

REVIEW ARTICLE

Sub-national governments, natural resources, and poverty in Peru: allocation of canon resources 2001-2022

ABSTRACT

The aim of this paper is to analyze the quality of public management in sub-national governments (province and district municipalities) in Peru in the last two decades, specifically those with natural resource exploitation (from mining, oil, or gas), which is why they receive significant amounts from the mining canon, oil extraction canon and royalties. The study focuses on the budget implementation, the prioritized projects, and their impact on the improvement of the living standards and the reduction of poverty in the above-mentioned areas inside Peru. It concludes that there has been progress, but there is still evidence of insufficient strategic planning, inadequate investment prioritization, deficient public management, under-qualified personnel in charge and lingering social inequality that should have been significantly reduced.

Keywords: Canon; natural resources; subnational governments; public management; investments.

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INTRODUCTION

Peru is one of the world's most megadiverse countries, and it is also one of the countries that is most vulnerable to climate change. This results in opportunities and threats. One such opportunity lies in the large and varied number of natural resources available, and the impact that their exploitation can have on economic growth and the improvement of the standard of living of the Peruvian population.

The resulting economic activity involves significant taxation revenue for the government, part of which is distributed to sub-national governments located in the areas with their corresponding mining, oil, or gas deposits through the canon, *sobre canon* and royalties. The research question that emerges is the following: Have the canon, *sobre canon* and royalties helped improve the standard of living of the populations living in the areas near natural resource exploitation projects?

To answer this question, a literature review on the issue has been conducted using international and national sources. Through quantitative and qualitative methods, we will analyze the impact of these resources in helping selected regions, provinces and districts overcome poverty levels.

Literature review on public policies by sub-national governments

The problem of public management is complex and involves many aspects, requiring a comprehensive approach. It is related to efficiency and quality in budgetary resource management, to qualification and training standards for the public officials involved, to rules and regulations that complicate processes rather than facilitating them, to logistics and transparency issues in public procurement, to deficiencies in the preparation of studies and technical or complex dossiers, and –unfortunately—to increasingly frequent cases of corruption.

If the general problem of public policies is complex, public management in local and regional governments –known in the literature as sub-national governments—is even more so. At these government levels, the above-mentioned problems become more serious, which prevents governments from meeting their

decentralization, social inclusion, national integration, and poverty and inequality reduction objectives.

A study by the Economic Commission for Latin America and the Caribbean (ECLAC, 2021) on national public investment plans in Latin America and the Caribbean shows that 12 of 16 countries studied in the region have public investment plans that include citizen participation, coordination with subnational governments and accountability. However, it recommends that efficiency in public investment should be improved by incorporating or improving prioritization criteria, with output/outcome indicators and an explicit link to the 17 Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda.

In such regard, according to a World Bank report (2021) on public management capacity and empowerment of subnational governments in Peru, reforms have been made to improve management and expenditure reporting, and almost all sectoral functions and financial resources were transferred to regional governments and municipalities, but without taking into account their preparation and capacity.

Bonet-Morón and Pérez-Valbuena (2017), in a study by Banco de la República for the Caribbean region of Colombia, analyze the four income sources with which the departments and municipalities of that region finance their projects, including royalties from oil exploitation. They conclude that most socio-economic problems from the region will not be solved with more financial resources, but with more transparency and a more efficient use.

This issue does not only concern developing countries, but it also affects industrialized economies. Thus, Ishihara (2022) mentions the case of Mie prefecture, where “la gestión de desempeño y la contabilidad de base devengada” [performance management and accrual-based accounting] was introduced. Prior to this, the priority was compliance (zero budget balance) rather than a cost or performance evaluation.

Other authors stress the study of public infrastructure project financing through Public-Private Partnerships (PPP). In such regard, Liu *et al.* (2022) evaluate this type of

financing in Australia. The authors point out that the Special Purpose Vehicles (SPVs) –specially created to execute the respective concession contracts—are usually heavily influenced and limited in their actions by the private debt investors and lenders involved in financial structuring.

Ruiters and Matji (2016) analyze the models and conceptual framework of PPPs for the financing of water and sanitation infrastructure in South Africa municipalities. They identify the amount of debt required, the ability to pay the debt, risk analysis and transfer, the quality-price relation, and the local sociopolitical context as key factors of this financing.

Xu *et al.* (2015) develop a model to determine the optimal financing structure through PPPs for the construction of public housing for rent in Hangzhou, China. They conclude that the optimal proportion in which the public and private sectors will participate depends on the uncertainty and risk levels.

Levitt and Eriksson (2016) developed a governance model for PPP infrastructure service delivery in Eastern Australia. The model concludes that governments should prioritize infrastructure projects based on an expert, non-partisan infrastructure panel.

From another perspective, Novikova (2022) assesses the importance of investing in research infrastructure as a substantial aspect of modern scientific and technological development. She believes that not only should the financial implications of the project be quantified, but also the broader social impacts through an economic efficiency analysis. To this end, she proposes a method that evaluates both aspects.

Plzakova (2022) evaluates investments in the tourism sector in the Czech Republic, with a local focus. She concludes that a combination of public and private investment is the best way to cover all aspects of local development, and that the direct beneficiaries should be involved in the relevant evaluation.

Standar *et al.* (2021) evaluate local renewable energy investments in Poland, financed with European Union (EU) resources. This financing requires transparency in spending

with the publication of data. She concludes that the environmental impact does not occur only in a particular municipality, but involves several, so that joint action on this issue must be encouraged.

Slijepcevic (2018) assesses the impact of the global economic crisis on local government investments in Croatia. The study concluded that the crisis affects the public finances of these governments and widens the pre-existing gap of regional disparities that the European Union seeks to close, affecting the decentralization process.

Mejía and Meneses (2019) analyze the role of political elites in public spending in Ecuador's local governments, noting that central government transfers from oil exports are the largest source of local government revenue.

Tetreault (2020) analyzes extractivist policies in Mexico from the end of the 20th century to the first decades of the 21st century, distinguishing four stages: i) Classical Orientation; ii) State Policy; iii) Neoliberal Period; and iv) New Extractivism.

Therefore, the current state of knowledge on the subject should lead to profound reflections for the Peruvian case. Generally, in this type of projects there is a gap between low financial efficiency and high economic efficiency compared to other types of projects.

ARGUMENTATIVE REVIEW

Peru's misguided territorial management, political division, fragmentation and their effects on decentralization and poverty

According to the constitutional mandate, the Peruvian State is one and indivisible, and its government is unitary, representative, and decentralized (Congreso de la República, 2022). In practice, however, Peru has a political organization that encourages division rather than union, creating over time a vision of “watertight compartments” in each region, province, district, or minor village in the country.

Ancient Peruvians, starting with Caral civilization over 5000 years ago, lived in harmony with nature. Water (Yaku), Mother Earth

(Pachamama) and the mountains (Apus) were their deities; they organized themselves with great intelligence to take full advantage of their territory, dedicating the productive lands to the cultivation of crops to feed the population and uncultivated lands in higher areas for their dwellings.

Over millennia, ancient Peruvians organized themselves by following and protecting the watershed, with a comprehensive sense of territory, seeking what today would be termed sustainable development and achieving the physical integration of their territory and population.

During the nearly three centuries of the Inca Empire, they took advantage of this knowledge and ancestral practices, and divided the territory into four regions or Suyos: Chinchaysuyo, Antisuyo, Collasuyo and Contisuyo. Except for Antisuyo, the other three regions covered coast and highlands. In addition, a road was designed and used that integrated the entire territory longitudinally along more than 5,000 kilometers (the Capac Ñan). Peru before the arrival of the Spaniards was an integrated territory where people lived in harmony with nature.

With the Viceroyalty period, between 1574 and 1784, the *corregimientos* and *repartimientos* were established to serve the interests of the Spanish Crown to extract gold and silver as quickly as possible to send to a metropolis that was still living in the era of metallism or bullionism¹. The proper territorial management that Peru had experienced for millennia was abruptly changed by a centralist regime that divided the territory for extractive purposes, without considering its impact on nature. The Spanish presence then produced a social and productive disarticulation that we still suffer from today.

At the end of the 18th century, the problem was further accentuated when the *corregimientos* were replaced by the *encomiendas* in the context of the so-called Bourbon Reforms, which consisted of important political, economic, administrative, religious and cultural

¹ Metallism or Bullionism is the name given to an economic doctrine that considered that wealth consisted of accumulating precious metals (gold and silver). It is considered a primary stage of mercantilism and developed in Spain in the 16th and 17th centuries. It also occurred in England.

changes implemented in Spain and its colonies to reinforce monarchical power, centralize administration and increase tax collection.

The Viceroyalty was divided into intendancies ruled by governors who were appointed directly by the King. It is with respect to this regime of intendancies that the first departments and provinces were established at the beginning of the Republic and have remained the way of dividing the country politically ever since.

In the 1970s, the military government established the so-called *Corporaciones Departamentales de Desarrollo* (CORDES) and, a decade later, during the government of president Alan García (1985-1990), the first serious and technically sustained effort was made to correct this political division into departments, by creating twelve regions with cross-cutting criteria, which met with very good popular acceptance. In the early nineties, during the government of Alberto Fujimori, this process was cancelled, arguing bureaucratic and budgetary difficulties (which existed, but had to be corrected instead of leaving the previous effort without effect), creating the so-called *Transitory Councils of Regional Administration*, which did not produce positive results either.

In 2002, during the constitutional government of President Alejandro Toledo, a new Regionalization law was enacted, creating the current regions, each one based on the former departments. In the end, the solution became worse than the problem.

Oswaldo Molina, from *Red de Estudios para el Desarrollo* (REDES), points out in this regard: "The decentralization process foreseen in its design stalled in 2005 during its second stage, when a referendum truncated the project for the creation of macro-regions" (Molina, 2022, slide 5).

The author states that, in 2021, after almost two decades of implementing the decentralization process, the desired objectives have not been met. This is evidenced by indicators of households with access to basic services. For example, in the case of sanitation infrastructure, coverage in the regions is only 74%, while in Metropolitan Lima it is 93%. Regarding Internet access, coverage in the regions is 40%,

while the corresponding indicator in Metropolitan Lima is 67%.

Molina argues that there are five causes for the failure of decentralization: design deficiencies, rushed implementation, weak institutional capacity, lack of specialized technical personnel, dependence on transfers from the national government, inequality, and inability to efficiently manage spending.

Molina (2022), citing Trivelli, refers to what she regards as “minimum conditions for growth”, which include: at least 50% of the target population has completed high school; there is at least one health center; the poverty level is lower than 43%; there is at least one entity that provides financial services; and there are at least local elections.

Considering these minimum requirements to carry out growth and development processes, the researcher concludes: “Sólo 156 de los 1,874 distritos del Perú cuentan con estas condiciones mínimas. 1 de cada 3 peruanos vive en provincias donde ningún distrito cumple con estos mínimos. 3 departamentos no tienen un solo distrito que cumpla estos requerimientos” [Only 156 of Peru’s 1,874 districts meet these minimum conditions. One out of every three Peruvians lives in provinces where no district meets these minimum requirements. Three departments do not have a single district meeting these requirements] (Molina 2022, slide 16).

Clearly, the data show that the objectives of the decentralization process beginning in 2002 have not been met. The aforementioned hard poverty continues and so does the inequality between regions, provinces and districts.

This is the summarized history of erroneous decisions that, in the last two centuries, have led Peru to become a country in which each minor village wants to become a district; each district aspires to become a province; each province wants to become a region (as if these decisions would improve the standard of living of their inhabitants), but which stimulate the fragmentation of the territory. Even in one region (Puno), there are individuals who would like to become independent from the Peruvian territory. The proposal made in 1938 by the Peruvian geographer and scholar Javier Pulgar

Vidal (1911-2003), distinguishing eight natural regions in Peru with a transversal criterion and according to the altitude: Chala, Yunga, Suni, Puna or Jalca, Janca or Cordillera, Selva Alta or Rupa Rupa, and Selva Baja, has been of no use until now.

As of early 2023, Peru is divided into 25 regions (plus Metropolitan Lima, with a special regimen), 196 provinces, 1,896 districts, and 2,465 villages. Even when this erroneous policy has been evident throughout recent history, fragmentation continues to be reinforced. In the Peruvian Congress, there are several bills aiming to create new districts and provinces; and –to make a solution of the problem more difficult—in the Office of the President of the Council of Ministers there are numerous territorial disputes between districts and provinces pending to be solved.

In Lima, the country’s capital, there are unresolved conflicts between districts such as Magdalena del Mar and San Isidro, between Santiago de Surco and Villa El Salvador, and between Independencia and Comas. Water, which the ancient Peruvians worshipped as a deity and was a source of union (they worked politically with authorities along the basin), is now a source of conflict between Moquegua and Arequipa or between Ancash and La Libertad, to cite just two examples.

Disputes also revolve around infrastructure projects, such as the one between Cañete and Chíncha –to the south of Lima—over the location of the Melchorita natural gas liquefaction plant, or historical disputes such as those between Jauja and Huancayo in the Junín Region or between the districts of Ollaraya and Unicachi in the province of Yunguyo in Puno.

As if that were not enough, politicians seeking to become municipal or regional authorities or members of Congress encourage greater fragmentation by including the creation of new districts and new provinces in their electoral bids and government plans.

Therefore, the public policies implemented in Peru to achieve economic growth, poverty and inequality reduction have a limited capacity to achieve their desired objectives. Undoubtedly, the sustained economic growth

experienced by Peru between 2000 and 2019 had an evident effect on the reduction of monetary poverty, reducing it from 54% to 20%. Then came the COVID-19 health crisis and poverty reduction efforts regressed, until poverty affected about 30% of the population.

Experience shows that sustained economic growth does reduce monetary poverty, but is not enough to reduce extreme poverty, or “hard” poverty, which is mainly related to the isolation of millions of Peruvians living in small villages, poor districts and provinces located in isolated locations far from larger cities and, therefore, lack essential public utilities such as drinking water and sanitation, roads, highways, bridges, electricity, irrigation canals, rainwater drainage, communications, as well as quality healthcare and education infrastructure.

These basic services have to be provided by the State with the resources coming basically from tax revenue, including the canon, *sobre canon* and royalties resulting from the exploitation of natural resources that are destined precisely to the communities, districts, provinces and regions located near the respective investment projects. When the State is mentioned, not only the national government is being referred to (until now, it is commonly called “central government”), but also regional and municipal governments (termed “sub-national governments”).

This study will analyze in detail the canon, *sobre canon* and royalty resources. Contrary to what might be expected, they have not been able to lift the populations near these projects out of poverty, mostly due to inadequate prioritization (which favors the construction of monuments, stadiums and bullrings, new municipal buildings, remodeling of plazas, etc., rather than water or sewage, storm drainage, education or healthcare works), poor management (low budget implementation, poor technical studies, paralyzed works, etc.) and, in other cases, insufficient resources.

Importance of natural resource exploitation and resources coming from canon, *sobre canon* and royalties

Peru is a megadiverse country in several ways: economically, socially, geographically, and

culturally. In this context, a range of natural resources can be found which have been historically exploited, and continue to be exploited today, with varying results.

As shown in Table 1, according to data from the Banco Central de Reserva del Perú (BCRP, 2021), Peru’s GDP distribution by sectors reveals that the manufacturing sector contributes with 12.6% of the total, the mining and hydrocarbon sector represents 11.5%, the agriculture and livestock sector represents 5.9%, the fishing sector accounts for 0.5%, the construction sector represents 6.8%, water and electricity account for 1.9%, while the trade and service sectors contribute with 10.5% and 50.3% respectively.

Table 1
GDP by productive sectors: 2021 (in millions of soles from 2007, and percentages)

Sector	Value	(%)
Agriculture and livestock	32,684	5.9
Fishing	2,542	0.5
Mining and hydrocarbons	63,482	11.5
Manufacturing	69,379	12.6
Water and electricity	10,200	1.9
Construction	37,349	6.8
Trade	58,125	10.5
Services	277,525	50.3
TOTAL	551,284	100.0

Note. Adapted from BCRP, 2021.

In other words, the agriculture and livestock, fishing, mining and hydrocarbon sectors, which account for the potential and diversity of natural resources, account for nearly 18% of Peru’s domestic production. The use of these natural resources generates potential wealth, but in order to really transform this potential into tangible wealth, it is necessary to highlight their value. This means that, in the relevant investment projects, it is not only necessary to have natural resources and the corresponding skilled labor, but also the necessary capital, financing, technology, information, infrastructure, business management. It is the combination of all these productive factors that will allow the desired objective to be achieved.

However, there is a widespread belief that the availability of such a variety of natural resources is a sufficient condition to generate wealth, jobs and raise the living standards of communities. This idea led to a mistaken interpretation of the well-known phrase attributed to the Italian scholar Antonio Raimondi: “El Perú es un mendigo sentado en un banco de oro” [Peru is a beggar sitting on a golden bench]. Raimondi specialists and scholars have denied the authorship, arguing that this phrase is far from this scientist’s way of thinking.

Indeed, highlighting the value of these resources for the benefit of Peru and generating added value in them also involves the responsibility of improving the standard of living of Peruvians who live in the communities and regions where there is an investment project. To this end, a significant part of the taxes paid by the concessionaires are devoted to this objective through the canon, *sobrecanon* and royalty funds.

The mining sector alone, for example, generated USD 44,684 million in exports in 2021 (around 70% of the total), and is the main export activity in Peru. In terms of job creation, the mining sector generates 152,581 direct jobs and as many indirect jobs.

The mining canon constitutes 50% of the income tax paid by mining companies; the mining royalty compensates producing regions for part of the economic consideration paid by companies for the exploitation of non-renewable resources. On the other hand, the gas royalty is part of the income received by the State for the exploitation of natural gas and condensates, while the oil canon and *sobrecanon* is the right of the areas where the exploitation of oil, associated natural gas and condensates takes place.

Table 2 shows that, only considering the canon and royalty resources in the mining, oil and energy sectors, a total of PEN 64,558 million were allocated, 49% of which came from the mining canon, 26% from the gas canon, 14% from the oil canon and *sobrecanon*, and 11% from mining royalties in the 2009-2018 period. This is a significant amount of resources which should serve to enhance the living standards of the population living in the areas where the investment projects take place, but this is not happening.

Table 2

Resources gained from canon and royalties in the mining, oil, and energy sectors in the 2009-2018 period (in million soles)

Canon	Royalties (PEN)
Mining canon	31,379
Gas canon	16,803
Gas canon	8,784
Mining royalties	7,592
TOTAL	64,558

Note. Sociedad Nacional de Minería, Petróleo y Energía (SNMPE), 2019.

The available resources coming from these funding sources have continued to grow over time. As per the same source (SNMPE, 2022), in the 13-year period between 2008 and 2021, transfers to sub-national governments for mining canon, gas canon, excess oil royalties and mining royalties amounted to PEN 89,265 million, 75% of which was allocated to local governments and the remaining 25% to regional governments.

From the point of view of the regional distribution of these canon and royalty resources, Cusco is the region with the largest transfers in the period analyzed, with a total of PEN 25,496 million, followed by Ancash with PEN 13,151 million, Arequipa with PEN 9,081 million, and Piura with PEN 5,559 million. These four regions concentrate 60% of the total transferred.

On the other hand, considering levels of government, it is the municipalities –as already mentioned—that receive the largest budget from these sources of financing, but this distribution shows a great disparity.

According to the canon legislation², the canon is distributed as follows: 20% of the total collected goes to the municipalities of the province or provinces where the natural resource is located; 60% of the total collected goes to the province and district municipalities of the region where the natural resource is located, according to population density; and 20% of the total collected goes to the regional governments in whose territory the natural resource is located. The Ministry of Economy and

² Act No. 27506 or Canon Act, passed on July 9, 2001.

Finance (MEF by its Spanish initials) is the institution in charge of said allocation.

This distribution of royalty resources is clearly inadequate, as it does not respond to the competencies and needs of the population. Within this framework, a district municipality can receive –and, in fact, several do receive– more resources than a province municipality, without having the corresponding competency, trained personnel or the scale or size that would allow them to execute medium or large investment projects. In this way, the current distribution favors the “atomization” rather than the “integration” of the corridor created by the mining activity, generating –as previously mentioned– the concentration of resources in a few municipalities that accumulate resources without using them or use them without prioritizing adequately.

Between 2008 and 2021, the revenue from the canon, *sobrecanon* and royalties from the mining, oil and energy industries constituted 23% of the total budget of subnational governments and 34% of the total budget if only local governments are considered. In 2021, one out of every PEN 4 budgeted for municipalities nationwide came from these sources.

These are average figures because the percentages are higher in the regions where the deposits are located. Within the analysis period, these resources covered 49% of the budget of sub-national governments from Cusco, 46% in Ancash, 48% in Tacna, and 47% in Moquegua.

Given that resources from the canon, *sobrecanon* and royalties can only be used for public investment expenditures, between 2008 and 2021 these revenues represented, on average, 41% of the budget allocated to investments in subnational governments, reaching a percentage of over 70% in some regions.

According to the Sociedad de Comercio Exterior del Perú (ComexPerú, 2022b), between 2009 and 2021, 76% of the budget received by subnational governments from canon, *sobrecanon* and royalties was mainly used to finance six sectors: transportation, planning, education, agriculture and livestock, health and sanitation. In particular, local governments

prioritized transport, planning, sanitation, education, and environment.

From the point of view of the priority objective of reducing poverty and inequality, are transport and planning the sectors to effectively prioritize, or should they be sanitation, healthcare, and education?

Efficiency in the management of available budgetary resources

A special report by ComexPerú (2022c) states that, between 2010 and 2021, the public budget allocated to local governments increased from PEN 22,887 million to PEN 45,009 million, which meant an increase of almost 100%, while the budget allocated to regional governments increased by 127%, from PEN 19,927 million to PEN 45,287 million.

In 2021, sub-national governments captured nearly 40% of the total public budget, and 63% from the domestic public investment. This can be mainly explained by the transfers that belong to canon, *sobrecanon* and royalties³, resulting from the significant economic growth which happened between 2010 and 2019, with an average annual interest rate of 4.5%. It is evidenced that the revenue collected resulting from the exploitation of natural resources is increasingly important for the financing of sub-national government budgets.

However, as has already been pointed out, increased budgetary resources do not correlate with an improvement in the management of these resources and their proper distribution. On one hand, new municipalities continue being created, which increases expenditure atomization. On the other hand, the systems for transferring budgetary resources from the national government to subnational governments are not based on a technical study that prioritizes closing the social infrastructure gap, or an adequate estimate of the cost of service coverage. They do not include funds for operation and maintenance, and lack any periodic estimation and updating mechanisms, as well as follow-up.

³ The revenue from canon, *sobrecanon* and royalties are considered Determined Revenues (RD by its Spanish initials) in the general budget for the public sector.

The issue of inefficiency in public spending also reaches the budgetary resources allocated to emergency works due to natural disasters. Such is the case of the Autoridad para la Reconstrucción con Cambios, created especially to rebuild the areas affected by the 2017 Coastal El Niño Phenomenon in thirteen regions of the country⁴.

There are also studies that analyze in depth the management of budgetary resources in specific regions or municipalities. For example, ComexPerú (2022a), in another study, analyzes the efficiency of public spending in the Arequipa region, one of those that receives significant resources from canon and royalties from the exploitation of mining and energy resources. According to the study, in the 2008-2019 (pre-pandemic) period, Arequipa experienced an average annual growth rate of 4.7%, whereas the monetary poverty rate decreased from 40% to 12% in the same period.

The study notes, however, that structural problems still exist, meaning that a significant part of Arequipa's population still has unsatisfied basic needs. Among the reasons for this situation, ComexPerú includes the management of public investment projects. Although these doubled in the 2011-2021 period, hardly 50% to 60% of the budgeted resources have been implemented.

The study focuses on public investment in the agriculture, education, health, sanitation, and transport sectors. It is estimated that the infrastructure gap in sanitation, transport, and electricity in Arequipa amounts to PEN 3.885 billion (around USD 1 billion).

Inefficient resource management is evidenced when the resources available to close the gap are compared to the speed at which the resources are implemented. The ComexPerú study proposes several concrete actions to improve the efficiency of public spending in

Arequipa, including the following: improving the methodology for the preparation of development plans at regional and local levels; establishing minimum criteria for subnational authorities to guide concerted development plans to close social and infrastructure gaps; and strengthening technical assistance and training.

All these problems generate a feeling of disillusionment and distrust in regional and local authorities and the government in general due to the inadequate use of their taxes and the lack of transparency in these processes, which affects democratic institutionality and creates a breeding ground for populist and radical proposals that complicate the situation even further. Some have even created the erroneous narrative that the poverty and abandonment of many locations near mining and energy projects is because the concessionary companies do not pay their taxes or do not comply with the infrastructure works required. However, it is clear that it is the State that has failed at all levels.

The case of San Marcos district, Ancash

The case of San Marcos district, located in Callejón de Conchucos, Huari province, Ancash region, is key to understand part of the problems caused by the deficient use of canon resources coming from the exploitation of mining resources.

San Marcos is located in the lower part of Proyecto Antamina, one of the world's most important copper deposits⁵. It is the district that receives the most budgetary resources in Peru, mainly from the canon and mining royalties; however, its population still lacks basic public services, and it has one of the lowest implementation rates of its respective investment budget expenditure.

⁴ The Autoridad para la Reconstrucción con Cambios (ARCC) was created to rebuild the physical infrastructure damaged by the Coastal El Niño phenomenon in 13 Peruvian regions: Ancash, Arequipa, Ayacucho, Cajamarca, Huancavelica, Ica, Junín, La Libertad, Lambayeque, Lima, Loreto, Piura and Tumbes. The above-mentioned phenomenon took place between late 2016 and January 2017 and consisted of rains and floods that resulted in 232,000 victims, more than 1,129,000 affected individuals, 26,000 collapsed houses and 258,000 affected homes.

⁵ Peru is the world's second largest copper producer behind Chile. Antamina is a polymetallic mining complex located at 4,300 masl and produces copper, zinc, bismuth, molybdenum, silver, and lead. It involves an investment of USD 3.6 billion provided by a strategic alliance comprising four world leaders in the mining sector: BHP Billiton, Glencore, Teck, and Mitsubishi Corporation.

In 2006, when I was the executive president of Peru's Banco de la Nación⁶, I had the opportunity to visit this beautiful district from the Andean zone of Ancash region, when I visited the bank branch located there. On that occasion, I met the district mayor, who welcomed me warmly. I had reviewed the unrestricted cash balances that the district held in the bank to that date, which exceeded PEN 400 million, without considering the future cash flows already secured as a result of the canon and royalties they receive on a regular basis.

Then, I asked the mayor if they had already covered the basic services of water and sanitation fully for the local population. He said they had not, but that it was the national government's duty to finance. What did they mainly spend their resources on, then? An important part of them was kept in bank deposits, while another had been invested in several projects such as roads, sidewalks, small channeling works, sports courts, and other minor works. In a nearby district, Chavín de Huántar, which also received canon resources and mining royalties, the facility they felt most proud of was the construction of a new bullring.

Of course, said works have the approval of the population, as do works carried out in other provinces and districts that receive canon, such as monuments, new municipal or community facilities, etc., but would it not be fully understandable to prioritize public works for water and sanitation, electrification, storm drainage, construction and equipping of health centers or schools?

Not only has this problem continued, but it has also worsened. In late 2021, San Marcos district already had unrestricted cash balances in excess of USD 1 billion, as an incomprehensible example of useless accumulation of funds and inadequate prioritization of investment projects. Regarding this case, recent studies state the following about the district:

⁶ The Banco de la Nación is an institution that acts as the financial agent of the Peruvian State, and has the largest network of branches and offices in Peru. It was founded in 1966. As of 2022, it had a total of 638 branches across Peru, including in districts where it is the only banking service provider. The author of this paper was executive president of the Bank between 2006 and 2007.

San Marcos es (...) el distrito más rico del Perú, ya que fue el que más dinero recibió por concepto de canon y regalías mineras en el 2021. Sin embargo, es uno de los distritos con peor ejecución a nivel nacional. El año pasado, solo gastó el 36% del total de los recursos recibidos por estos conceptos. [San Marcos is (...) the wealthiest district in Peru because it is the district that received the most money from canon and mining royalties in 2021. However, it is one of the districts with the worst resource implementation records nationwide. Last year, it only spent 36% of the total of resources received from these sources]. (Luna, 2022, par. 1)

It adds the revealing figures of the essential infrastructure deficit that continues to this day:

Las brechas sociales y económicas en San Marcos son muy grandes. Alrededor de 3,000 hogares no tiene acceso a la red de desagüe, el 99% de las pistas están sin pavimentar, se requiere construir 10 colegios para cerrar la brecha de infraestructura educativa, el 15% de niños padece desnutrición crónica y el 82% de la superficie agrícola no cuenta con sistema de riego (8,231 hectáreas). [Social and economic gaps in San Marcos are enormous. Nearly 3,000 homes do not have access to the sewage network; 99% of roads are unpaved; it is necessary to build 10 schools to close the gap in educational infrastructure; 15% of children suffer from chronic malnutrition; and 82% of the agricultural land surface do not have access to an irrigation system (8,231 acres)]. (Luna, 2022, par. 2)

No planning, no management capacity, many corruption cases

San Marcos is just one example of many in Peru, where the problem is not a lack of financial resources, but rather a lack of adequate strategic planning and an evident inability to adequately manage those resources.

In such regard, Luna's report states:

Solo en el 2021, se dejaron de invertir S/ 466 millones, con lo que se pudo haber construido 7 centros de salud o utilizar menos de la mitad de estos recursos no gastados (S/ 173 millones) en cerrar la brecha de acceso a agua, saneamiento y electricidad del distrito.

Para abril del 2022, se tenía 24 proyectos paralizados que suman una inversión de S/ 191 millones. (Luna, 2022, par. 4-5)

[In 2021 alone, USD 466 million were not invested. This could have helped build seven health centers; or else, less than half of this amount (PEN 173 million) could have been spent on closing the gap in access to water, sanitation, and electricity in the district]. By April 2022, 24 projects were stalled, which amounts to an investment of PEN 191 million.

In the current administration, between 2019 and 2021, the district received PEN 248 million for urban transportation projects, but only implemented 20%, despite the fact that almost 100% of San Marcos' roads are unpaved]. (Luna, 2022, par. 4-5)

Molina (2022), citing a report by the Contraloría General de la República for all government levels, states that, as of June 2022, there were 1,704 stalled works in local governments with an unimplemented investment of PEN 6.983 billion, and 274 paralyzed works in regional governments with an unimplemented public investment of PEN 12.854 billion. As for the national government, by the same date, there were 368 stalled works compromising an investment of PEN 9.893 billion.

The problem of corruption is also a key factor in the performance of sub-national governments. In such regard, a report by Ojo Público (Montaño, 2022) shows shocking figures. The 25 regional governors elected for the period 2018-2022 have pending investigations in the Public Prosecutor's Office; 21 of them have ongoing proceedings for alleged corruption offenses; eight regional governors were unable to complete their term of office as a result of these

proceedings; in addition, there are 196 ongoing investigations against regional authorities for alleged corruption offenses in the Anti-Corruption Prosecutor's Office (Montaño, 2022).

Undoubtedly, the high incidence of corruption cases is only a sign of the political crisis that Peru has been experiencing for some time, which is reflected in weak and aimless political parties, absence of new leadership and updated proposals that take into account the interests of citizens.

This complicated reality can be explained not only by the lack of planning and deficient management, but also by the existence of a still paternalistic "mentality", which claims that the resources from the canon, *sobrecanon* and royalties are "our resources" and "we can use them for whatever we consider most convenient", even if there are priority issues that have not been addressed. Basic issues such as water and sewage infrastructure, education or public health are responsibilities attributed to the national government.

The contradiction is that, in many cases, authorities and anti-mining leaders, who for the most part are responsible for the inadequate use of canon resources, are permanently inciting the population to block roads and access to the mines, demanding more resources, in a clearly deceptive populist practice. This leads us to the absurdity that provinces and districts that have financial resources do not meet their basic needs.

Results obtained in the main municipalities with canon

Table 3 shows interesting results. The budget implementation figures for investments in the 18 provinces or districts in six regions that receive the largest amount of canon, *sobrecanon* and royalties in Peru are compared.

In 2022 alone, according to MEF figures (2023), these eighteen districts⁷ or provinces had an improved initial budget for investments

⁷ Among the eighteen districts included in the sample of those receiving the highest royalty income is Megantoni, created on July 6, 2016, and comprising the territories where the Camisea Gas lots are located and where native Machiguenga communities live. This is the reason why there is no poverty figures for that district in 2009 in Table 3.

Table 3

Budget implementation of investments and poverty levels in districts with the largest canon: 2009-2022 (in millions of soles and percentages)

Region	District	Amended institutional budget (PIM, million USD)	Implemented	Poverty 2009	Poverty 2018
Ancash	N.Chimbote	249.8	52.20%	21.40%	13.80%
Ancash	San Marcos	995.9	37.40%	16.40%	24.80%
Ancash	Santa (P)	364.8	35.00%	24.50%	14.80%
Arequipa	Cerro Color.	197.6	48.20%	18.00%	9.10%
Arequipa	Paucarpata	115.7	89.00%	23.50%	8.30%
Arequipa	Yarabamba	304.3	21.50%	22.40%	15.70%
Cusco	Echarate	149.8	79.30%	48.10%	23.20%
Cusco	Espinar	207.2	69.00%	64.40%	30.90%
Cusco	Megantoni	356.6	50.70%	n.d.	33.60%
Cusco	Pichari	183.1	72.20%	58.70%	30.70%
Moquegua	M. Nieto	205.1	78.80%	18.80%	8.10%
Moquegua	Torata	115.2	81.90%	11.10%	6.10%
Piura	Piura (P)	142.9	56.20%	16.90%	9.80%
Piura	Pariñas	132.7	50.70%	18.00%	15.60%
Piura	Tambogrande	122.7	51.20%	43.80%	38.10%
Tacna	G.Albarracin	205.9	86.80%	14.20%	18.70%
Tacna	Ilabaya	135.5	68.80%	1,1%	6.90%
Tacna	Ite	125,9	66.40%	7,0%	7,0%

Note. (P) Province municipality n.d. non-available data

Note. Adapted from the Ministerio de Economía y Finanzas (MEF, 2023; Instituto Nacional de Estadística e Informática (INEI), 2010, NIEL 2020.

amounting to PEN 4.311 billion (equivalent to USD 1.141 billion), more than 70% of which came from resources from canon, *sobrecanon* and royalties. However, on average, these subnational governments only implemented 61% of that budget, with some of them recording very low levels of implementation, such as Yarabamba (21.5%) in Arequipa or Santa (35%) and San Marcos (37%) in Ancash.

It is evident that the budget implementation of inefficient investments leaves many projects unimplemented and budgetary resources unused, while the population in these locations continues to face serious limitations in the provision of basic public services. Two additional issues that should be investigated –and will not be analyzed in this paper—are the quality and priority of the projects executed (taking into account the existing social gaps) and whether what appears in the MEF statistics as implemented (accrued) budget is the actual progress in physical works or only financial implementation (transfer).

Table 3 also shows that, in the vast majority of the subnational governments included in the sample, according to official INEI figures, monetary poverty decreased substantially between 2009 and 2018, contradicting the typical narrative on the subject that claims that areas with natural resource exploitation that are entitled to canon, *sobrecanon* and royalties have not reduced their poverty levels. The same analysis should be made to evaluate poverty in terms of unsatisfied basic needs, in accordance with the United Nations methodology.

However, what is striking and merits further analysis, is what happened to poverty in the district of San Marcos in Ancash and in the sampled subnational governments of Tacna: in all of them, monetary poverty increased rather than decreased between 2009 and 2018. All of this is prior to the adverse effects that the COVID-19 pandemic had on poverty.

CONCLUSIONS

Conclusions and solution proposals to this complex problem

Based on all the aspects analyzed, the first point to be made is that the regionalization process based on departments did not work, and it is necessary to rethink the strategy involving macro-regions and transversal commonwealths that adequately manage watersheds, with intermediate cities to provide basic services to the poorest population that currently lives in isolated places and with a substantive change of mentality in the management of the territory in Peru. This is no easy task. It will require much dialog, convincing, and minimum consensus. Accomplishing it will take several government terms and even constitutional changes, but the task must start now.

Widespread corruption and the lack of transparency and inefficiency in management must be corrected by rethinking the process of allocating resources to subnational governments, establishing specific policies to prevent corruption, and setting up technical offices to help regions and municipalities manage projects.

It is also necessary to strengthen the human capital of municipalities and regions, avoiding excessive turnover of officials with each new administration, to improve the criteria for resource allocation from the Municipal Compensation Fund (FONCOMUN)⁸ and the Regional Compensation Fund (FONCOR)⁹ to try to reduce existing disparities and improve the coordination and joint execution of common interest projects.

Definitely, a substantial part of the improvement in the management of public expenditure in sub-national governments involves reviewing the way in which projects are

allocated and prioritized with canon resources, *sobrecanon*, and royalties.

It is necessary to manage with strategic planning at regional and local levels. There are national plans and also sectorial and institutional operational plans, which should constitute frameworks for the public investment projects from sub-national governments. The Centro Nacional de Planeamiento Estratégico (CEPLAN, 2022)¹⁰ has prepared the Plan Estratégico de Desarrollo Nacional al 2050¹¹, later officially approved.

The question that immediately arises is: Does the allocation of budgetary resources, the use of resources from canon, *sobrecanon* and royalties, and the prioritization of public investment projects in sub-national governments contribute to achieving the 2050 vision of “inclusive, equal opportunity, competitive and sustainable development throughout the national territory”? According to the issues analyzed in this paper, the answer is that no progress is being made toward that goal.

Another important issue is related to technical studies of poor quality being conducted. As is already known, the range of public investment projects necessarily goes through the pre-investment study preparation stage (from the profile to the feasibility) and the relevant Technical Dossier. The cause-effect relationship is very simple: if the studies are poor, the projects will be poor as a result.

In this regard, it is necessary to reinforce the capacity of sub-national government officers to formulate, execute and supervise public investment projects. It is important to note the fact that, on many occasions, the companies in charge of preparing these technical studies do not have the necessary profile and experience to carry out such work.

Interesting proposals in this regard suggest the following: that the MEF should provide support to improve the quality of the investment projects; facilitating the support of

8 FONCOMUN was created by Decreto Legislativo No. 776, Municipal Taxation Act from November 15, 2004, and is endorsed by the Constitution (Constitución Política del Perú, Section 196, Numeral 5). Its aim is to promote investment in Peruvian municipalities, prioritizing those located in the most remote and disadvantaged areas. FONCOMUN includes the Municipal Promotion Tax (93.95% of the total), the Road Tax (6.12% of the total) and the Tax on Recreational Vessels (0.13% of the total).

9 FONCOR obtains resources from concession processes, as well as from resources allocated in the budget. It was created by Act No. 27783 from July 17, 2002, and is proportionally distributed among regional governments under equality and compensation criteria. They are used exclusively in regional investment projects.

10 CEPLAN was created through Decree No. 1088, approved on July 28, 2008. This agency oversees the National Strategic Planning System and is responsible for the preparation of national strategic plans.

11 The Plan Estratégico de Desarrollo Nacional al 2050 was approved through Supreme Decree No. 095-2022-PCM on July 28, 2022.

renowned engineering consulting firms in this task; entering into cooperation agreements with specialized university schools and establishing project management offices (PMOs), especially in cases involving medium or large projects with a macro-regional impact. In all cases, efforts should focus primarily on closing the socioeconomic gaps in the respective localities. To this end, it is necessary to sensitize the beneficiaries to support the process, and to prioritize appropriately.

In search of collaborative work, mining companies could finance the hiring of technical teams for projects in their zones of influence. The concession companies themselves can effectively contribute to the creation of these technical support teams.

On the other hand, it is necessary to review the current legislation for the use of resources from the canon, *sobre canon* and royalties, so that these can also be used for scientific research as well as operation and maintenance expenses, since one of the problems observed in public investment projects in different parts of the country is that there is no post-investment follow-up and, as a result, there are health centers and hospitals that are finished but not equipped, equipment that is no longer used due to lack of maintenance, among other problems.

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Conflicts of interest

The author has no conflicts of interest to declare.

Author contributions

Enrique Javier Cornejo Ramirez (lead author): Conceptualization, data curation, formal analysis, funding acquisition, research, methodology, project management, resources, software, supervision, validation, data visualization, writing (original draft, review, and editing).