

IMPACT OF THE LAS BAMBAS MINING CANON ON THE DISTRICT DEVELOPMENT OF CHALLHUAHUACHO - COTABAMBAS APURIMAC 2016-2018.

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Article History	Abstract
Received: 02 September 2023 Revised: 29 September 2023 Accepted: 10 October 2023	This research article is based on the thesis work entitled "Impact Of The Investment Of The Las Bambas Mining Canon On The Economic and Social Development Of The District Of Challhuahuacho, Province Of Cotabambas - Apurimac Region, Period 2016 - 2018", which was developed with the aim of explaining the impacts of public investment projects executed with trust funds and mining canon funds; as well as the fulfilment of the commitment of the 7 numerals of Annex K (Pro Inversión, 2004), which was initially assumed by the company Glencore PLC and later by the company Minerals and Metals Group (MMG). This agreement created many expectations in terms of the payment of royalties required by the regulations and their contribution to human and productive development, in the face of a reality that showed high rates of poverty and extreme poverty, chronic malnutrition of children under 5 years of age, infant mortality, low Human Development Index (HDI), high unemployment rates and low per capita income. among others. Faced with this situation, the community families had hopes that mining activity would contribute strongly to economic and social development, by executing various productive and social development projects according to D.L. No. 996 (Official Gazette El Peruano, 2008), such as basic sanitation, education, health, agricultural development, forestry, among others. From the macro point of view, the Las Bambas mining activity, since the stage of its exploration, has been contributing significantly to local, regional and national economic development by joining the national economy and promoting a significant improvement in development indicators among the inhabitants of Apurimac and the rest of the country. However, the view of indicators from the microeconomic point of view is very different from the view from the macroeconomic point of view.

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CC License CC-BY-NC-SA 4.0	Although it is true that the mining activity benefited more the families living in the area of direct social influence and not so much those living in the area of indirect influence. This continues to generate economic and social problems that translate into stoppages, strikes and road blockades, among others. Keywords: <i>Economic and social impact, trust funds, mining canon and social economic development.</i>
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Introduction.

According to Glave & Kuramoto (2007), who indicate that Peruvians have a love-hate relationship with mining. However, mining generates strong revenues for the State (mining royalty 35% of total net income and 2.5% of the total amount of sales as royalties). For this reason, activity is considered to be the main engine driving the growth of the country's economy. However, the discontent of the populations that do not benefit directly from the activity of the mining company or those that are outside the area of direct influence continues. Here the question arises: Why is the majority of the local population unhappy with mining exploitation despite the fact that it generates economic growth? The answer lies in the fact that even with the development of mining activity, the majority continue to be poor and that they are forced to share the use of water resources and soil with the mining company. The analysis of these divergences is never to end up obeying the interests of both sides and that the point of equilibrium to be found is far from reality.

In terms of social responsibility, Cajiga Calderón (2017) refers to "being socially responsible means being aware of the damage that our actions can cause to any individual or community". This approach is in line with those arrived at in this research. Faced with this situation, it is worth asking how to make the coexistence between the mining activity and the surrounding communities? As a result of this question, mining companies seek acceptance of their social responsibility and the implementation of the trinomial: social responsibility = mining + social environment + care of the environment.

From the economic point of view, economic development is understood as "the *progress of a nation's wealth guided by the general welfare of its citizens. The latter can be measured by evaluating the improvement in the quality of life based on the measurement of the indicators: life expectancy, literacy or gross domestic product*" (Euroinnova Business School, n.d.).

Likewise, Castillo Martín points out that " (2011) *these three factors: Environment, Economic Growth and Economic Development, play a fundamental role in the economy of any country or*

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nation, so none of them should be neglected or give preference to one in greater proportion than the others".

Regarding the economic impact, Peláez et al., (2013), argue that, "economic impact studies serve to measure the influence and benefits of investments likely to generate a socioeconomic impact on the beneficiaries, including legislative and regulatory changes". For Novella Hernández (2018), "the *social impact study* is a process that can contribute to ensuring the achievement of benefits and the prevention of damage from future projects". In relation to social impact, for Chávez Hernández (2014), "The social impact of a project will always have an impact on the social life of human beings, so it is necessary to see a complete evaluation of the consequences of each project before putting it into practice, from the generation of jobs to the improvement in the living conditions of the place where the project is carried out".

Regarding the social evaluation of projects, Fontaine (2008) points out that, "This consists of comparing the benefits with the costs that such projects imply for the country; that is, the effect that the implementation of the project will have on the social well-being of the community."

Materials and methods.

The type of research is descriptive and explanatory, and the techniques and instruments used for the collection of qualitative and quantitative data were:

1). Recognition of the peasant communities in the area of direct social influence of the mining company, where the main projects were executed with funds from the mining canon and trust; 2). Identification of families affected by environmental pollution; 3). – Identification of the main social and productive projects, and the determination of the amounts assigned to investment projects, execution deadlines, costs and quality of the work; 4). Literature review concerning: Undergraduate and Graduate Thesis Papers related to research work; Documents of the district municipality of Chalhahuacho, records and archives of peasant communities, magazines, newspapers, texts, documents and the Internet.

Primary data were collected through direct observation, survey, and interview. The instruments used were: observation sheet and notebook; the survey questionnaire with basically closed questions; the interview guide with open-ended questions; photographic record of the works; and tape recorder.

For the collection of secondary data, official sources from public and private institutions, research theses and documents from the communities and journalistic publications, among others, have been used.

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SPSS and Excel were used to process primary data, and secondary data were reviewed, classified and sorted. Finally, the data processed and presented in the form of tables and histograms were analyzed and interpreted through quantitative and quantitative techniques, in order to know what is behind the information and what explains the processed data.

Results.

With the installation and operation of the Las Bambas mining project, there have been more positive than negative changes in the economic and social aspects, both in the urban and rural areas.

The changes that have occurred are clearly observed at the level of the city of Challhuahuacho and the families of the beneficiary peasant communities with the execution of productive and social public projects, financed with funds from the Trust Fund (USD 64.5 million), mining canon (S/.174,802,177.52) and the investments made directly by the mining company MMG Las Bambas in compliance with the commitment acquired and established in "ANNEX K" (Wiener Ramos, 2018). It should be noted that, of the 17 social conditions contained in Annex K, shared responsibilities were established between the State and the MMG Las Bambas Mining Company. Of these, seven (7) conditions assumed by the Las Bambas Mining Company (Numerals: 1, 2, 4, 5, 9, 13 and 14), and ten (10) conditions assumed by the Peruvian State (Ministry of Energy and Mines, Ministry of Economy and Finance, PROINVERSIÓN, among other portfolios), these being Numerals: 3, 6, 7, 8, 10, 11, 12, 15, 16 and 17).

Investments of trust funds. According to information from FOSBAM's management, approximately 70% of the total Trust Funds in the geographical area of the provinces of Cotabambas and Grau in the Apurimac region have been executed until 2018, in accordance with the priorities indicated by Legislative Decree No. 996 (Official Gazette El Peruano, 2008).

As a result of the execution of works by the local government and the regional directorates of Apurimac in the district of Challhuahuacho, according to the commitment of annex "K", by 2018 the following were carried out:

- 1.- (Numeral 3): Execution of investment in basic social infrastructure projects**, the progress of which is estimated approximately: a.- Health infrastructure projects: 20%; b.- Health infrastructure projects: 40%, c.- Educational projects: 35%, d.- Road infrastructure projects: 40%.
- 2.- (Numeral 6): Relative improvement in the implementation of animal and agricultural health programs.**
- 3.- (Numeral 7): Relative improvement in the transfer of technology and technical assistance in animal husbandry and cultivation programs and animal husbandry**

4.- (Numeral 8): With regard to infrastructure works for the commercialization of agricultural and livestock products, there are still no positive results.

5.- (Numeral 10): Improvement of health insurance for affected community members through the construction of health posts and health centers.

6.- (Numeral 11): Preferential allocation of royalties and mining fees for the affected communities, district, province and region. There are improvements and preferences in the use of royalties and the mining canon in favor of the communities located in the area of direct influence of the mine, however, the improvements made are still minimal.

7.- (Numeral 12): External auditing with the collaboration of specialists to measure the percentage of contamination of water, soil and other resources. They have not yet been carried out with the collaboration of specialists to measure the progress of the execution of works and the percentage of pollution and its effects.

8.- (Numeral 15): The draft contracts will be known to the inhabitants of the province and the region. The managers report: not to know any information or contracts entered into by them. However, some interviewees indicate that local managers may know.

9.- (Numeral 16): The signing of the contract at the project site, with the full knowledge of the authorities and civil society: The community leaders report that they have no knowledge of this.

10.- (Numeral 17): Channeling of the resources generated by the project to the communities involved in the province and region: hoping that the mining project will be responsible and that it will generate sustainable development. According to information from the councillors of the Apurimac region, it has been partially fulfilling this commitment, by orienting public investment projects to meet the expectations of the population. But the population is dissatisfied with the execution of the works, due to the slow progress and poor quality of the finished works.

The results of the use of MINING CANON funds by the District Municipality of Challhuahuacho, appear in its jurisdictionas projects to support peasant communities: 1) Support Service for the Sheep Production Chain; 2) Cattle and Andean Tuber Health Service; 3) Installation of associated pastures in the community of Tambulla in the Panteompata sector; 4) Execution of small irrigation works for the promotion of agriculture; 5) Installation of Forestry nurseries; 6).- Installation of phytoawnings for vegetable production. and Capacity Building for Entrepreneurs.

In terms of road infrastructure, the construction of a motorable pontoon boat was carried out on the Huiccoto River, Ccalachaca in the community of Kuchuhuacho and others.

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Among the main social projects , the following works were carried out: 1) Construction of the Comprehensive Center for the Provision of Cultural and Sports Services; 2) Recreational works; 3) Improvement of infrastructure for early childhood and primary education; 4) Improvement in health infrastructure; 5) Sanitation (water and drainage).

In relation to the progress of the investments executed by the Las Bambas Mining Company, according to the commitment acquired in Annex k (numerals: 1, 2, 4, 5, 9, 13 and 14) until 2018, the following are:

1) Paragraph 1: The original Environmental Impact Assessment (EIA), which determined as an area of direct social influence the territory of 38 peasant communities and four population centers that are located along what would be the mining pipeline (from Las Bambas to Espinar). To date, this EIA has undergone four modifications, without making clear the decisions that are scarcely shared and some unknown by the local populations.

2) (Numeral 2): Provide job opportunities for professionals, technicians and workers in the province and region of the department of Apurimac as a priority. The Vice President of the Las Bambas company testified that the project concentrated 22,000 direct jobs, of which 18,000 were created in the development stage and 4,000 in the transition to the extraction of the mining deposit.

3) (paragraph 4): Relocation of affected communities. Faced with the need to relocate the families affected by the mining project, the city "Nueva Fuerabamba" was built, a huge residential complex of 500 apartments, with all the necessary amenities (see figures 1 and 2).

Figura1: New city of Fuerabamba



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Note: Taken from the Diario Gestión (2017) – "Nueva Fuerabamba: Así vive los comuneros de Las Bambas transferred to the new town" (<https://gestion.pe/economia/nueva-fuerabamba-viven-comuneros-bambas-trasladados-nuevo-pueblo-222344-noticia/>). CC BY 2.0

Homes of the former communal families of Fuerabamba and other communities



Note: Taken from Diario Gestión (2014) – "Construction of Las Bambas mine registers progress of more than 60%" (<https://gestion.pe/economia/empresas/construccion-mina-bambas-registra-avance-superior-60-57201-noticia/>). CC BY 2.0

4.- (Numeral 5): Replacement of the affected lands and pastures. it has been carried out through the resettlement of the affected community members, allocating land on the Yavi Yavi estate.

5.- (Numeral 9): Respect for culture, customs and human rights. The company has been respecting the culture and customs (anniversary celebrations, folklore, carnivals, musical contests, etc.), as they are native to the area, however, some of their rights have been violated.

6.- (Numeral 13): Social and environmental responsibility of companies, establishing positive relationships with communities. Between the Las Bambas mining company and the local communities, they do not always find peace and tranquility, but a certain interest on both sides means that conflicts between native populations and the mining company continue to exist.

7.- (Numeral 14): Integrate and harmonize mining development with agricultural activities. In the locality, before the extraction of minerals, the main activity was subsistence agriculture and livestock, with the installation and exploitation of mining, the links between mining and

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agriculture are generating conflicts and agriculture is lagging behind as a result of environmental pollution (soil, water, air, pastures) and its consequences on human and animal health. impeding integration between the two sectors.

In relation to the economic and social impacts produced, there are:

1) At the level of the city of Challhuahuacho: a). During the construction and installation of the mine, construction of private homes and the new city of Fuerabamba, significant jobs were generated; Approximately more than 5,000 direct workers and nearly 15,000 indirect workers, mobilizing a total of more than 21,000 workers (as of 2018); b- The Las Bambas mining project, by delivering large amounts of cash to community families to compensate for their expropriated land, generated money transfers to different economic sectors, as well as transfers of funds to the cities of Cotabambas, Grau, Abancay and to the capitals of Cusco, Arequipa, and Lima regions.

2).-The district of Challhuahuacho concentrates in 2017 a total population of 14,525 inhabitants, more than 100% of what it was in 2007 (INEI), growing rapidly the urban population from 1,626 to 6,196 inhabitants, from 2007 to 2017; it is basically increased by the attraction of mining activity and the construction of the New City Fuerabamba, which is located 5 km away from the capital of the district. Likewise, the displacement of the workforce from the countryside to the city was due to the phenomenon of migration in search of employment and better wages, causing greater demand for public services.

3. At the level of peasant communities, the results achieved were very different. Of the 38 peasant communities, those located in the area of direct social influence have benefited the most, but families located outside the area of indirect social influence have not.

Discussion.

The debate on mining activity is located within the framework of two highly discussed antagonistic positions: the first seeks the benefits of mining for the country's economy and the second opposes it because of the environmental damage that impacts on natural resources. In this scenario, the discussion on the coexistence of mining and agriculture is continuous and the debate always appears every time a mining operation is opened in the country or when the agreements between the parties are not complied with as established.

These controversies hinder economic and social development by not finding common points of balance, which can be solved by negative and unforeseen impacts or when the local population is not satisfied with the payment of royalties and the mining canon transferred by the

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State to the Municipality of the district. This seems to be incomprehensible due to the fact that the percentage of royalty payments and the mining fee per mining company are low.

Moreover, the discussion is carried out within the referential framework of Peruvian mining, social responsibility in mining, without losing sight of the concepts of the direct and indirect economic and social impacts of mining activity, the concept of economic development managed by the MEF, as well as the concepts of economic and social development managed by other authors.

In this scenario of handling concepts or approaches, three important factors are debated that must always walk together: care for the environment, economic growth and social development. These factors have a single purpose, to improve the social well-being or quality of life of the population within the framework of what is understood as sustainable economic and social development over time.

Conclusions.

1.- The trust funds and the mining canon, executed in social infrastructure works, as well as the investments executed in works by the mining company MMG Las Bambas in compliance with the commitments of the numerals assumed in Annex "K", have had a positive impact on the improvement of the quality of life of the local population. This is due to the fact that the execution of productive and social projects has been promoting economic and social development, and relatively mitigating the problems generated by environmental pollution.

2.- The MMG Mining Company. Las Bambas and the State, in view of the agreements entered into that appear in the mining concession contract, a commitment acquired of seven numerals by the mining company and ten numerals by the State of Annex K, social works projects were executed in the area of direct social influence of the mine; and almost nothing in the area of indirect social influence, which is why the improvement in the standard of living of the population is minimal and social conflicts continue in the locality.

3.- The economic and social impacts of the works carried out by the mining company MMG. Las Bambas, in view of the demands of economic and social development, improvement of the standard of living of the population and environmental pollution are more positive than negative in the area of direct and indirect social influence of the mine, and the works carried out do not seem to be sustainable over time nor the improvement of the quality of life of the population. as well as environmental pollution mitigation works.

Bibliographic References

- Cajiga Calderón, J. F. (2017). *THE CONCEPT OF CORPORATE SOCIAL RESPONSIBILITY*.
https://www.cemefi.org/esr/images/stories/pdf/esr/concepto_esr.pdf
- Castillo Martín, P. (2011). ECONOMIC POLICY: ECONOMIC GROWTH, ECONOMIC DEVELOPMENT, SUSTAINABLE DEVELOPMENT. *International Journal of the Economic and Legal World*, III, 1-12.
- Chávez Hernández, N. (2014). *The environmental and social impact of an investment project*. TESCO - Administration. <http://tescoadministracion.blogspot.com/2014/10/el-impacto-ambiental-y-social-de-un.html>
- Official Gazette El Peruano. (2008). *LEGISLATIVE DECREE OUE APPROVES THE REGIME APPLICABLE TO THE USE OF RESOURCES FROM THE PROCESSES OF PROMOTION OF PRIVATE INVESTMENT IN THE EXECUTION OF SOCIAL PROGRAMS*.
- Euroinnova Business School. (n.d.). *What is economic growth and development?*
<https://www.euroinnova.co/blog/que-es-crecimiento-y-desarrollo-economico#desarrollo-econoacutemico>
- Fontaine, E. (2008). *Social evaluation of projects*. Pearson Education.
- Glave, M., & Kuramoto, J. (2007). Peruvian mining: what we know and what we still need to know. *Book Chapters*, 1, 135-181.
- Novella Hernández, M. (2018). Social Impact Study: The invisibility of the communities of Inhassoro (Mozambique), before, after and during the process of extractive companies. *Engineering Without Friction - ISF*. <https://esf-cat.org/wp-content/uploads/2017/04/Estudio-de-Impacto-2017-baja.pdf>
- Peláez, J. A., Lorenzo, P. de A., & Cañizares Pacheco, E. (2013). How to assess the impact and return on public initiatives and investments. *PWC - Economic Impact Studies*.
<https://www.pwc.es/es/sector-publico/assets/brochure-estudios-impacto-economico.pdf>

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DEVELOPMENT OF CHALLHUAHUACHO - COTABAMBAS APURIMAC 2016-
2018.

ProInversión. (2004). *"Annex K. Social conditions for the exploitation of the Las Bambas mining project", Bases of the international public tender No. PRI-80-2003, Promotion of private investment in the Las Bambas project - Department of Apurímac.*

Wiener Ramos, L. (2018). *Governance and Governability: The Las Bambas Case* (C.-P. de Derechos Colectivos e Industrias Extractivas, Ed.).