

Public Investment and Its Impact on Poverty Systematic Literature Review

Luis Rubén Castillo Talledo¹, Anthony Carmen Huamán², Lorena Beatriz Tume Sánchez³,
Marcos Alejandro Yáñez Rodríguez⁴

Abstract

This article presents a systematic review that examines the relationship between public investment and its incidence on poverty at the international and national level, (Peru), specifically in the El Carmen de la Frontera district, Huancabamba. The PRISMA method was used and an exhaustive analysis of various academic sources such as Scopus, SciELO, Redalyc, Dialnet, Erib Plus, Latindex and the César Vallejo University was carried out, in which it was identified that public investment, especially in sectors such as health, education and infrastructure, has a positive impact on poverty reduction and economic development. However, despite increases in public spending, the results show that poverty rates have not decreased uniformly, highlighting the need to improve the efficiency and effectiveness of investments. The review also highlights socioeconomic factors that moderate this relationship and shows regional disparities in the impact of public investment. It is concluded that adequate management and strategic planning are essential to maximize the benefits of public investment and contribute to sustainable human development.

Keywords: *Public Investment, Poverty, Education, Impact of Public Investment.*

Introduction

Public investment is an essential mechanism to improve the economic and social development of a country, especially in contexts where poverty and inequality are persistent problems. In this sense, public investment refers to the spending made by governments on infrastructure, public services and social programs, with the aim of improving the quality of life of the population and promoting economic growth (Salazar et al., 2024). In the Latin American context, public investment has been proposed as a key strategy to address the high poverty rates that affect millions of people.

Through the allocation of economic resources in infrastructure, education, health and social services, the governments of each country seek to improve the living conditions of their citizens, especially those who are in a vulnerable situation (Podesta, 2020). This approach is essential to confront poverty, which affects millions of people in various regions of the world.

Internationally, despite the potential benefits, there are still significant challenges that limit the positive impact of public investment on poverty reduction. For example, corruption and mismanagement of government entities are critical factors that can divert resources from essential projects. A study conducted in Ecuador reveals that, although 84.6% of respondents benefit from public projects, many still face problems such as unemployment and limited access to basic services (Palacios et al., 2019).

In Peru, poverty has been a persistent challenge, despite the economic progress achieved in recent decades. According to recent studies, a considerable part of the population continues to live in poverty, which reflects the need to implement effective public policies. In this sense, public investment is presented as a fundamental tool to address this problem, because it has the potential to improve people's living conditions through the development of infrastructure and access to basic services such as health and education (Valencia et al., 2024).

Therefore, based on what has been described, the central problem addressed in this article is the impact of

¹ MPA; César Vallejo University, Peru, Email: P7001223007@ucvvirtual.edu.pe <https://orcid.org/0000-0002-9580-2721>, (Corresponding Author).

² MSc; César Vallejo University, Peru, Email: acarmenh@ucvvirtual.edu.pe, <https://orcid.org/0000-0002-4446-3774>.

³ MPA; César Vallejo University, Peru, Email: ltumesa@ucvvirtual.edu.pe, <https://orcid.org/0000-0003-2724-1712>.

⁴ MsC.; National University of Ecuador, Ecuador, Email: marcos.yanez@unae.edu.ec, <https://orcid.org/0000-0003-3683-8481>

public investment on poverty. Despite increases in public investment in sectors such as health, education and housing, poverty rates have not decreased uniformly. For this reason, the following research question is posed: What is the impact of public investment on poverty reduction in Peru during the last five years?

Likewise, the general objective is to analyze the relationship between public investment and its impact on poverty during the last five years using various academic sources and recent studies. In this same sense, the following specific objectives are defined: analyze how the different areas of public investment (health, education, infrastructure) have contributed to the reduction of poverty levels, identify the socioeconomic factors that moderate the incidence of public investment on poverty and compare the results obtained in different regions to understand disparities in the incidence of public investment in the distrito El Carmen de la frontera, Huancabamba.

To begin with, public investment is defined as the expenditure made by governments to create, maintain or improve infrastructure and services that benefit the population (Linarez & Villalobos, 2023). This public investment is necessary for the economic development of a nation, because it allows the construction of infrastructure, the provision of basic services and the promotion of employment.

In this sense, according to Alvarado et al. (2020) social public investment not only improves access to basic services such as education and health, but also promotes decent employment, which creates economic opportunities that help break the cycle of poverty. Therefore, this investment translates into a significant increase in the quality of life of the most vulnerable communities, because it provides them with the necessary tools to access formal and stable work.

On the other hand, poverty can be understood as a multifaceted phenomenon that originates from a combination of economic, social and political factors, among others (Casas, 2020). This vision highlights that poverty is not caused simply by a lack of income, but is also influenced by inequality in access to opportunities and basic services such as education and health.

In this sense, it is important to establish a relationship between public investment and poverty. The investments made in the development of infrastructure such as housing and basic services such as health and education have a direct impact on reducing poverty levels (Cuenca & Torres, 2020). So, by facilitating access to essential services for daily life, people are helped to actively participate in the development of the economy, which contributes to reducing the intergenerational cycle of poverty. For this reason, an adequate distribution of resources in these sectors is essential to achieve a significant impact in the fight against poverty.

Public investment has a significant impact on economic growth and human development, since it contributes to the improvement of the living conditions of the population. By allocating resources to strengthening the commercial sector, and building infrastructure such as schools, health care units, among others, governments can create an environment conducive to sustainable economic development. Recent studies have shown that investments in infrastructure not only generate direct jobs during their construction, but also facilitate access to markets and services, which in turn stimulates economic activity in various regions (Hurtado & Pinchi, 2023).

Considering the reviewed literature, it can be mentioned that public investment is a fundamental instrument to reduce poverty and promote economic development in countries like Peru. Therefore, there is a positive relationship between public investment and the reduction in poverty rates. Hence, it is evident that investment in sectors such as education, health and infrastructure has shown promising results in terms of reducing poverty and improving the living conditions of the population.

Methodology and Materials

The methodology used for this systematic review is based on the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) method, which provides a structured framework for the identification, selection and analysis of relevant studies around the topic of study. The review will be carried

out in the following databases: Scopus, SciELO, Redalyc, Dialnet, Erih Plus, Latindex and the César Vallejo University. The objective of applying this method is to analyze the relationship between public investment and its impact on poverty during the last five years.

Now, some inclusion and exclusion criteria have been established for the selection of scientific articles. Among the inclusion criteria applied are the following:

- Year of publication: only articles published between 2019 and 2024 will be taken into consideration.
- Type of study: empirical studies, systematic reviews, research articles and documents that analyze the relationship between public investment and poverty.
- Language: Publications made in Spanish and English will be analyzed.
- Thematic relevance: Research that specifically analyzes public investment in different areas of human development and its impact on poverty.

On the other hand, the following criteria will be used to eliminate studies that are not relevant:

- Year of publication: articles published before 2019.
- Type of study: opinions, editorials, non-academic reviews or articles that do not present empirical and reliable data.
- Lack of full access: studies that are not available in full text or that cannot be reviewed through the selected databases will be excluded.
- Irrelevant topics for the study: Studies that do not specifically address public investment and its impact on poverty.

On the other hand, to search for information, keywords related to the topic and objectives of the study were used. The search formula used includes some words such as “public investment”, “poverty”. Similarly, Boolean operators (AND, OR) were applied to combine some terms and achieve better search results. For example, the following terms were combined: “public investment” AND “poverty” and “investment in education” AND “impact on poverty.”

Likewise, a PRISMA diagram was created to illustrate the flow of the selection process, showing the total number of records identified, duplicates removed, documents evaluated, excluded, and finally the documents included in the systematic review. The application of this methodology guaranteed that the review was rigorous and structured, allowing an exhaustive and systematic analysis of the incidence of public investment and poverty during the last five years.

Now, for the information selection process, the steps of the PRISMA method were also followed, which are as follows:

- Identification: in this phase all articles found through searches in the selected databases were registered.
- Removal of duplicates: In this step, duplicate articles were removed to ensure that each study is considered only once.
- First selection: the titles and abstracts of the articles were reviewed to identify studies that

meet the inclusion criteria.

- Eligibility assessment: The full texts of the shortlisted studies were examined to determine their final eligibility.
- Registration: those studies that met all the established criteria were included, for which a PRISMA flow chart was used.

For the systematic review, a data extraction matrix was carried out that allowed organizing and synthesizing the relevant information from the selected articles. This matrix facilitated comparative analysis and identification of the most relevant findings on the topic of study. This process is detailed in table 1, which included the following elements:

Author(s)

Year of publication

Objective of the study

Type of study

Key results related to public investment and its impact on poverty.

Main conclusions

The use of this matrix made it possible to clearly identify the common trends and findings among the different studies reviewed, facilitating a more in-depth analysis of how public investments affect poverty, as well as the factors that can moderate this relationship in different regional contexts. international and national level. The analysis of the most relevant findings was carried out through a systematic approach that involved the review and synthesis of the selected articles based on the previously established data extraction matrix. Each selected study was evaluated in relation to its objectives, methodology and key results, allowing the relationship between public investment and poverty to be identified.

Through a comparative analysis, similarities and differences in the impacts observed in various regions were highlighted, which facilitated the understanding of disparities in the incidence of public investment. This process not only allowed for the consolidation of existing evidence on the topic, but also provided a solid basis for formulating practical recommendations aimed at improving the effectiveness of public investment in the fight against poverty.

Results and Discussion

Table 1. Data Extraction

Author(s)	Year	Objective of the Study	Methodology	Main Results	Conclusions
Alvarado et al.	2020	Evaluate how social investment in Ecuador, between 2000 and 2018, has influenced poverty reduction.	An Ordinary Least Squares (OLS) model was used to evaluate the influence	The results suggest that social investment, especially in sectors such as education and health, has been a determining factor in	It is concluded that social investment plays a crucial role in reducing poverty in Ecuador. 0.89% of the

			of social investment, as an explanatory variable, on poverty, considered as a variable to be explained.	poverty reduction, especially in rural areas. In addition, other economic factors were controlled to isolate the specific impact of the social investment.	variability in poverty at the national level is explained by the variability of social investment, with a greater impact in the areas of education and health.
Valencia et al.	2024	Analyze Latin American academic research that relates public investment to poverty reduction, in different databases.	Descriptive systematic review of 20 international scientific articles.	The results reveal that most of the research has focused on analyzing the links between public investment and variables such as economic growth, poverty reduction and development.	It is concluded that it is essential that public entities develop strategic plans in order to identify and address the needs of the population, thus promoting local economic development.
Casas	2020	Analyze the connection between inequality and poverty through empirical evidence and existing theories.	A simulation model was built that incorporated the Gini coefficient and poverty lines as key indicators.	As a main result, it is evident that inequality is a determining factor of poverty, and that by implementing income redistribution mechanisms, such as limiting the tolerance threshold for inequality, poverty levels are reduced.	It is concluded that it is necessary to promote more just and equitable societies, given that economic inequality is the root of the persistence of poverty.
Salazar et al.	2024	Conduct an exhaustive study of all research that relates public	A systematic	The main results	It is concluded

		spending to poverty reduction, using text mining techniques.	review of 24 articles published between 2015 and 2021 was carried out, obtained from various academic databases. The most common statistical methods used in these studies included linear, logistic and least squares regression models, with the aim of quantifying the relationship between public spending and poverty.	demonstrate that measuring poverty is essential to carry out an accurate diagnosis of social deprivation and design interventions aimed at the most vulnerable groups. Also, the importance of analyzing the relationship between public spending and poverty reduction is highlighted to make informed decisions about the allocation of resources.	that the studies consulted suggest that increasing public spending is a necessary but not sufficient condition to significantly reduce poverty. Complementary interventions are required that focus on improving the opportunities and capabilities of individuals and communities.
Palacios et al.	2019	Determine the positive impact of government actions on the quality of life of the residents of the city of Portoviejo.	Descriptive research, analytical research and survey development.	The results of the field research reveal a high prevalence of labor informality and underemployment in the studied population. While public investment projects have generated some benefits in terms of access	This study concludes that the majority of people who participated in the survey told us that thanks to government projects they have been able to improve their economic situation,

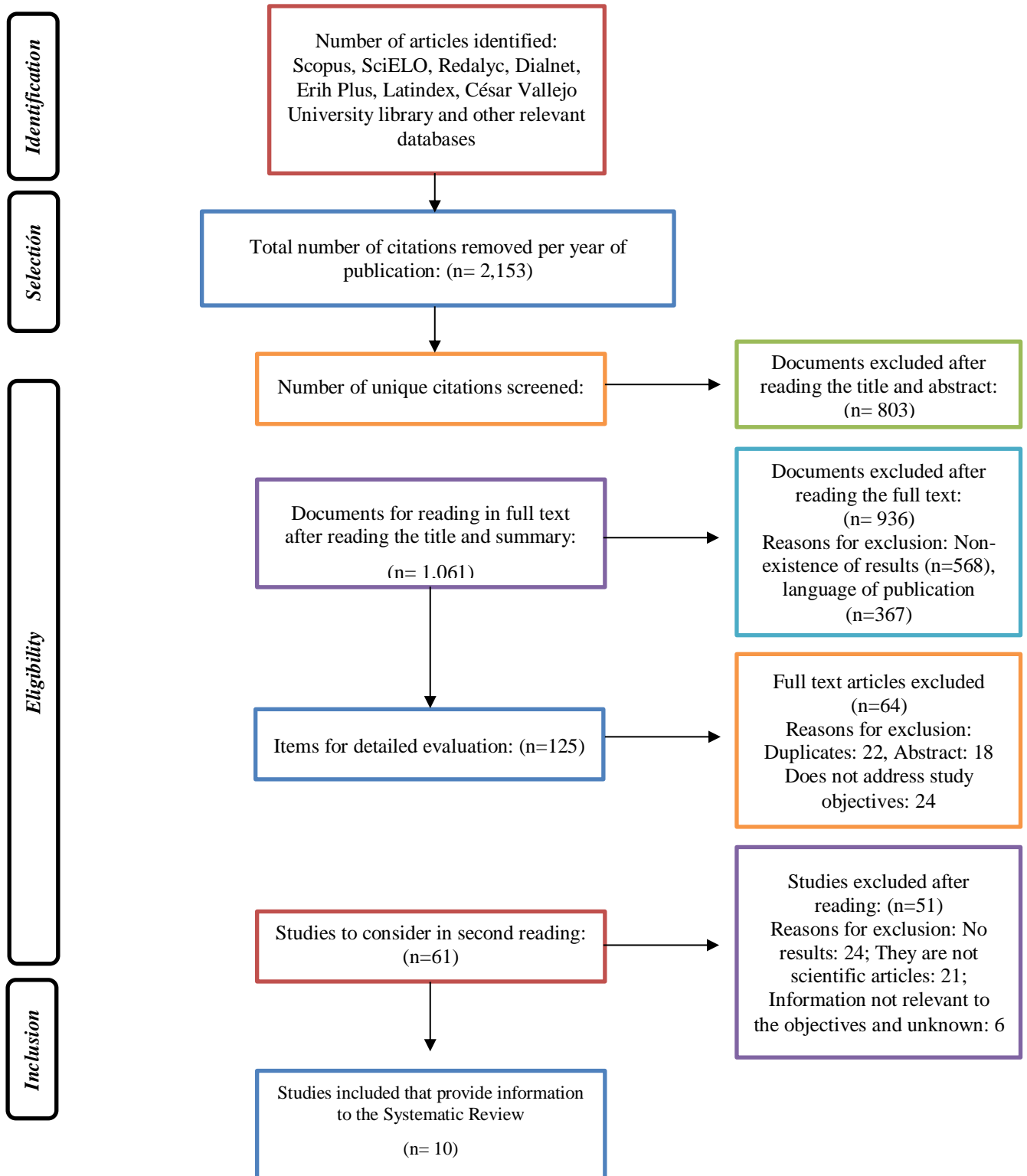
				to housing and social services, improvements in the provision of basic services have been limited.	especially since many of them do not have jobs.
Cano et al.	2023	Determine the degree to which public investment and other productive sectors have driven the economic development of San Román in the last fifteen years.	Statistical analyzes such as ANOVA, Regression and multifactor correlation .	The results of the study quantified the contribution of each factor to economic growth, finding that trade explains 63.99% of the variation in GDP, followed by agriculture with 28.82% and manufacturing with 4.11%. Public investment, although significant, only represents 0.35%.	This study concludes that commerce and agriculture are those that have the greatest impact on the economic development of San Román. Public investment, although present, has a marginal contribution to economic growth.
Bravo	2020	Evaluate the contribution of public investment to the economic development of Ecuador.	A mixed methodological design was used, combining qualitative techniques of documentary analysis to explore the theoretical and conceptual dimensions of the relationship between public investment and poverty.	The main results show that education and housing are the areas that receive the most public investment, which demonstrates a commitment to improving the quality of life of the population, allocating 4.70% of GDP to these sectors.	This study concludes that despite the efforts made, public investment has not managed to generate enough employment or improve cities in a significant way, being a key challenge for public policies focused on combating poverty.

Chancusig	2022	Analyze the relationship between the investment made by the State and the economic growth experienced by each Ecuadorian province.	Exploratory spatial data analysis, applying a spatial lag model (SAR).	The results indicate that public investments focused on strategic sectors have generated positive externalities in adjacent provinces, contributing to regional economic growth.	This study concludes that public investment in Ecuador, although quantitatively relevant in infrastructure, must evolve towards a model that prioritizes efficiency in the allocation of resources, ensuring that investments in infrastructure are complemented by investments in quality of services.
Quispe et al.	2021	Identify the effects of public investment in reducing monetary poverty at the family level in Puno.	Descriptive and correlational methodology, applying the Log-linear and Log-Log model.	The results reveal that public investment in Puno had an average annual growth rate of 23.58% during the period studied, contributing to a sustained reduction in poverty, with an average annual decrease of 5.16%.	The study concludes that there is a causal relationship between the increase in public investment in sectors such as sanitation, housing, education and health, and the decrease in monetary poverty in Puno families.
Rodríguez & Béjar	2022	Conduct a systematic review of the scientific literature on the efficiency of public investment, with a focus on articles	Topographical review, using “public investment efficiency”, “public investment management	The results of the systematic review identified 12 articles, developed by 25 researchers, predominantly individual. The studies, based mainly on secondary data, showed methodological diversity, with	This study concludes that the field of public investment efficiency presents great potential for future research, especially with regard to the application of new methodologies and the exploration of specific contexts.

		published in indexed journals between 2016 and 2022.	ent” as variables.	correlational, descriptive and explanatory designs. Also, strong empirical evidence has been found that supports the hypothesis that more efficient public investment contributes to accelerating economic development and reducing poverty rates in Peru.	
--	--	--	--------------------	--	--

Source: Own elaboratio

Figure 1 Search Diagram



Source: Own elaboration

The systematic review carried out confirms the relationship between public investment and its impact on poverty and economic development in various contexts, specifically, in Peru. In this sense, various studies, such as those by Alvarado et al. (2020) and Quispe et al. (2021), highlight the positive impact of public investment in poverty reduction, mainly when it is directed to sectors such as education, health and social protection.

Similarly, the research carried out by Chancusig (2022) and Cano et al. (2023) highlight the essential role of public investment in stimulating economic growth, in various areas such as infrastructure and productive activities. Furthermore, Chancusig's (2022) research suggests that public investment can generate positive effects, benefiting neighboring regions.

In this same sense, the studies by Bravo (2020) and Rodríguez & Béjar (2022) emphasize the importance, not only of increasing public spending, but also of guaranteeing its efficiency and effectiveness. On the other hand, the research by Palacios et al. (2019) highlights the need to direct public investment in specific areas of need, such as housing and basic services with the aim of maximizing its impact on poverty reduction.

Now, the studies by Alvarado et al. (2020) and Quispe et al. (2021) also emphasize the importance of investing in sectors such as education, health and social protection to reduce poverty and improve human capital. Although investment in infrastructure can be a powerful driver of economic growth, as Chancusig (2022) suggests, it is of utmost importance to ensure that it is well planned and targeted to specific needs.

The empirical evidence analyzed suggests that well-directed and efficient public investment can be a powerful instrument to reduce poverty and improve the living conditions of the most vulnerable populations (Salazar et al., 2024). This agrees with the findings found by Palacios et al. (2019) who highlights that investment in education and health contributes to improving the development of the population, which in turn increases its productivity and employability. Likewise, it can act as an automatic stabilizer, reducing the effects of economic crises and protecting the most vulnerable sectors.

As seen, the systematic review carried out has confirmed the importance of public investment as a tool to reduce poverty and promote economic development. However, to enhance its impact, it is necessary to improve the efficiency and effectiveness of public investment, through strategic planning, transparent management and rigorous evaluation of results (Valencia et al., 2024).

Therefore, it is essential to recognize that public investment does not operate in a vacuum; That is to say, its success depends on a solid institutional environment and the active participation of the community. Collaboration between government entities, the private sector and civil society is essential to design and implement projects that effectively respond to local needs.

Conclusions

The systematic review carried out has shown the important relationship between public investment and poverty, which highlights the role of public investment as a fundamental driver for economic and social development, especially in contexts such as Peru. The studies analyzed, such as those by Alvarado et al. (2020) and Quispe et al. (2021), demonstrate that investments in key sectors, such as health, education and infrastructure, have a significant positive impact on reducing poverty levels.

However, it has been observed that, despite the increase in the distribution of resources to these sectors, the results are not always uniform and there are regional disparities that require attention. Furthermore, it is evident that, to maximize the impact of public investment in poverty reduction, it is essential not only to increase investment, but also to guarantee its efficiency and effectiveness (Bravo, 2020). The research analyzed suggests that well-targeted investment can act as an automatic stabilizer during the economic crisis, protecting the most vulnerable sectors and improving their ability to actively participate in the economy.

On the other hand, it is essential to address the existing barriers that limit the potential of public investment.

Factors such as corruption, mismanagement and lack of community participation can divert vital resources and hinder sustainable development. Therefore, it is recommended to encourage a participatory approach in the design and implementation of public investment projects, ensuring that the voices of beneficiary communities are considered in the process (Palacios et al., 2019).

Now, as stated at the beginning of this systematic review, the importance of public investment in the fight against poverty is reaffirmed. From the systematic review carried out, it is established that, as at the international level, public investment has a significant impact on the El Carmen de la Frontera district, Huancabamba. Therefore, it is concluded that it is important that there is a renewed commitment on the part of the governments and actors involved to optimize the use of public resources and guarantee that these effectively contribute to improving the living conditions of the most disadvantaged populations.

References

- Alvarado, R., Requelme, F., Córdova, Z., & Medina, M. (2020). Social investment and its impact on poverty in Ecuador. *Revista Económica*, 7(1), 62–70. <https://revistas.unl.edu.ec/index.php/economica/article/view/804>
- Bravo, I. (2019). Public investment and poverty: the Ecuadorian case until 2020. *Revista Universidad De Guayaquil*, 129(2), 38–55. <https://doi.org/10.53591/rug.v129i2.1376>
- Cano, M., Huailapuma, L., Calcina, S., Mullisaca, P., & Aguilar, H. (2023). Incidence of Public Investment and its contribution to the economic development of the San Román province, Puno, 2007–2021. *Revista de Investigaciones Altoandinas*, 25(3), 171–178. <https://doi.org/10.18271/ria.2023.531>
- Casas, J. (2020). Unveiling the link between inequality and poverty. *Apuntes Del Cenes*, 39(69), 39–68. <https://doi.org/10.19053/01203053.v39.n69.2020.9197>
- Chancusig, G. (2022). Effects of public investment on the economic growth of Ecuador. *Cuestiones Económicas*, 32(1). <https://doi.org/10.47550/RCE/32.1.2>
- Cuenca, A., & Torres, D. (2020). Impact of investment in infrastructure on poverty in Latin America in the period 1996–2016. *Población y desarrollo*, 26(50), 5–18. <https://doi.org/10.18004/pdfce/2076-054x/2020.026.50.005-018>
- Hurtado, A., & Pinchi, R. (2023). Economic growth, poverty and human development in Peru. *Revista Científica Pakamuros*, 7(1). <https://doi.org/10.37787/z3fjzf50>
- Linarez, J., & Villalobos, O. (2023). Public investment for the growth of local governments: systematic review. *Ciencia Latina Revista Científica Multidisciplinar*, 7(3), 1249–1262. https://doi.org/10.37811/cl_rcm.v7i3.6268
- Palacios, N., Zambrano, J., & Ubillus, M. (2019). Public investment and poverty reduction in the city of Portoviejo. *ECA sinergia*, 10(2), 7–16. https://doi.org/10.33936/eca_sinergia.v10i2.1423
- Podestá, A. (2020). Public spending to boost economic and inclusive development and achieve the Sustainable Development Goals. *Serie Macroeconomía del Desarrollo*, N° 214 (LC/TS.2020/123), Santiago, Comisión Económica para América Latina y el Caribe (CEPAL).
- Quispe, J., Quispe, F., Guevara, M., Arce, R., Yapuchura, C., & Catachura, A. (2021). Public investment and monetary poverty in families in the Puno Region - Peru (2004 – 2019). *Journal of the Academy*, 4, 124–140. <https://doi.org/10.47058/joa4.7>
- Rodríguez, M., & Béjar, O. (2022). Efficiency of Peruvian Public Investment. Systematic review of articles published in indexed journals (2016–2022). *Ciencia Latina Revista Científica Multidisciplinar*, 6(4), 5015–5040. https://doi.org/10.37811/cl_rcm.v6i4.2992
- Salazar, J., Villegas, J., Rodríguez, L., & Torres, L. (2024). Public Expenditure and Poverty: A Systematic Mapping Study. *Ciencia Latina Revista Científica Multidisciplinar*, 8(1), 8483–8499. https://doi.org/10.37811/cl_rcm.v8i1.10177
- Valencia, P., Valencia, P., & Farfán, J. (2024). Public investment for national development: A systematic review. *Impulso. Revista De Administración*, 4(8), 246–263. <https://doi.org/10.59659/impulso.v4i8.60>