



The road to internationalization of a latin state company: the case of Pemex

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El camino para la internacionalización de una empresa estatal latina: el caso de Pemex
O caminho da internacionalização de uma empresa estatal latina: o caso do Pemex

The main aim of this research is to analyze the process of internationalization in a state-owned company, concretely the case of Petróleos Mexicanos (PEMEX) in Mexico through Uppsala Model. It is a qualitative research with descriptive exploratory scope using the case study technique. Results confirm that PEMEX used a sequential model of internationalization to obtain experience through exports, establishment of offices and branches abroad, the creation of filial companies and strategic alliances. It is concluded that knowledge is acquired by experience at the first stage of internationalization. In addition, PEMEX recognizes that the knowledge is acquired in external environment through of some networks and business relations.

El principal objetivo de esta investigación es analizar el proceso de internacionalización de una empresa estatal, concretamente el caso de Petróleos Mexicanos (PEMEX) en México a través del Modelo de Uppsala. Este trabajo es una técnica cualitativa con un enfoque descriptivo- exploratorio usando la técnica de caso de estudio. Los resultados confirman que PEMEX utilizo un modelo de internacionalización gradual y secuencial para obtener experiencia a través de exportaciones, establecimiento de oficinas y sucursales en el exterior, la creación de compañías filiales y alianzas estratégicas. Se concluye que el conocimiento es adquirido por la experiencia en la primera etapa de internacionalización. Además, PEMEX reconoce que el conocimiento puede ser adquirido en el entorno externo a través de algunas redes y relaciones de negocios.

O principal objetivo dessa investigação é analisar o processo de internacionalização de uma empresa estatal, definitivamente o caso dos Petróleos Mexicanos (PEMEX) no México através do Modelo de Uppsala. Esse trabalho é uma técnica qualitativa com um enfoque descriptivo- exploratório utilizando a técnica de estudo de caso. Os resultados confirmam que PEMEX usou um modelo de internacionalização gradual e sequencial para adquirir experiência através de exportações, estabelecimento de escritórios e filiais no estrangeiro, a criação de empresas filiais e alianças estratégicas. Se conclui que o conhecimento é adquirido pela experiência na primeira fase da internacionalização. Também, PEMEX reconhece que o conhecimento pode ser adquirido no meio externo através de algumas redes e relações de negócios.

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1. Introduction

Nowadays, big companies seek to compete in international markets through the internationalization of its operations in order to achieve economic growth, promote and offer job opportunities and improve the living standards of the society, among the most important aspects (Contractor, Kundu & Hsu, 2003). Internationalization strategy can take different shapes, from export to direct foreign investment through the different types of alliances or societies among the shareholders.

On the other hand, the internationalization process of companies from emerging countries has taken importance in recent years (Velez-Ocampo, Govindan & Gonzalez-Perez, 2017; Montoya, 2012; Casanova, 2010; Cuervo- Cazorra, 2010). Emerging countries have increased the momentum of internationalization of mostly state-owned enterprises (Li, Cui & Lu, 2014). Also, the participation of the state as the owner of companies in Latin America has a long tradition, however the specific study of the internationalization of companies has focused mainly on private companies (Zavaleta - Vazquez & Wise - Lozano, 2015). A reason of this is the classical view of state-owned companies as inefficient, bureaucratic, lack of strategic vision and non-productivity and profit orientation (López - Morales & Ortega - Ridaura, 2016). However, there is evidence that state-owned enterprises have improved their efficiency and productivity, even in some cases beating private equity companies (Aljifri & Moustafa, 2007).

According to Cuervo - Cazorra, Inkpen, Mussachio & Ramaswamy (2014) there are two main logics for the existence of state-owned companies. The first one corresponds to the solution of shortages in the market, so that state-owned companies have to cover these shortages. The second corresponds to the ideology and political strategy of the governments in control of the strategic assets. Today, the role of the state in the internationalization of companies in Latin America is not clear (Finchelstein, 2017), however, in the 90's the state played an important role in several countries in the region with the implementation of economic liberalization policies (Cuervo - Cazorra, 2007).

In the case of Petroleos Mexicanos (PEMEX), the company represents an important asset for the Mexican Government. The company is the greatest taxpayer of the country and the main source of currency. It is in the "top ten" of the world's largest oil companies. The subsidiary company PMI Comercio Internacional is the seventh merchandising company of the world.

In view of the foregoing, derives the following research question: How is the process of internationalization of a state company? This questioning will allow to determine the primary target of this paper that will be useful to answer this question. Therefore, the aim is to analyze the internationalization process of a state company in Latin America, focusing for its study the case of PEMEX in Mexico.

The structure of this paper is divided into seven sections. First, the introduction that will allow the reader to understand the increasingly active participation of state companies in international trade; second, the origins and profile of PEMEX will be described; third, the review of the literature that will allow to know the theories about internationalization of companies, mainly the Uppsala Model. Subsequently the methodological process will be explained through the case study to address the research; in the next section the findings will be described as well as an analysis of them through the role of PEMEX in the international context, after a section with conclusions is shown and finally the practical implications are discussed.

KEY WORDS

Internationalization, state company, PEMEX, Latin America, Uppsala Model.

PALABRAS CLAVE

Internacionalización, compañía estatal, PEMEX, Latin America, Uppsala Model.

PALAVRAS-CHAVE

Internacionalização, empresa estatal, PEMEX, América Latina, Modelo Uppsala.

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2. Company Overview

PEMEX was founded on 1938, this fact led to the creation of the company *Petróleos Mexicanos* (PEMEX, 2017a). In 1940 it assumes the structure of vertical integration, which consists of a single company administrating all the activities of its business (Campodónico, 1996), in this case the company was the one in charge of administrating from the exploration to the commercialization of petroleum and its different derivatives. Important milestones in its history were the construction of its oil plants. PEMEX currently has six oil plants, these plants bear the oil infrastructure of the country (PEMEX, 2017a).

PEMEX throughout its history has faced challenges. In 1944 the oil production of the country descended, therefore in order to satisfy internal needs, the company was in need of importing oil products. Additionally in the 80's the descent of the oil prices affected the production and income of the company. In 1991 the oil plant 18 de Marzo was closed to improve the quality of the air in Mexico City. In recent years it has had to face the fall in oil prices worldwide, which has impacted its income.

An important fact in recent years was 2013, this year the Mexican Government enacted structural reforms in several sectors, including the energy sector. The energetic reform presents several points that directly affect the operations of PEMEX, for example: the introduction of individuals into productive activities of the company and the establishment of foreign oil companies in Mexico (Muciño, 2014).

Nowadays PEMEX is the main company in Mexico. In 2016 the company had around 126,532 employees working primarily in Mexico, although it has mainly operations in the United States and Europe. It also reached sales for a \$1,079,546, 000 million pesos (Annual Report, 2015). After the energetic reform in 2013, the company was divided into seven production companies of the State (SPC) (PEMEX, 2017a).

Table 1. The State Productive Companies.

<i>SPC</i>	<i>Main Business</i>
PEMEX Exploración y Producción	Operation and petroleum extraction.
PEMEX Exploración y servicios	Drilling, completion and wells reparation.
PEMEX Transformación Industrial	Refinement processing, export and import.
PEMEX Logística	Transportation of PEMEX products.
PEMEX Etileno	Production and commercialization of derivatives of the methane.
PEMEX Fertilizantes	Fertilizer production and distribution.
PEMEX Cogeneración y servicios	Co-generation, provision and commercialization of electrical and thermal energy.

Source: PEMEX, 2017 b.

PEMEX also have different branches, one of the most important is PMI Comercio Internacional, a company dedicated to business operations of PEMEX in international markets.

This company provides different financial, administrative, legal and business intelligence services. Altogether the SPCs and the diverse branches conform the corporate structure with which it operates in Mexico and different parts of the world.

In the international arena, PEMEX is one of the main producers of oil around the world, and the main producer in Latin America. The exports of PEMEX only in 2017 were directed to the United States, Canada, Nicaragua, Jamaica, Dominican Republic, Netherlands, Germany, Switzerland, France, Spain, Italy, India, China and Japan (PMI Comercio Internacional, 2017).

Table 2. Main oil producers in 2015.

Company	Ownership	Employees	Country	Millions of Barrels of Crude Oil (MBCO).
1.Saudi Aramco	State	54,441	Saudi Arabia	12 MBCO
2. GAZPROM	State	462,000	Russia	8.3 MBCO
3. National Iranian Oil Company	State	N.D.	Iran	6 MBCO
4. Exxon Mobil	Private	71,300	United States	4.7 MBCO
5. Rosneft	State	106,000	Russia	4.7 MBCO
6. PETROCHINA	State	464,000	China	4 MBPCO
7. British Petroleum	Private	74,500	England	3.7 MBPCO
8. Royal Dutch Shell	State	93,000	Netherlands/ England	3.7 MBPCO
9. PEMEX	State	155,000	Mexico	3.6 MBPCO
10. Kuwait Petroleum Co.	State	18,571	Kuwait	3.4 MBPCO

Source: Own elaboration, based in Helman (2015).

Table 2 shows the main producing companies of oil world-wide. PEMEX is number 9 very close to Royal Dutch Shell and British Petroleum. Additionally, it occupies the third place in number of employees with 155.000, only behind PETROCHINA and GAZPROM. Within 10 companies, only one of them is private (ExxonMobil), this indicates that most of the oil resources of the world are property of the governments.

3. Literature Review

For the purposes of the present paper, the internationalization will be addressed from the perspective of the Uppsala Model. *Uppsala Model* focuses on the gradual acquisition, integration and use of knowledge about foreign markets and their operations, as well as the continuous commitment of companies to get involved in these markets (Kamakura, Ramón- Jeronimo & Vecino- Gravel, 2012; Nava- Aguirre, Erosa-Martín & Alvarez- Herrera, 2010). This model belongs to the group of models based on behavioral theories and divides internationalization in stages (Lopez, Kundu & Ciravegna, 2009).

Accordingly, the company faces four stages of involvement with the outside and is determined by *commitment* and knowledge of the company with the market. The stages are: non-regular exports, exports through an agent or intermediary, the establishment of a subsidiary and the most advanced stage, foreign direct investment (FDI) through the establishment of operations in the foreign market (Almodovar & Rugman, 2015; Johanson & Vahlne, 1977).

Johanson and Vahlne (1977) incorporated the concept of business relationships between the parties involved. Companies learn through the shared experience resulting from business relationships which allows once abroad to further extend those relationships. Thus, in 2006 the original Model is modified in its interpretation by changing the concept of *commitment to the market to the commitment of relationships*. "When a focal firm and another are mutually committed to future business with each other, they have a basis not only for learning about and from each other, but also for creating new knowledge through interaction" (Johanson & Vahlne, 2006, p. 168).

Also, Johanson & Vahlne (2009) indicate the concept of *learning* as a result of the networks and work relations between the companies and *commitment* with the internationalization process that simultaneously would allow to have more opportunities abroad. Also recognizes three types of learning of business networks. First, learning as a result of the relationship between the buyer and seller, for instance, they both learn how to coordinate more efficiently on their activities in order to strengthen this relationship; secondly, the learning of skills from each company which can be used on a third business relationship, and a third, to learn how to coordinate activities with other companies, generating more business relationships.

Uppsala Model combines the learning resulting from the experience in foreign markets and their commitment, with the learning resulting from the relations and businesses networks. Nevertheless, the consolidation of businesses relations is not a simple task because it requires time and responsibility of the parties. Once specified and formalized, the expansion and internationalization of the companies become great opportunities. According to its authors if the process of increase of the knowledge and commitment in the local company and its partners in the foreign market show a successful behavior, it will result in greater investments, greater control and diminution of the irrigation, in resume advance to a more advance stage of internationalization (Nakamura, Ramón- Jerónimo & Vecino- Gravel, 2012; Johansson & Vahlne, 2006).

Returning to the postulates of the Uppsala Model, it is important to mention the three exceptions that are attributed to it: first, companies that have large amounts of resources face fewer problems linked to market commitments and therefore can advance to other stages of internationalization ; the second exception is that when the market is stable, knowledge of it can be reached by other means and not only by experience; and the third mentions that when the company has sufficient experience in other similar markets, it can generalize that experience to any other market (Johanson, Ivarsson & Vahlne, 2011, Johanson & Vahlne, 1990).

Likewise Uppsala model is one of the most used for explaining why the companies go abroad (Casillas & Moreno- Menendez, 2014). In this regard this Model was chosen for this work due to its simplicity, its perspective of learning, its adaptation to new realities and that the use of the experience for explaining the internationalization of a company. All these characteristics are important issues for understand the internationalization process of PEMEX.

There are several studies that have used the Uppsala Model as a theoretical foundation. Velez-Ocampo, Govindan and Gonzalez-Perez (2017) analyze the process of internationalization of Mexican family businesses. Figueroa de Lemos, Johanson & Valhne (2011) research about internationalization risk formula from its two main variables: commitment and uncertainty (Johanson & Valhne, 1977). Kubickova (2013) also applies the Uppsala model to SMEs in the Czech Republic, where the results suggest that decisions about which market to internationalize are based on geographical proximity and cultural affinity. Costa e Silva, Pacheco, Meneses and Brito (2012) research about how knowledge derived from firms' relationships influence its internationalization process, the main outcomes indicates the importances of trust- building and creation of opportunities in the relationships for internationalization.

These studies support the current validity of the Uppsala model in studies about the internationalization. This validation is due to that literature in international business have not developed new explanations about the internationalization process (Costa e Silva, Pacheco, Meneses & Brito, 2012).

In addition, there are diverse studies analyzing the state- owned MNCs from emerging markets. Choudhury & Khanna (2014) study the why state- owned MNCs from India go abroad in order to obtain independence of the governments entities, the outcome suggests that the independence of cash flows increase the independence. Another study investigate the effects of state ownership in the decisions of Foreign Direct Investment in Chinese firms (Cui & Jiang, 2012), the results shows that the effects of home and host regulatory influence the decisions to joint ownership.

4. Method

According to Yin (2009) case studies are used to address questions like how? and why? the studied phenomena happen. The case study is considered as an important research tool, its main strength lies in deepening the behavior of people and events (Yin, 2009).

Thus, the proposed technique for preparing cases of studies from Reddy & Agarwal (2012) was used for this paper. Several studies identified in the literature have used this methodology (Alberti, Giusti, Pizzurno, 2016). According to this methodology this paper would be a case type II, since it will be based on non-primary and secondary sources. The main secondary sources of information are: institutional website, electronic database, newspapers, online magazines, corporate reports, journals and interviews in the media.

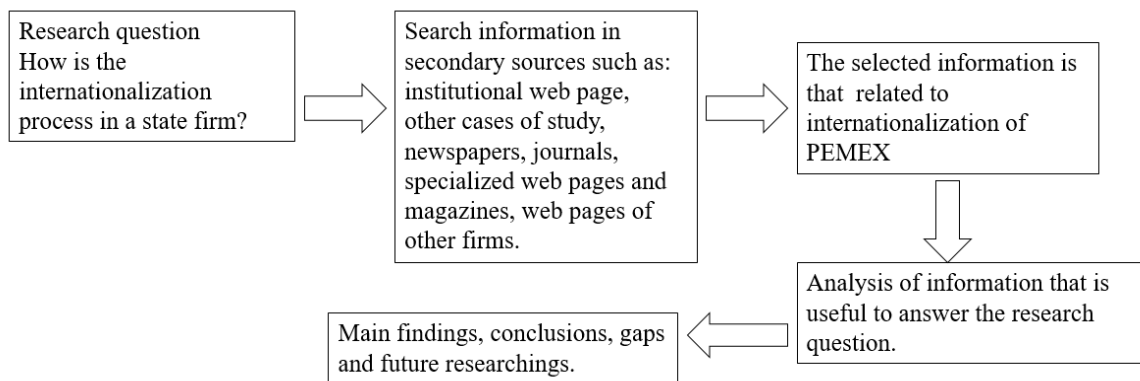
According to Reddy and Agarwal (2012) the first step of this methodology is to select an area of study, subsequently it should collect secondary information considering its quality. Finally, a classification is made of this information according to its importance.

The internationalization of the company was the specific study topic selected to analyze PEMEX. The main reason for this selection is because state- owned companies have been recently studied in the

international business literature, the most part of research is centered in private companies. Likewise, we proceeded to the collection of information, the first source was the institutional website and the institutional database (BDI) where the several annual reports (since 1977) of PEMEX were obtained.

The information of the mentioned sources that were considered for this study were those which represented a form of internationalization, such as: exports, acquisitions, mergers, licenses or foreign direct investment (FDI). Once the information was obtained, a graphic scheme was developed through a timeline where the main PEMEX internationalization patterns are presented by year, country and region. It is worth noting that for the elaboration of this scheme, only the first time that PEMEX made exportations was taken into account and not if it continued doing so. Finally, the analysis was done in order to comply with the purposes of this research.

Figure 1. Sequence of case methodology.



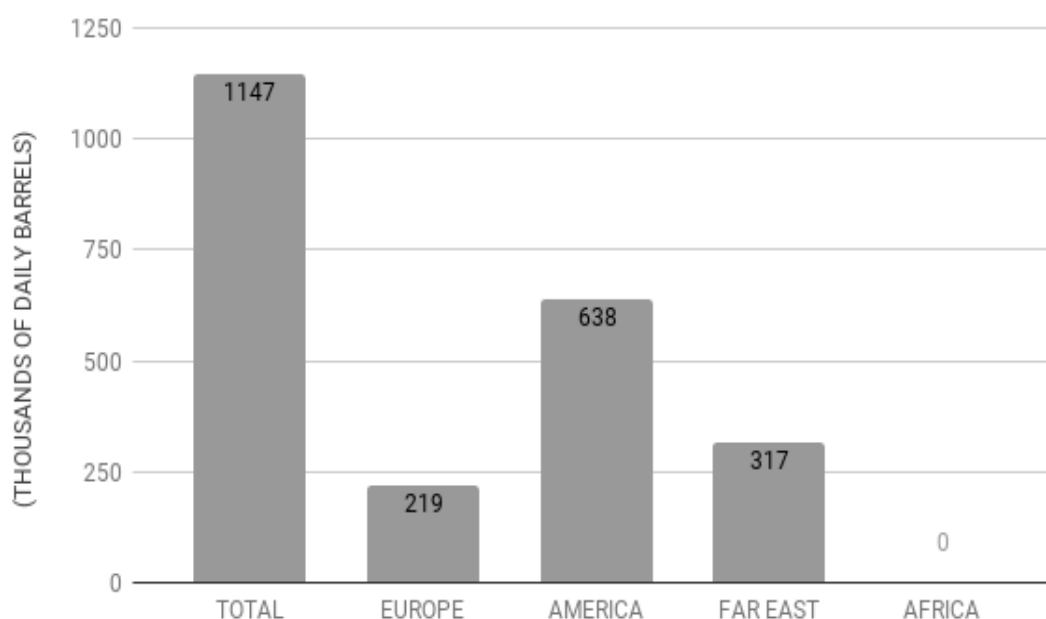
Source: Own elaboration.

5. PEMEX in the International Context

The presence of PEMEX in the international scenario comes from its beginnings through the exports of crude oil as well as its overseas representative offices in London, Madrid, New York and Houston in the eighties. According to the Statistical Yearbook of PEMEX (1977), the Mexican company exported a volume of 8,995 barrels in 1977, where 3,799 barrels corresponded only to crude oil. PEMEX's income by sales abroad registered 112 billion of pesos in the same year. The export activity of PEMEX has been permanent since 1938 showing record numbers with the exception of the blows with the fall of international prices as it did in 1985.

Since 1990, the Institutional Pemex Database (BDI) records sales and volume of exports by specifying the type of product. **Figure 1** describes the volume of exports of crude oil by geographical destination up to the year 2017.

Figure 2. Volume of exports of crude oil (2017).

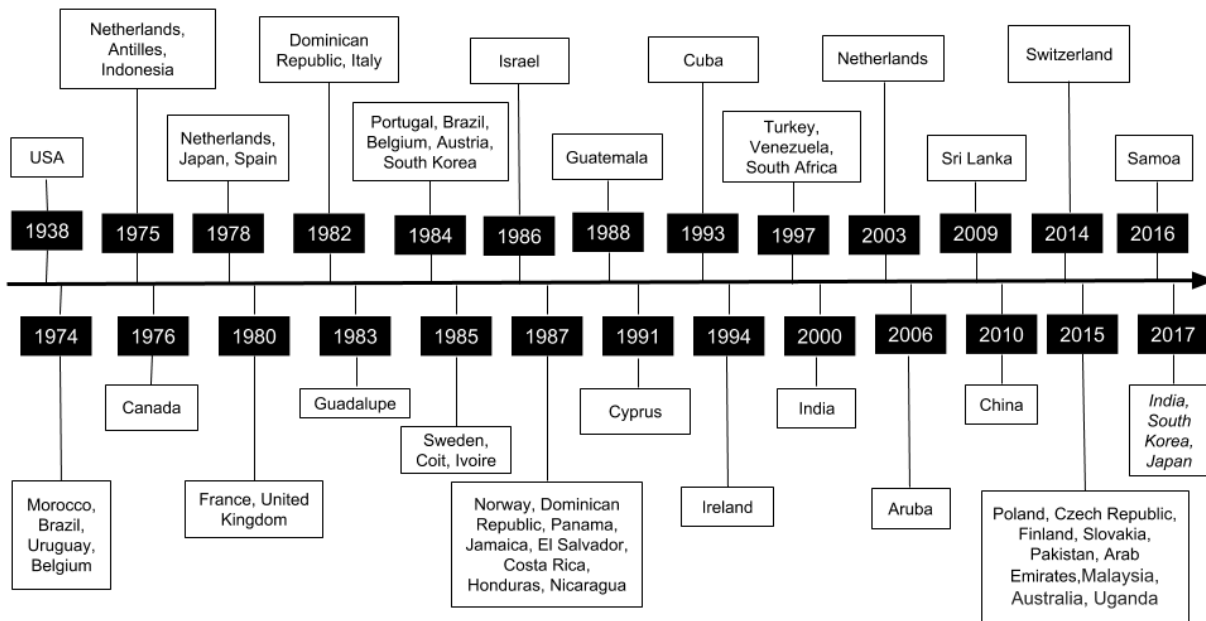


Source: Own elaboration with data from BDI Pemex.

During 2017, the volume of exports of crude oil was 1,174 thousand barrels per day. **Table 2** describes the value of exports by an amount of \$ 20,023 million dollars (Indicadores petroleros PEMEX, 2017). In this same year, Pemex exports included the United States, Spain, India, Italy, Dominican Republic, Portugal, Jamaica and Nicaragua, countries where its participation was higher. Countries like Japan, South Korea, France, China and the Netherlands were added as new export market destinations (Sigler, 2017).

It is important to notice that Far East Region as export destination market is increasing since last year. The most representative countries are India, Japan and South Korea. According to the Mexican Energy Ministry, in this region exports increased 45.2% and moved from 219,200 to 318,300 barrels per day (average) between 2015 and 2016. By the first quarter of 2017, sales increased to 216,800 barrels (Sigler, 2017).

Figure 3. PEMEX exports by year.



Source: Own elaboration based in annual reports 1977-2016 from PEMEX, Atlas Media and Sigles (2017).

Despite of the beginnings of PEMEX as exporting company (in 1938), is not until the decade of the 1980s that a transformation of ideology occurs and PEMEX planned to improve and take advantage of its international activity. First, a technological modernization that began during the administration of President José Lopez Portillo in 1976 and in 1988 with the administrative organization through the decentralization of PEMEX. The representative offices in London, Madrid, New York and Houston served as intermediaries between buyers and salesmen during this process as internationalization. President Carlos Salinas de Gortari was a key element in this transformation, since he laid the foundations for the parastatal's internationalization with a view to signing the North American Free Trade Agreement (NAFTA) by continuing to modernize and restructure PEMEX (García, 2001).

Another transformation of PEMEX was the improvement plan for the activities of export oil, marketing of petroleum products, foreign investment and other support businesses. Therefore, the company decided to separate activities of international trade of crude oil and hydrocarbons and to do so through the establishment of three types of societies: holding societies or shares holding (holdings), marketing partnerships (trading) and corporate services (services). i.e., PEMEX would seek competitiveness abroad through the work and activities of subsidiaries (PMI Comercio Internacional, 2012).

It is important to highlight that the first step to effectively address the aforementioned actions was forming in 1989 the PMI Comercio Internacional, S.A. de C.V. enterprise with State participation majority and PEMEX as a main shareholder. The two activities of the new company were marketing of Mexican crude oil abroad and the provision of services to a group of companies known as PMI Group² which aims to maximize the value of oil exports and guarantee the supply of products to Mexico. Holding

companies, distributors and services of the PMI Group until the year 2012 have tax residence in countries like Netherlands, Spain, United States, Switzerland, England and Ireland which has allowed to form alliances and important joint ventures among which, highlights REPSOL in 1988, with Magellan Midstream Partners in 2010 and Transmontaing Operating Co. in 2011 (PMI Comercio Internacional, 2012).

Other actions of the companies of the PMI group were the opening of the office branch in Panama of the subsidiary PMI Trading Ltd in 2007. Likewise, PMI Holdings North America Inc. opened representative office in Singapore in 2009 with the aim of improving the positioning of PMI Group in the Asian market, the idea was the representation and having presence and knowledge in those markets.

Figure 4. Subsidiaries around the world.



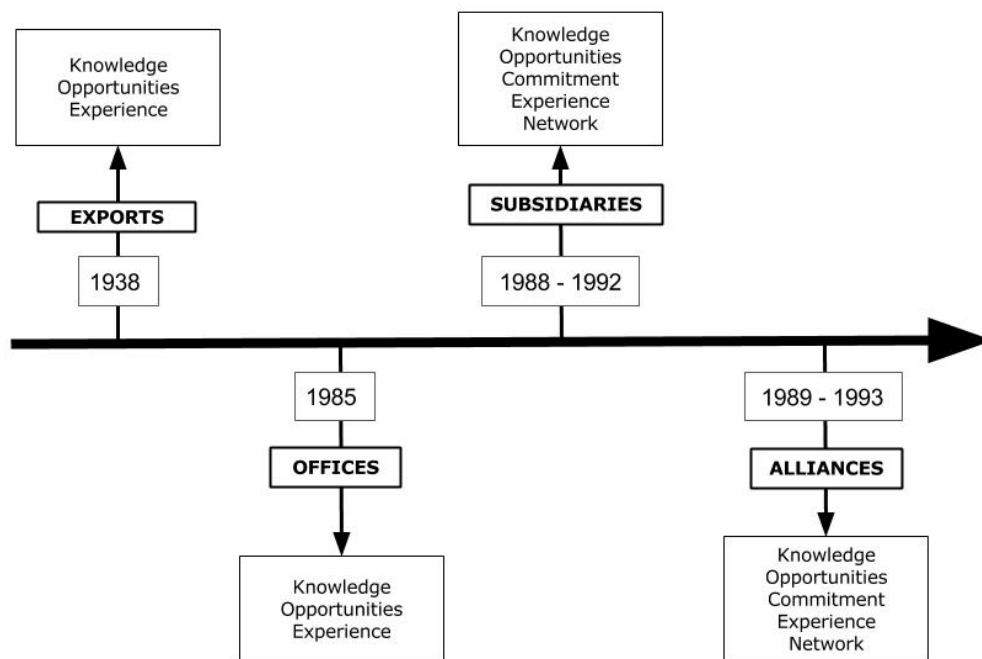
Source: Own elaboration, based in annual reports.

On the other hand, several strategic alliances were generated between Pemex and foreign companies. According to the report on the structure of the companies in 2012, one of the most representative alliances was carried out between PMI North America SA de CV and Shell Oil during 1993. This alliance was with the intention of creating the company's refinery in Houston where 50 % is owned by Shell and the other 50 % by PEMEX. PMI Trading Ltd. supported the Alliance between PEMEX Refinacion and Transmontaigne Product Services Inc. for the creation of the ducts in the border of Juarez and Matamoros-Brownsville the year 2004 (Corona, 2017). Likewise, the case of PEMEX Internacional España and the stake in Repsol in 1990. We shall not forget, the investment of PEMEX in Petrol-Repsol in 2012.

However, the great transformation of Pemex that places it in the international sphere is given with the Energetic Reform in 2013 at this point, PEMEX becomes the productive enterprise from the State in order to be competitive in the international market, positioning its leadership and the generation of value in its economic activities. Since the energy reform, PEMEX again led a corporate restructuring distributing 59 private companies³ among its subsidiaries: PEMEX Transformación Industrial operates 14 companies, Pemex Fertilizantes 11, Pemex Corporativo 9, Pemex Exploración y Producción five, Pemex Cogeneración y Servicios 4; and Pemex Etileno only one. The rest of the 15 companies (PMI Group) are controlled by the PMI Comercio Internacional⁴ (Flores, 2017).

Due to the above, PEMEX's road in its internationalization process has highlighted a series of strategies over the years (Figure 5). First, exports diversifying their destinations; second, the opening of representative offices, with the intention of promoting the company but above all to serve as network between the different actors involved; thirdly, the creation of subsidiaries abroad through PMI Comercio Internacional with the aim of obtaining advantages and benefits but above all to acquire knowledge through business networks. The latest strategy, i.e., the creation of alliances that is at the same time a result of subsidiary companies has promoted joint investment with companies like Shell and Repsol to name a few.

Figure 5. Internationalization strategies by year.



Source: Own elaboration, with data of several sources.

Nowadays PEMEX continues to strengthen its position in the international arena. The Energetic Reform of 2013 came to accelerate the process of internationalization not only by favoring its export activity but also through strategic alliances and collaboration networks with foreign companies in search of generating value for its activities.

Table 3. Strategies of internationalization and main elements.

<i>Strategies</i>	<i>Objective</i>	<i>Benefit</i>	<i>Commitment</i>
Exports	-Diversify destinations -Increase sales	Knowledge Learning Opportunities Experience	Market
Representative offices and branches	-Increase sales -Promote PEMEX -Serve as intermediaries or liaison between buyers, sellers and suppliers.	Knowledge Learning Opportunities Experience	Market
Subsidiaries	-Divide activities -To improve competitiveness -Positioning PEMEX -Create alliances -Increase profits	Knowledge Learning Opportunities Experience Relationships	Business networks
Strategic Alliances / Investments	-Form collaborative networks -Positioning PEMEX	Knowledge Learning Opportunities Experience Relationships	Business networks

Source: Own elaboration

Table 3 presents the main patterns of internationalization that PEMEX has continued throughout its history. As mentioned above, the presence of Pemex in the international stage occurs from the export of crude oil.

It is important to point out the direct participation of the state in the internationalization process of PEMEX, however the impact is not clear yet. The recent Mexican economic history is divided in 3 models (Montserrat- Huerta & Chávez- Presa, 2003): the "desarrollo estabilizador" (1940- 1970), the "desarrollo compartido" (1970- 1982) and the "crecimiento hacia afuera" (1982 to the date). In the first and second model was applied a model of import substitution. On the other hand, in the third model the government promotes economic liberalization policies in several sectors.

Based on the results in the **Figure 3 and 5** is posible to identify that from 1940 to 1982 the exports were the main ways of internationalization followed by PEMEX (Desarrollo Estabilizador and Desarrollo Compartido). On the other hand, in the model of "Crecimiento hacia afuera" the company increased its exports, alliances and open subsidiaries and offices abroad. These facts have sense in the Mexican policies, increasing the degree of internationalization in the model "crecimiento hacia afuera".

6. Conclusions

The aim of this paper was to analyze the internationalization process in a state-owned company, specifically the case of the Mexican oil company PEMEX. The main conclusion is that PEMEX followed an internationalization process through stages where gradually involved a greater degree of resources and activities with the aim of increasing the knowledge about international markets. This sequential process analyzed from the perspective of the Uppsala Model (Johanson & Valhne, 1977) allows to recognize first, the importance of the experience through the knowledge and commitment of resources (oil) and subsequently in its business networks.

Therefore, it is shown that the internationalization strategies of a private company and a state company are very similar. In the literature review several studies present a similar behavior to that demonstrated by PEMEX in its internationalization process, that is, a gradual and sequential process (Johanson & Valhne, 2006). In this case the Uppsala Model explains how is the process of internationalization of a state-owned company (Kubickova, 2013; Figueroa de Lemos, Johanson & Valhne, 2011).

Based on the experience generated since 1938 by oil exports, PEMEX was able to commit on other types of activities that from the opening of offices and branches abroad allowed to strengthen the presence of PEMEX outside the country. This strategy allowed new opportunities as market diversification and growth of their exports despite the fall of oil prices in 1985. The presence of PEMEX with representation and liaison offices served gradually to integrate acquired knowledge and use it effectively to position and indirectly promote PEMEX internationally, thus allowing further creation of subsidiary companies.

According to the revisions of the Uppsala Model in 1990 that incorporates the external environment in the analysis, it can be confirmed that another one of PEMEX's internationalization strategies was the relationship and business networks that were created from the establishment of subsidiary companies led in this case for PMI Internacional. From this perspective, and as an exception to the original Uppsala Model, it is confirmed that knowledge can also be acquired through external relationships such as the relationships between buyers, sellers and suppliers. These business networks have cycles and can settle and weaken depending on the interests of the companies as it did with Cuba and the Cubapet project. One of the characteristic features of this inclusion in the Model is that the benefit is not only related to the business network, but also to what this network generates when sharing the experience. There is not a single market commitment but a commitment to relationships that also generates learning and future opportunities.

Strategic alliances as a result of the learning from subsidiaries generate important agreements between companies. For example, the opening of the oil plant Deer Park as a result of the business relationships between PMI Norte America SA de CV and Shell Oil in 1993. Partnerships with REPSOL was another strategy to enter Europe. Thus, knowledge cannot only be acquired with the relationship, but from the relationship. In this sense the knowledge and skills of each company adds up to generate new business relationships. In other words, the experience of the companies will only generate knowledge at the moment that the knowledge acquired abroad is incorporated through the business relations between the companies. The external environment is not simple, however, with the establishment of subsidiaries and later with partnerships through investments there is greater control and lower risk.

On the other hand, while PEMEX is a company that respects the principles of the Uppsala Model being gradual and sequential. PEMEX has focused more on exports that are a basic form of internationaliza-

tion, than other more advanced ways such as the joint venture or foreign direct investment. This possibly has to do with the type of industry, since its main resource (oil) comes from nature and this makes it practically impossible to move it. Also the fact of being a state company allows profit objectives to be different that a private company, thus limiting the degree of internationalization it achieves (Finchelstein, 2017; Cuervo- Cazorra, Inkpen, Mussachio & Ramaswamy, 2014).

Despite the existence of other forms of non-sequential internationalization of companies, the Uppsala Model continues to be an obligatory reference (Figuroa de Lemos, Johanson & Valhne, 2011, Osarenkhoe, 2009). In addition, exceptions to the model (Johanson & Valhne, 1990) can be adapted to business reality. Companies with a greater endowment of physical, human and organizational resources can advance faster for each of the stages proposed by the Model when facing fewer risks as happened with exports; likewise, if the conditions between countries are similar it is possible to advance between the stages, as it happened with the offices abroad and the subsidiaries, and finally, if the markets are stable the knowledge can be acquired in other ways and not only with experience as it happened with the diverse strategic alliances that PEMEX established around the world like for example Repsol, Mexpetrol and Apel to mention only some.

Perhaps the main contribution of this case is the importance of business networks. In this regard, it is important to analyze the benefits that PEMEX has obtained from its internationalization (Table 4). Therefore, the relationships from subsidiaries and strategic alliances have been the most important issue because the company have established business networks around the world. This networks have prompted not only the international expansion but the expansion in several areas that have made to PEMEX one of the most important oil producers worldwide.

As a final conclusion, the postulates of the Uppsala Model of internationalization by stages are confirmed. In the first place, PEMEX sequentially became involved abroad, engaging its products and activities in the market with the aim of acquiring knowledge through experience abroad. Secondly, Pemex recognizes that knowledge can be acquired in the external environment by networks and evaluating business relationships with customers and suppliers, as evidenced in the commitment of businesses with countries such as the United States, Spain, Argentina and Peru.

Finally, as future research is important carry out comparative analysis about the internationalization process in state and private companies from the same industry or different industries. Also, analysis of the process followed by similar companies that come from developed markets. It is also relevant to analyze how factors such as industry and type of property influence the degree of internationalization and clarify the influence of the state in the internationalization of PEMEX as in China, Russia and India. A future research could be to test the internationalization process of PEMEX longitudinally. Also a later research could be to test longitudinally the effect in the internationalization of the energetic reform implemented for the Mexican government in 2013.

7. Practical Implications

This paper has several practical implications. First, to analyze in depth the strategies of growth (as internationalization) of a state company from an emerging market (Mexico), maybe this analysis could be replicated in similar companies with different context. Second, to identify if the ways a company goes abroad is useful to improve the competitiveness in foreign markets. Third, with the results of this research the managers can establish patterns of decisions that can contribute to the international development of companies. Finally, this research is a starting point about the study of the state's role in the internationalization process.

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Notas

2. Companies of the PMI Group are: Pemex Holding B.V. Pemex Holding Petróleos España, PMI Services, B.V., PMI Services North América, Inc., Pemex Services Europe, Pemex International España, PMI Trading Ltd., PMI Holding North America; Pemex Deer Park Refining, PMI Marine, Texas Frontera, Llc., Frontera Brownsville Llc., y PMI Field Management Resources.

3. Before the United States Securities Commission there is evidence of the 59 companies, while on the Mexican National Banking and Securities Commission, only 32.

4. On December 19, 2014 PMI Comercio Internacional was transformed from State majority shareholding to subsidiary company.