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CONSEQUENCES OF PRIVATIZATION IN MEXICAN MINING SECTOR: WHO ARE THE WINNERS?

The cornerstone of the market-oriented reforms in Mexico's transition to capitalism was rapid mass privatization of strategic state enterprises. In the mining industry the outcome of almost 30 years of continuity in economy liberalization was the consolidation of large capital with monopolies that given the levels of corruption in Mexico and the institutional vacuum can protect only the interests of large business. Also, there has been an increase in the externalities of different types and abuses towards vulnerable sectors of population that in the end pay all the economic and social costs of their rights violations.

Keywords: privatization; mining sector; economy liberalization; monopolies; Mexico.

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НАСЛІДКИ ПРИВАТИЗАЦІЇ В ГІРНИЧІЙ ГАЛУЗІ МЕКСИКИ: ХТО ВИЙШОВ ПЕРЕМОЖЦЕМ?

У статті описано ринкові реформи в Мексиці в процесі переходу країни до капіталізму, зокрема, процеси масової приватизації стратегічних державних підприємств. У гірничій галузі Мексики 30 років політики лібералізації призвели до консолідації великого капіталу, монополізації та ескалації корупції за одночасного інституційного вакууму. Все це в сумі призвело до ситуації, коли захищаються інтереси виключно великого бізнесу. Крім того, спостерігаємо зростання впливу негативних зовнішніх факторів різного роду, особливо екологічних. Все це ще більше ускладнює становище найбідніших верств населення гірничих регіонів, що має та матиме свої економічні та соціальні наслідки.

Ключові слова: приватизація; гірничя галузь; лібералізації економіки; монополії; Мексика.
Рис. 2. Табл. 2. Літ. 29.

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ПОСЛЕДСТВИЯ ПРИВАТИЗАЦИИ В ГОРНОДОБЫВАЮЩЕЙ ОТРАСЛИ МЕКСИКИ: КТО ВЫШЕЛ ПОБЕДИТЕЛЕМ?

В статье описаны рыночные реформы в Мексике в процессе перехода страны к капитализму, в частности, процессы массовой приватизации стратегических государственных предприятий. В горнодобывающей отрасли Мексики 30 лет политики либерализации привели к консолидации большого капитала, монополизации и эскалации коррупции при одновременном институциональном вакууме. Всё это в сумме привело к ситуации, когда защищаются интересы исключительно большого бизнеса. Кроме того, наблюдается рост влияния негативных внешних факторов различного рода, особенно экологических. Всё это ещё больше ухудшает положение наиболее бедных слоёв населения горнодобывающих регионов, что имеет свои экономические и социальные последствия.

Ключевые слова: приватизация; горнодобывающий сектор; либерализация экономики; монополии; Мексика.

Introduction. Mexico has already experienced almost 30 years of neoliberal policies which have been oriented towards the liberalization of several sectors of Mexican economy. However, the principles of the market, limited state intervention, open competition, utility maximization and comparative advantage in trade which are oriented towards industrialized development, have had some undesirable effects

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(Haque, 1999). According to Vargas-Hernandez et al. (2010), the cornerstone of neoliberal reforms was the privatization of strategic state enterprises, which brought radical changes in the relations among the state and capital owners. In Mexican mining these reforms changed the Mining Law and the Law on Foreign Investment that eventually fostered the settling of large capital firms which are privileged with a low fiscal burden and control of vast mineral deposits (Wise et al., 2005; BMI Mining Report, 2014).

Along with neoliberal policies, the profits for these firms increased, but also a number of externalities and abuses towards population residing near the mining sites. Mexico is currently ranked 4th by mining exploration in the world, mostly driven by Chinese demand for copper and by the urgent need of the United States for gold and silver due to the financial crisis (Notimex, 2013). Potential profit turns mining into an attractive industry, during 2006–2012 it generated 16,717 mln USD from the exploitation and commercialization of gold, silver, copper, zinc, iron and coal among others. However, Mexico is also ranked 106th out of 177 countries in the Corruption Perceptions Index (2013), which raises concerns about the mix of market reforms and corruption.

Although the profitability is remarkably high, in the long run this sector may finish being a concern for national security. Mining doesn't create a multiplier effect; poverty and inequality remain constant while mining companies enjoy a very favorable tax regime and good business environment. Additionally, the current extractive scheme fosters the ecosystem destruction, the overuse of natural resources, acceleration of climate change and the increase of health risks leading to conflicts outbreak in some communities near the location of mineral deposits (Garcia, 2013a). In this regard the Economic Commission for Latin America and the Caribbean (ECLAC, 2013) found that the most common causes for conflicts arise from environmental impact, territorial disputes, violation of human rights, lack of social responsibility and disputes for economic benefits. However, the mining sector since its origins has had an important role in economic development; therefore, the dilemma is how to maximize profits and keep an appropriate level of investment vs. the sustainable development of the industry.

Using a historical approach the authors of this paper build a case study on the changes in the mining sector, assessing how rapid privatization of the industry which previously was owned mostly by large state enterprises, led to the creation of private monopolies and institutional vacuums that deprived most of population from defending themselves against abuses or externalities. The next section is the literature review on privatization in transition economies. Afterwards, the analysis of the economic history of Mexican mining is performed in order to establish the mass privatization origin. The following section consists of an assessment of who are the winners of this outcome and a deep analysis of its consequences. Finally, conclusions and policy recommendations are given.

Privatization in transition economies. The issue of property and privatization in economies in transition is relevant when the outcome of the process is the rise of firms with monopolistic features. According to Hazlett (1987), property rights are the key element that will ultimately determine the success or failure of an economic system; therefore, the challenge is to establish optimal property rights in order to not gene-

rate negative impacts. Also, the property rights system can provide a better understanding of the problems associated with monopolies, especially because they give exclusiveness to the owner of the resource to decide the alternatives of exploitation, which is chosen based on potential profitability. The microeconomic theory suggests that the main restrictions a monopolist faces are the choice of technology and consumer behavior (Varian, 1992), which raises concerns especially when it intersects with the notion of national patrimony; this raises public anxiety regarding the nature of business control over productive assets.

According to Allina-Pisano (2009), relatively unregulated privatization processes lead to the formation of private monopolies and oligopolies. This implies that competition for the ownership of major assets is limited to a reduced numbers of participants and it also turns the attention away from the central purpose of property rights which is to guarantee secure life for people but not the protection of private profits. This means that an inappropriate system of property rights in the presence of monopolies will incentive firms prioritize short-term preferences and rent-seeking activities and to ensure them firms will also increase lobbying among political elites (Braguinsky, 1999). Also, Spicer et al. (2000) stressed that for economies in transit progressive privatization is preferable to rapid mass privatization since the latter is strong in the destruction of previous regimes and markets creation, but weak in support of a new institutional order. Then, an abrupt change could lead to the absence of institutional infrastructure that could foster corporate governance by private actors and to the development of their own regulation and enforcement mechanism with political complicity. These factors could weaken the rule of law and increase corruption, which means unequal legal treatment and in this case the main concern will be protecting corporations from state intrusion instead of protecting people against one another or the state (Allina-Pisano, 2009)

The biased protection in favor of firms has direct impact when negative externalities arise, according to Varian (1992) the omissions in the estimation of private costs which are normally lower than social costs are absorbed by the society in various forms. In the case of monopolies, they react differently than the social planner would, since the priority for a monopolist is still to obtain the highest profits at minimum costs. Therefore, they respond mostly to market incentives, especially with regard to shifts in production costs, prices and demand of the offered goods, than the interaction of these variables will determine if a monopolist is willing or not to internalize the externalities produced (Laxmirayan et al., 2005).

Most of the relations and impacts are of importance in the understanding of the effects of the privatization in Mexican mining sector. In the next section we will show how Mexico has created conditions to fall in this very unfavorable situation.

From nationalization to privatization: the mining industry. In order to make a comprehensive statement of the problem we need to analyze changes in the property rights along Mexican history. Privatization and the changes brought can be better explained by the impacts of liberalization and market reforms. According to Vargas-Hernandez et al. (2010), previous to this process Mexican state was skeptical about capitalism and also worked with the belief that the state is capable to regulate and intervene in almost all economic affairs through its constitutional mandate. Wise et al. (2005) argue that a major turning point in Mexican legislation was the

Constitution of 1917 which in its Article 27 established the principle of national ownership of mineral and subsurface deposits, and this ownership was inalienable and imprescriptible. This fact was the main issue that fostered in the future the opposition to adopt capitalism, since it also gave a new meaning to the notion of patrimony that became an important element for Mexican nationalism and still remains nowadays (Ferry, 2002).

The Constitution also established that resources exploitation was subjected to issuing the concessions granted by the State only to native or naturalized Mexican citizens and Mexican owned capital. Despite this constitutional mandate foreign direct investments (FDI) were permitted and since that time there has been struggle between the influence of FDI in the sector and the fulfillment of national development goals that lead to several attempts to restructure the mining sector by increasing taxes and royalties. Wise et al. (2005) argue that between 1934 and 1956 when the Law of Mining Taxation and Development was implemented taxes and duties increased reaching 35% of the gross value of the minerals produced leading to FDI decline and the abandonment in exploration and therefore to a decrease in production. Later in 1961, the import substitution model included into a reform to the Article 27 ensured a full control of Mexican state and national capital over foreign ownership in order to create a national industry and to develop the domestic market. This measure gave birth to the Mexican Metallurgical of Penoles Incorporated, FRISCO Mining Inc. and Mexican Mining Group; which are currently the 3 largest consortiums in the sector. Progressive changes in the Mining Law also created conditions for larger participation of the state that acquired bankrupted mining companies in an attempt to preserve jobs and productivity in the sector which eventually turned into a heavy burden for the public debt.

By the year 1983 the state's participation was 40% in the mining sector, which with the severe economic crisis that had started in the previous year and high level of public debt, forced to apply neoliberal adjustment measures requested by the World Bank (WB) and the International Monetary Fund (IMF) as a condition to receive financial aid. Liberalization of Mexican economy implied privatization and deregulation of the private sector in order to modernize the state and give the country a comparative advantage especially regarding FDI attraction (Haque, 1999). As in the past, the sector operated basing on the concessions regime, which under these new reforms that changed also the Law on Foreign Investment accelerated the concentration and centralization of mineral deposits in the hands of domestic and foreign large capital firms with monopolistic features.

The evolution of property rights in terms of concessions is the key element in the study on the impacts of the mining sector since the exploitation of minerals passed from the exclusive state control to become mostly a subject to private property. Even though by the constitutional mandate Mexican nation is supposed to be the owner of mineral deposits, the reforms managed on to transfer ownership of state monopolies to private hands, mostly to large business (Vargas-Hernandez, 2010). The consequences of these changes are shown in the next section.

Who benefits from the privatization? Mining is the sector exclusive for a limited number of actors given the costs and the risks of projects. It not surprising then, that most of new international firms in the sector are listed at the Mexican Stock

Exchange, including those coming from abroad, which exhibit large capital, high profitability and productivity (Wise et al., 2005; Ramirez, 2013a, 2013b). According to the Mexico Mining Report 2014 (Business Monitor International, 2014), Mexico's current regulatory landscape is favorable for mining activity and FDI reached a five-year high in 2013. Although new mining royalties which range from 7.5% to 8% for precious metals are high in comparison to other countries in the Americas, the overall tax regime is not burdensome, the investment regime is open, labor costs are low and the manufacturing sector is developed; these conditions benefit mostly foreign firms.

Mining activity is of very high value; however, information about tax collection and the companies' profits is difficult to find and access. In order to compare the income for Mexican state and the value of mining activity we analyze the data of the income tax collection from the mining industry, funds collection from mining rights and the total value of metallurgical and mining production (metallic and nonmetallic) in the period of 2002–2012. This is shown in Table 1.

Table 1. Income tax collection of the mining industry, funds from mining rights and value of the mining production 2002–2012, mln pesos

<i>Year</i>	<i>Mining income tax collection</i>	<i>Collection from mining rights (concessions)</i>	<i>Value of mining production</i>
2002	6,741.30	211	45,219.2965
2003	3,559.70	258	48,857.55608
2004	4,507.20	371	66,151.84295
2005	8,703.50	395	714,86.75238
2006	12,059.80	323	100,634.7674
2007	14,610.40	422	115,199.8496
2008	16,089.30	587	116,872.7914
2009	17,537.30	733	133,860.4315
2010	15,799.70	1,022	187,511.874
2011	18,753.20	1,305	262,290.4035
2012	22,267.10	1,799	291,148.8629 ¹⁾

¹⁾ Preliminary estimation.

Source: Anuario Estadístico de la Minería Mexicana 2004, 2008, 2012; Tributacion de las industrias extractivas en la region Andina: Un foro regional sobre el diseno y la evaluacion de regimenes fiscales para industrias extractiva, 2014.

The gap between the value of production and the collection of public funds is very large as it is easily seen in Figure 1.

A very concerning matter in this gap is the income from the mining rights or concessions, since in the attempt to create a comparative advantage Mexico is virtually giving away its land. Article 263 of the Federal Law of Rights states that each semester depending on mines, companies must pay a fee for each ha granted once a concession is approved, as shown in Table 2.

Additionally, the Article 15 of the Mining Law establishes that concession will have a lifespan of 50 years which and could be extended for the same period of time if owners do not incur in infractions that could cause its cancellation. Both the fees and the granted length of concessions are meant to reduce the production costs and give a certain degree of profitability to investors in the sector. This raises the debate about the impacts of FDI which is an important factor in the extractive scheme. It is

stressed in literature that sometimes the degree of foreign direct investment could create problems such as the rise of pollution, in this regard Cole et al. (2002) concluded after analyzing the sample of 33 countries in the period of 1982–1992 that when corruption levels were high, the stringency of environmental policy was negatively affected by the FDI level. This is critical since according to the Corruption Perceptions Index (2013), Mexico is ranked 106th out of 177 countries; therefore the dynamics of FDI, corruption and the overemphasis on economic growth are leading to the underestimation of several externalities that undermine the sustainable development goals (Haque, 1999). Also, there is evidence that at the political level many companies pay bribes to influence public officials (Business Monitor International Mexico Mining Report, 2014).

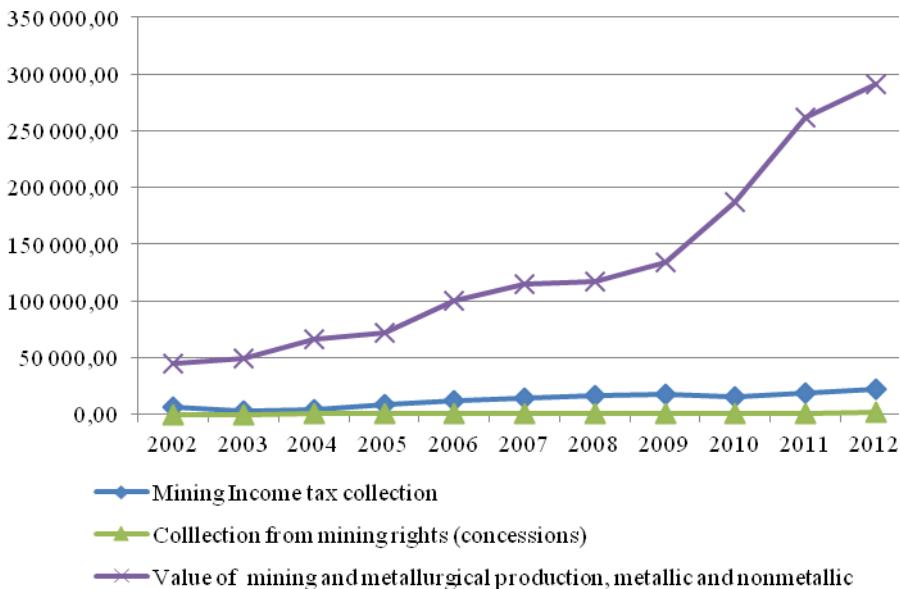


Figure 1. Gap between collection of public funds and the value of production 2002–2012

Table 2. Mining rights fees

<i>Mining concessions</i>	<i>Fee per (pesos/ha)</i>
First and second year	5.91
Third and fourth year	8.83
Fifth and sixth year	18.26
Seventh and eighth year	36.73
Ninth and tenth year	73.44
From the tenth year	129.24

Source: Federal Law of Rights.

The main issue with corruption is that combined with market policies it leads to a situation when vulnerable segments of population are excluded from the regulatory framework, and this favors monopolists' and large capital and therefore the states fails to promote the internalization of externalities (Vargas-Hernandez, 2011). With regard

to externalities, the chosen production technology could be a consequence of this favoritism that in the case of Mexican mining can be exemplified by the permissiveness of authorities to allow the use of the open pit method for minerals extraction which is already forbidden in many countries. According to the Environmental Law Alliance Worldwide (2010), this method is associated with losses in vegetation, air pollution from the intensive use of explosives and carbon dioxide emissions, water pollution of surface and ground waters due to the use of cyanide and other chemicals during the beneficiation process, and finally it generates huge piles of wastes consisting of grinded rocks treated with toxic chemicals. Among the potential consequences are the risks to water availability for the ecosystem and population near the sites, damages to public health and habitat loss due to forced displacement of several species and alterations in their food supplies and nesting.

In Mexico the most common causes for conflicts between companies and communities are environmental impacts, territorial disputes, violations of human rights and lack of compliance of corporate responsibility policies and sometimes a combination of all of them (ECLAC, 2013). In the case of environmental externalities, mining projects usually have a more significant impact in the aquifers where sometimes they inflict severe or irreversible damage. Also, they settle next to isolated areas or communities that are extremely poor where the main economic activities are agriculture, fishing or animal breeding. Also, pollution could be accidental or deliberate, which relates to the open pit method that is used because it is more profitable than underground mining, if a deposit has proper conditions. Currently in Mexico the count of mining conflicts rise to 34 (Observatorio de Conflictos Mineros de America Latina, 2014) of which 9 are linked to environmental impacts, 4 involve the water pollution and 2 are related to the open pit exploitation method. Conflicts are not exclusive of a specific region, in Mexico they have spread in the whole country; Figure 2 shows the distribution of these conflicts.

According to Lara et al. (2013), after studying the role of natural resources, corruption and conflicts concluded that good governance and adequate institutions are the main factors that mitigate corruption and conflicts outbreak linked to rent-seeking. This is particularly important since the lack of peace and security can undermine even more the conditions for human wellbeing.

The ECLAC (2013) argues also that an important externality linked to this type of extractive model are the environmental mining passives (EMPs), which are the impacts from abandoned projects and unregulated closures, represent high risks to health and the environment. There is already evidence on the EMPs effect on health, Pineda et al. (2007) assessed the damage on the DNA of children and fauna (rodents) in San Luis Potosi close to contaminated mining areas. They determined that pollution from arsenic, lead, cadmium, copper and zinc was already increasing their concentrations in the sample's blood; the main cause was the ingestion of polluted soil in the form of dust.

All previous facts show the overall dynamics of Mexican extractive model which is very unfavorable to the most vulnerable population and the environment as the expendables in the exchange to keep at least a constant flow of investments into the mining industry.



Source: Observatorio de Conflictos Mineros de America Latina, 2014.

Figure 2. Distribution of mining conflicts in Mexico

Conclusions and policy recommendations. The evidence suggests that rapid mass privatization in the mining sector was not the best strategy for Mexico since changes in property rights had adverse impacts on population and the environment. Additionally, corruption and international pressure had no influence on the state of monopolies and large capital firms which have also taken legal ownership of natural resources, returned few benefits and refuse to internalize the externalities.

Costs of the absence of control of these firms and the levels of corruption are a burden for vulnerable and poor population segments which have been gradually excluded from the regulatory framework due to institutional vacuum produced by the decades of neoliberal policies, where the market is protected against most of the sanctions that the state could impose evidenced by the number of conflicts distributed along the country which could eventually turn the issue into a concern of national security.

If Mexican government expects to make mining a more or less acceptable activity, it must work faster on the development of better institutional framework to deal with market problems as well as the development of an anti-corruption strategy. Also, it is necessary to change policies on taxation, concession fees and length of developing mechanisms for the adoption of more environmentally friendly technologies even if it means reduced profitability of mining projects.

So far, the policies used by Mexico are very consistent with the contents of the microeconomic theory of monopoly. Nevertheless, it is highly recommended to switch to an economic policy for the development of good conditions for human life.

Acknowledgements. *This paper is a result of the project IGA No. F2/26/2014 "Impact of economic liberalization on environmental policy".*

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Стаття надійшла до редакції 15.11.2014.