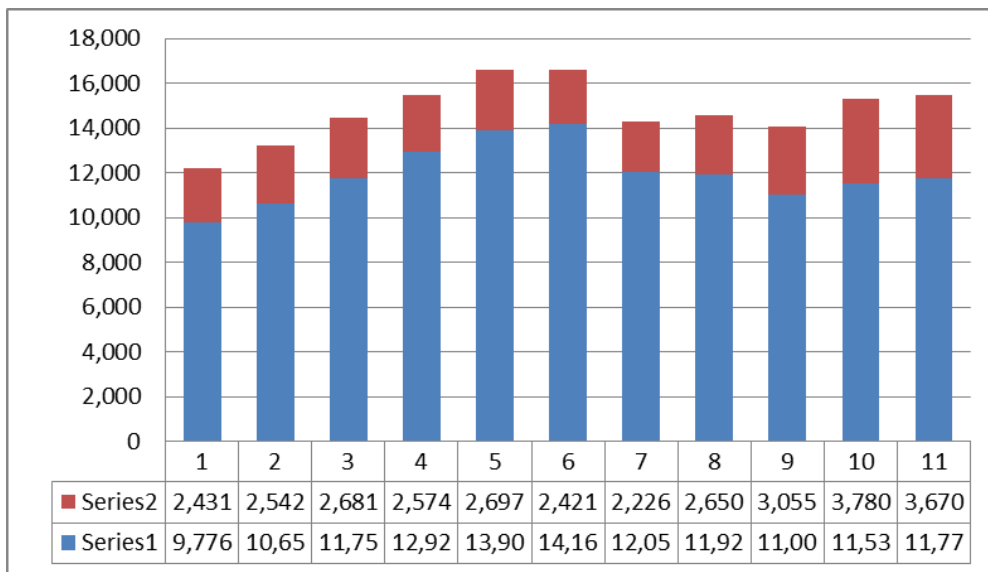
**Solicitudes/Applications**

Series 1	Modelos de Utilidad/ Utility Models
Series 2	Diseños Industriales/ Industrial Designs
Series 3	Patentes/ Patents

Graph 1: Patents, Industrial Designs and Utility Models Applications in México from 2003-2013

Source: (Intelectual I. M., 2014)

In the following graph 2, shows the PCT and normal applications in México from 2003-2013



<b>Series 1</b>	<b>PCT</b>
<b>Series 2</b>	<b>Normal</b>

Graph 2: PCT and normal applications in México from 2003-2013  
Source: (Intelectual I. M., 2014)

### Patents in the United States of North America

The United States Patent and Trademark Office (USPTO or Office) is an agency of the U.S. Department of Commerce. The main activity of the USPTO is to grant patents to protect the inventions and to register trademarks.

In the following table 2 are the principal characteristics of the USPTO in patents:

<b>The granting of patents is based on</b>	Priority of invention
<b>Term of the patent</b>	20 years
<b>Language of the application</b>	English
<b>Area covered</b>	United States Of America
<b>Request for examination</b>	NO
<b>Publication of the application</b>	18 months after the priority date
<b>Are there objects excluded from patentability inventions or not considered?</b>	YES
<b>Opposition system</b>	YES

Table 2: the principal characteristics of the USPTO  
Source: (Económicos, 2009)

The following table 3 shows the fees for patents in the United States of America, the fees are in USD:

Fee Code	Description	Fee US Dollars	Small Entity Fee	Micro Entity Fee
1011/2011/3011	Basic filing fee - Utility (paper filing – also requires non-electronic filing fee under 1.16(t))	280.00	140.00	70.00
1011/4011†/3011	Basic filing fee - Utility (electronic filing)	280.00	70.00	70.00

Table 3: Fees for patents in the United States of America  
Source: (USPTO, 2015)

Table 4 shows the fees in Euros.

Fee Code	Description	Fee Euros	Small Entity Fee	Micro Entity Fee
1011/2011/3011	Basic filing fee - Utility (paper filing – also requires non-electronic filing fee under 1.16(t))	250.81	125.40	62.70
1011/4011†/3011	Basic filing fee - Utility (electronic filing)	250.81	125.40	62.70

Table 4: Fees for patents in the United States of America  
Source: Prepared by the author

The following table 5 shows the maintenance fees for patents in the United States of America, the fees are in USD:

Fee Code	Description	Fee	Small Entity Fee	Micro Entity Fee
1551/2551/3551	Due at 3.5 years	1600.00	800.00	400.00
1552/2552/3552	Due at 7.5 years	3600.00	1800.00	900.00
1553/2553/3553	Due at 11.5 years	7400.00	3700.00	1850.00

Table 5: Maintenance fees for patents in the United States of America  
Source: (USPTO, 2015)

The following table 6 shows the maintenance fees for patents in the United States of America, the fees are in Euros:

Fee Code	Description	Fee Euros	Small Entity Fee	Micro Entity Fee
1551/2551/3551	Due at 3.5 years	1434.45	717.25	358.57
1552/2552/3552	Due at 7.5 years	3227.17	1613.58	806.79
1553/2553/3553	Due at 11.5 years	6633.29	3316.64	1658.32

Table 6: Maintenance fees for patents in the United States of America in Euros  
Source: Prepared by the author

In the United States of America there are three types of patents:



- Utility “Utility patents may be granted to anyone who invents or discovers any new and useful process, machine, article of manufacture, or compositions of matters, or any new useful improvement thereof.”
- Design “Design patents may be granted to anyone who invents a new, original, and ornamental design for an article of manufacture.”
- Plant Patent “Plant patents may be granted to anyone who invents or discovers and asexually reproduces any distinct and new variety of plant.” (USPTO, 2015)

Payment Methods:

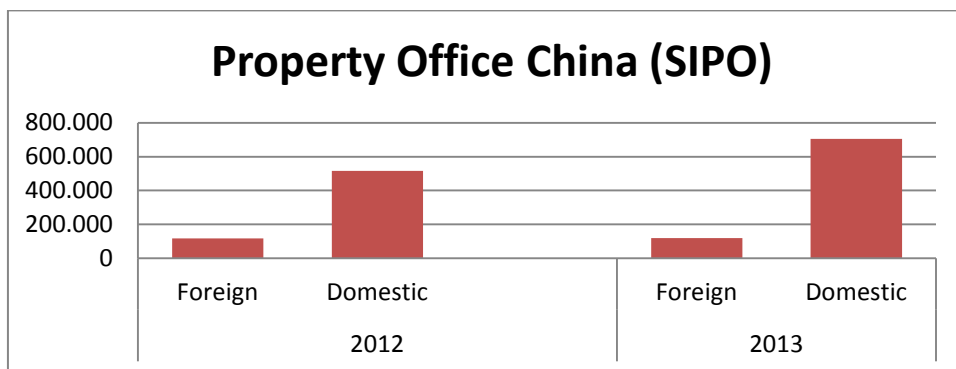
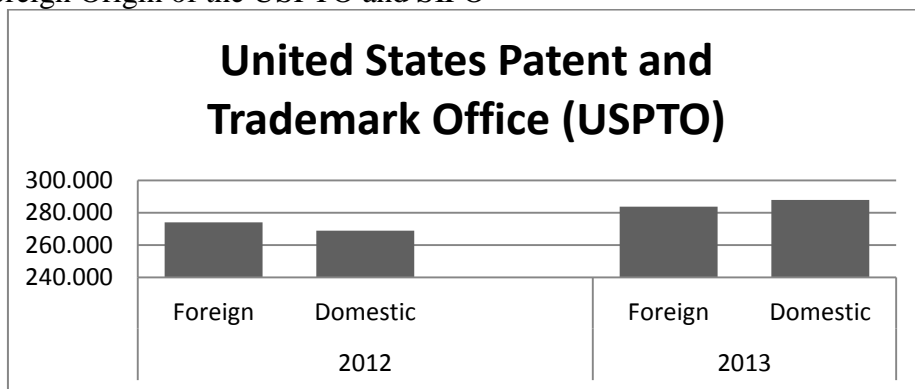
- Online at Office of Finance Online Shopping Page
- Via Fax
- Send payment by mail

File your application:

- Electronically using EFS-Web (USPTO, 2015)

To protect a patent internationally the patent the United States has a treaty International Patent Cooperation.

In the following graph 3, shows the Applications Filed- Domestic and Foreign Origin of the USPTO and SIPO



Graph 3: Applications Filed- Domestic and Foreign Origin of the USPTO and SIPO  
Source: (Offices, 2014)

## Methodology

This research is not experimental, with a transactional descriptive design. (Sampieri, 2014) The questionnaire contains 10 items, which are dichotomous, it was designed this way to know only whether respondents knew the information or not. With a simple answer , yes or not, it is sufficient for the purpose of the survey. The design of the questionnaire was based on information from the Mexican Institute of Intellectual Property, to investigate if people knew patenting procedures in Mexico, what can be patented, if the information is easily accessible.

The survey was applied online, using the google docs. The survey was applied to 59 people, at random, with different levels of education, professional activities. The results were analyzed based on the answers of the survey. To know if respondents want to protect their inventions, México is not the only place where they can patent, given the opportunity to patent, that there is support from the government.

## Results

According to the questionnaire here are the results of every question.

Yes	44	28	25	21	26	15	14	7	54	56
No	15	31	34	38	33	44	45	52	5	3
Question	1	2	3	4	5	6	7	8	9	10

Table 7: Results of the questionnaire

Source: Prepared by the author

The percentages of the results of the questionnaire.

Percentages	Yes	75%	47%	42%	36%	44%	25%	24%	12%	92%	95%
	No	25%	53%	58%	64%	56%	75%	76%	88%	8%	5%
	Question	1	2	3	4	5	6	7	8	9	10

Table 8: Percentages of the results of the questionnaire

Source: Prepared by the author

### 1. It knows where to go to protect its invention in Mexico?

A significant percentage does know which government office or Ministry to go to protect its invention. The information is available to any citizen. The government is promoting their patent offices as an excellent job. People are having access to information through different media, the internet, television, social media, and YouTube.

### 2. It knows the attributions of the Mexican Institute of Industrial Property (IMPI) for the protection of industrial property.

The percentage of people who know and unknown the attributions of the IMPI is similar. The people who know do further study in detail for the

information to view what can be protected and what procedures are to do. The others do not investigate, do not understand information that is available; do not want to take the time to do the necessary procedures for the protection of their inventions.

3. The information provided by the IMPI is easily accessible for the inventor to make the protection process.

The information provided by the IMPI to some respondents is not readily available. There may be some reasons why it is considered that the site was not well designed to search for information. The government is not doing a proper diffusion of information and the patent office. The information is not reaching all interested persons. The people, who perceive that information is readily accessible, have the means to access them, visit the regional offices of IMPI. The search form is most appropriate, they know to look in specific, and education provides them with understanding.

4. The Mexican Institute of Intellectual Property has a particular process for the user to identify at what stage is the protection of the invention.

People might have questions about the process, in what step is the patent or the time to get it. The IMPI should have a flowchart, similar to the US patent office.

5. Does it know the term of a patent?

The length of a patent is 20 years, for exclusive use. The protection is only where this is granted, not global. If there is no knowledge of the time of exclusivity and the country where is protected. The inventor must have the information required and know the procedures, to protect the invention.

6. Does it know the conditions of patentability in Mexico?

It is important to know what is patentable and what is not. In Mexico, there are certain things that cannot be patented by law. The inventor can say that he has nowhere to patent his invention, but if this is investigated; can patent it in another country that allows it. It is important to look for options that are best for the inventor and product.

7. Does it consider that, in Mexico there is support for national inventors?

The perception of those surveyed that, in Mexico there is no support for inventors. Many people are unaware of government programs and support. The information is in the secretaries, but not reaching the people who may have the interest. The time and requirements to apply for funds; are tedious and takes a long time to get a response.

8. Does it know the procedure for patent protection internationally?

When making the decision to patent, it is important to consider other countries for protection. The people by ignoring the process for patent protection internationally; can only focus on the local market. Patenting abroad is an investment that can limit the inventor. It is important to know

the procedure, consider this if it is a commercial success the invention being patent.

9. If it has the chance, patented in Mexico?

If given the opportunity to patent in Mexico, by having a greater number of granted patents, the country would not have a technological lag. The country will not depend, on other countries to have technology, could add value to what is produced in Mexico with our development. People want to develop new inventions, patent them for protection and make a profit. Mexico can be an excellent market potential.

10. If the IMPI had the option of electronic registration for patents would the process be easier?

People today prefer to do certain paperwork online. In Mexico does not offer the option of online registration for patents. In the future, the IMPI has to modify its policies to allow this process. There is to consider an aspect that online registration allows to do it at different times and every day; people sometimes do not have the time to do it personally.

## **Conclusion**

Selecting where it can be patent the invention is not an easy decision. There are some factors into consideration to make the decision as costs, the place to patent, whether the invention is patentable by the laws of the country. The patent is already registered by another company or person. An analysis of the viable options for patenting is important if the registration is to be exclusively national or international.

In this case, a comparison of two countries Mexico and the United States of North America is made. Each country has different policies for patenting; in the case of Mexico is a country that depends on the technology being developed in other countries. United States is a leader in technological development worldwide, are countries that are neighbors this can influence the choice to decide where to patent.

Many people have great ideas but do not know where to go to protect or how the procedure is, the time it takes to grant a patent. If the registration of the patent is nationwide, if it is protected internationally. What are the procedures must be done in each country to protect the patent. The information that is available for the people can help the decision to choose where to patent.

In the case of Mexico has to reach more people so it can protect their inventions. People want to develop new inventions, patent them for protection and make a profit. In the future, the IMPI has to modify its policies to allow this process of online registration for patents. There is must be a change in the perception that Mexico there is no support for inventors. The IMPI should have a flowchart, similar to the US patent office.

This article has one goal encourage people to register their patents. The information is available so it can compare the two systems that were elected by the proximity of the countries. Know the options where they can go for registration, procedures, costs, time.

### **Related Work**

The authors Canós, Pons, Valero, Mahuet, their article is about Decision making in the company: process and classification. Referring to types of decisions, stages of decision making. Other authors Abbas, Zhang, Khan, have an article named " A literature review on the state-of-the-art in patent analysis " that has some diagrams to have a better understanding of the patent analysis.

Jaime Aboites has an article " Mexico and Korea: Comparative Study of Knowledge Flows " has a section about the Patent system and the national systems innovation of the two countries. He compares the two countries in the production of patents. Miranda in his work " Patentable inventions " describes the concept of invention, requirements for an invention to be patentable, so the persons that area interested in patent know the requirements, also which are not patentable inventions.

The IP5 Statistics Report 2013 has the activity of the IP5 Offices, this offices are European, Japan, Korean, China and the US. It has information about their activity annually. The five IP offices (IP5) is the name given to a forum of the five largest intellectual property offices in the world.

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