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REVIEW

Socioeconomic and environmental effects of the mining sector in Peru (2007-2022)

Efectos socioeconómicos y ambientales del sector minero en el Perú (2007-2022)

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ABSTRACT

During the period 2007-2022, Peru's mining sector experienced significant growth driven by foreign investment. However, this growth was overshadowed by the proliferation of socio-environmental conflicts that severely affected the economy and social fabric of mining regions. These conflicts led to the paralysis of major investment projects worth more than $18 billion, representing around 10 % of GDP. Economic simulations revealed that, between 2008 and 2014, the country lost more than $67 billion in economic and tax benefits due to the non-execution of projects. In addition, the trade war between China and the United States and the fall in commodity prices intensified the vulnerability of mining exports, which were already affected by social conflicts. At the social level, it was evident that areas with the highest mining activity maintained high levels of poverty and exclusion, reflecting an unequal distribution of benefits. Regional studies confirmed that indigenous and peasant communities were the most affected, facing environmental pollution, loss of biodiversity and violations of their territorial rights. The results confirmed that socio-environmental conflicts had a negative impact on exports and investment in the mining sector, revealing the urgent need for fairer and more sustainable governance of natural resources.

Keywords: Mining; Socio-Environmental Conflicts; Investment; Poverty; Exports.

RESUMEN

Durante el período 2007-2022, el sector minero en el Perú experimentó un crecimiento significativo impulsado por inversión extranjera. No obstante, dicho crecimiento se vio opacado por la proliferación de conflictos socioambientales que afectaron gravemente la economía y el tejido social de las regiones mineras. Estos conflictos provocaron la paralización de importantes proyectos de inversión por un valor superior a los 18 000 millones de dólares, representando alrededor del 10 % del PBI. Simulaciones económicas revelaron que, entre 2008 y 2014, el país dejó de percibir más de 67 000 millones de dólares en beneficios económicos y tributarios debido a la no ejecución de proyectos. Además, la guerra comercial entre China y Estados Unidos y la caída de los precios de los commodities intensificaron la vulnerabilidad de las exportaciones mineras, que ya estaban afectadas por los conflictos sociales. En el plano social, se evidenció que las zonas con mayor actividad minera mantuvieron altos niveles de pobreza y exclusión, reflejando una distribución desigual de los beneficios. Estudios regionales confirmaron que las comunidades indígenas y campesinas fueron las más perjudicadas, enfrentando contaminación ambiental, pérdida de biodiversidad y violaciones a sus derechos territoriales. Los resultados confirmaron que los conflictos socioambientales incidieron negativamente en las exportaciones y las inversiones del sector minero, revelando la urgencia de una gobernanza más justa y sostenible de los recursos naturales.

Palabras clave: Minería; Conflictos Socioambientales; Inversión; Pobreza; Exportaciones.

INTRODUCTION

The mining sector in Peru has historically been one of the main drivers of economic growth, attracting significant investment flows, especially foreign investment, which have boosted the national economy. However, this growth has been accompanied by a series of social and environmental conflicts that have generated differentiated impacts in the mining regions and in the country's economy in general. The coexistence of high poverty rates in areas with intense mining activity, the paralysis of projects due to socio-environmental conflicts and the persistent inequality in the distribution of benefits, reveal a structural problem that goes beyond macroeconomic indicators. This paper seeks to analyze the economic and social impacts of these conflicts, addressing their influence on exports, mining investment and the development of affected communities, under the premise that socio-environmental conflicts have had a significant effect on the performance of the sector between 2007 and 2022.

DEVELOPMENT

Differential economic impacts of conflicts in the mining sector

In Peru, a large increase in mining investments has been seen in recent years, which were mainly driven by foreign capital that has improved the country's economy, however, other studies pointed out that this activity is mainly due to the emergence of social conflicts in the region.[1]

According to the Central Reserve Bank of Peru, the social conflicts involved with mining projects have caused the stoppage of investments of more than US$18 billion, which is equivalent to 10 % of the national Gross Domestic Product (GDP) in recent years; In addition, another study conducted by the Peruvian Institute of Economics, using simulations of the 2007 input-output matrix, calculated that the non-execution of mining projects due to social conflicts between 2008 and 2014, which represented a loss of approximately 67 203 million dollars and 4 734 million dollars in taxes that were not collected for the country.[2]

In 2019, the global economic recession became much more evident, and neither the Ministry of Economy and Finance (MEF) nor the Central Reserve Bank of Peru (BCRP) were able to achieve their proposed goals; although the BCRP expected to recover from copper exports, it could not until the last months of the year; for its part, the MEF assigned the growth of private investment to the increase in mining investment in copper projects such as Quellaveco, Mina Justa and the Toromocho Expansion.[3]

Similarly, the slowdown in the global economy, caused by the trade war between China and the USA, which occurred in 2018, together with the decrease in commodity prices, negatively affected mining exports due to the high concentration of this sector in the country's export structure.[3]

Differential social and environmental impacts on affected communities

Governments promote the extractive sector for economic growth, but indicators show another reality: in Colombia, the mining departments of Guajira and Chocó show a high poverty rate; in Mexico, San Luis de Potosí and Guerrero, despite zinc and gold production, are poor states; and in Peru, despite measures to reduce poverty, in some mining departments the national average is very high.[4] The socioeconomic situation tells us that the regions with the highest mining investment show a high rate of economic poverty, which makes it a source of conflict.[1,5,6,7,8,9,10]

Studies reveal that the extractive sector in Latin America contributes to problems of poverty, inequality and environmental degradation, and it is observed that the benefits are only enjoyed by a few, while the negative impacts affect the most vulnerable communities, such as indigenous and peasant populations.[11,12,13] Similarly, due to the different forms of mining from artisanal to ancestral, each of them generates serious environmental impacts such as pollution, deforestation and loss of biodiversity, in addition to blowing up human rights, conflicts due to invasion of private property, problems with protected indigenous lands and conflicts with government authorities.[14,15,16,17,18]

General Hypothesis

H1: There is a significant impact of socio-environmental conflicts on Peruvian mining exports in the period 2007 - 2022.

Specific Hypotheses

H1.1: There is an impact of socio-environmental conflicts on investments directed to the mining sector between the years 2007 - 2022.

CONCLUSIONS

The analysis carried out shows that socio-environmental conflicts in the Peruvian mining sector have had significant repercussions on both the national economy and the social reality of the communities involved. Despite the high investment amounts and growth expectations associated with mining, the constant tensions

and project stoppages have generated losses of millions of dollars in exports, tax revenues and development opportunities. Likewise, it has been shown that regions with greater extractive activity do not necessarily show improvements in their welfare indicators, with high levels of poverty, exclusion and environmental deterioration persisting. These findings reinforce the hypothesis that socio-environmental conflicts have had a negative impact on the performance of the mining sector, and underscore the need for a more equitable, transparent and participatory management of natural resources that prioritizes community rights and long-term sustainability.

BIBLIOGRAPHICAL REFERENCES

1. Vilca W, Loa E, Ramírez Á, Medina C. Responsabilidad social empresarial minera y los conflictos socioambientales en el Perú. Rev Int Investig Cienc Soc. 2021;17(1):195–219. https://doi.org/10.18004/riics.2021.junio.195.

2. Ccama F, Jurado J, Acero S. Conflictos sociales en la minería peruana: un análisis teórico de su origen. Semestre Econ. 2019;8(1):7–39. https://doi.org/10.26867/se.2019.v08i1.83

3. Beraun S, Sotomayor A, Beraun J. Exportaciones Mineras y su Repercusión en el Crecimiento Económico del Perú: Periodo 2010-2020. Rev Inst Investig Fac Minas Metal Cienc Geogr. 2022;25(49):159–71. https://doi.org/10.15381/iigeo.v25i49.23012

4. Fuentes H, Ferrucho C, Martínez W. La minería y su impacto en el desarrollo económico en Colombia. Apuntes Cenes. 2021;40(71):189–216. https://doi.org/10.19053/01203053.v40.n71.2021.12225

5. Aguilar JD, Tafur H, Cubas N, Revilla Arce J. Desarrollo sostenible y conflictos medioambientales causados por la minería en la Región Cajamarca. Rev Latinoam Cienc Soc Humanid. 2023;4(2):3972–80. https://doi.org/10.56712/latam.v4i2.883

6. Andujar J, Ormachea R, Ruiz M, Chirinos C. Minería del cobre en Perú: análisis de las variables exógenas y endógenas para gestionar su desarrollo. Rev Venez Gerenc. 2021;26(94):784–801. https://doi.org/10.52080/rvgluzv26n94.18

7. COMEX. Crecimiento proyectado del subsector minería metálica para 2022 se reduce del 5.9 % al 2.9 %, debido a los conflictos mineros [Internet]. 2022. Disponible en: https://www.comexperu.org.pe/articulo/crecimiento-proyectado-del-subsector-mineria-metalica-para-2022-se-reduce-del-59-al-29-debido-a-los-conflictos-mineros

8. Defensoría del Pueblo. Reportes defensoriales [Internet]. s.f.. Disponible en: https://www.defensoria.gob.pe/categorias_de_documentos/reportes/

9. Instituto de Ciencias Hegel. Conflictos sociales o socioambientales en Perú [Internet]. 2021 [citado 2025 Jun 29]. Disponible en: https://hegel.edu.pe/blog/conflictos-sociales-o-socioambientales-en-peru-que-es-ejemplos-resolucion-etc/

10. Ministerio de Energía y Minas. Anuario Minero – Reporte Estadístico del Ministerio de Energía y Minas [Internet]. s.f.. Disponible en: https://www.gob.pe/institucion/minem/colecciones/2400-anuario-minero

11. Ministerio de Energía y Minas. Inversión Minera [Internet]. s.f.. Disponible en: https://www.gob.pe/institucion/minem/informes-publicaciones/3614950-inversion-minera

12. Moreno R. Impacto ambiental asociado a la implementación y ejecución del proyecto de mediana minería río blanco. Rev Investig Talentos. 2021;8(1):52–61. https://doi.org/10.33789/talentos.8.1.143

13. Navarro O. Análisis de las exportaciones de oro del Perú: Comportamiento a corto y largo plazo (2009-2019). Natura@economía. 2023;7(1):32–46. https://doi.org/10.21704/ne.v7i1.1934

14. Parillo E, Zela C. Causas de los conflictos socioambientales en el Perú – 2018. Rev Investig Cient Ing Ñawparisun. 2020;3(1). https://doi.org/10.47190/nric.v3i1.128

15. Ramirez J, García N. Impacto socioambiental de la minería a cielo abierto en Mezcala, Guerrero, México.

Rev Iberoam Cienc Soc Humanist. 2020;9(17):219–39. https://doi.org/10.23913/ricsh.v9i17.195

16. Ulloa W. Relación de las regalías mineras y el desarrollo del cantón Portovelo en Ecuador. Estud Gestión. 2023;(13):149–72. https://doi.org/10.32719/25506641.2023.13.7

17. Vergara P, Rodríguez A. Análisis ambiental de la minería de carbón en el ecosistema estratégico de páramo (Boyacá, Colombia). Sci Tech. 2021;26(3). https://doi.org/10.22517/23447214.24519

18. Minaría Sostible de Galicia. El 45 % de economía mundial está impulsada por el sector minero [Internet]. 2022. Disponible en: https://minariasostible.gal/es/economia-mundial-y-el-sector-minero/

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CONFLICT OF INTEREST

None.

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