

# Management of Social Public Policies for Technology Transfer and Rural Development (PROCOMPITE), Apurímac, Perú

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## Abstract

Social inequality expressed in poverty in Latin American countries, especially in Peru, is due to different factors such as the policies built by national and subnational governments, as well as the difficult geography that hinders any development attempt of those who make up the high Andean peasant communities. In Apurímac, the government implements public social policies of technological transfer of the PROCOMPITE program through competitive funds through investment projects and business plans, assigned through competitive funds, in areas where there is no private economic intervention that stimulates the economy. The objective of this research is to describe the different planning and application strategies in the beneficiary communities of PROCOMPITE competitive funds and to measure their influence on sustainable rural development. The methodology was descriptive correlational, not cross-sectional experimental. The results on the direction of the PROCOMPITE program were found to be moderate with 73.0% acceptance, where managers strategically through persuasion, motivation, achieve the fulfillment of their agricultural tasks seeking the best personal performance through collaborative work between beneficiaries to achieve individual and community objectives and thus be able to obtain a good participation in the productivity of native potatoes, which affected the families of the beneficiaries of the program.

**Keywords:** Social public policy management, rural development, quality of life.

## 1. INTRODUCTION

Social inequality in the countries of South America, especially in high Andean populations, is very marked by different factors such as the lack of sources of work, low prices for their productivity and an absent government, etc. The United Nations for development (ODS, 2015). Its first Sustainable Development Goal “seeks to end poverty in all its forms in the world. With the objective that the poorest and most vulnerable have equal rights to economic resources, access to basic services, ownership and control of land, natural resources or new technologies”, consequently, they are the organized communities called Agents Economic Organized creditors or beneficiaries according to (Law 29337, 2021), in order to improve competition in the productivity of productive chains through adaptations and development of technologies, where private intervention does not contribute or participate in the rural development of these communities, the Populations organize and participate, manage social public policies with the

aim of obtaining sources of work that generate income that contribute to improving their quality of life.

The regional governments are in charge of its implementation through a competition of investment projects and business plans where the community members of Huancarama manage to become beneficiaries of the program through the business plan for the production of native parakeets with 126 beneficiaries, the improvements in production yield of native potato is temporary while they have technical supervision, the Organized Economic Agents (AEO) make great efforts to achieve the production estimates described in the competitive documents, which have repercussions on the quality of social life and integration with the environment.

The different governments implement strategies to fight against social inequality turned into poverty and extreme poverty. "The Communal Development Plan (Orellana, Mena Valdéz, & Montes Marín, 2016), PLADECO) municipal management instrument for the development of the local community and promote its social, economic and cultural progress". according to (Ruz, Maldonado, Orellana and Vicuña, 2014; Valenzuela, 2018 p 4).

The "Peruvian government through support for productive competitiveness (PROCOMPITE) and technology transfer promotes support for Organized Economic Agents (AEO) through the implementation of technology and innovation created, by (Law 29337, 2021) determines a planned production in its different stages", as well as its implementation. According to (Mazzucato, October 2018), "Technological advances with the capacity to positively impact human and environmental development must be oriented and placed at the service of the community and not only destined for profit and business growth, highlight the postulates of the economy " meanwhile (Lamas, L. 2020) highlights that the development of productivity, increasing the volumes of production of goods, generating better income, boosting the economies of producers, improves the basic living conditions of producers

"The producers organized with the purpose of participating directly in the commercialization, would contribute to the increase in productivity, which would be guided by local governments through local policies to strengthen capacities for the sake of local development", conceptualized by (CubidesZuñiga, Lugo Montilla, & CubidesZuñiga, 2020)

The objective of this research is to describe the different planning and application strategies in the beneficiary communities of PROCOMPITE competitive funds and to measure their influence on sustainable rural development.

## **2. METHODOLOGY**

Research approach is governed by the qualitative and quantitative approach (Hernandez, Fernandez, & Baptista, 2018) "Use data collection without numerical measurement to discover or refine research questions in the interpretation process" p.15.

The natural development of the events and facts of agricultural production is evaluated, that is, there is no manipulation or stimulation with respect to reality (Corbetta, 2003) cited by Hernández, Fernández & Baptista (2006). who explains "in general terms, the two approaches (qualitative and quantitative) using careful, systematic and empirical processes in their effort to generate knowledge which is in the process of adapting new productive technologies in rural areas in the productivity of native potato.

### Kind of investigation

It is descriptive, it allows to establish and describe the level of prevalence of the behavior of the beneficiaries of the PROCOMPITE program in the implementation of new productive technologies that contribute to rural development by promoting elementary conditions of quality of life; basic because the information is collected as it is without any type of intervention on the part of the researcher; It is correlational because it will allow establishing the level of dependency between the management of public social policy in rural development (Hernandez, Fernandez, & Baptista, 2018) by the management of beneficiaries of the program in search of improving their living conditions.

### Research design

It is of a non-experimental cross-sectional type, since the independent variable was not intentionally varied, observing the phenomenon as it occurs in its natural context and abstracting the statistical data at a given moment in time, for its organization, processing and analysis. The level of research according to (Hernández, Fernández, & Baptista, 2018) is correlational "examines the relationship or association between two or more variables, in the same research unit or study subjects".

### Population and sample

The population: "It is a set of cases, defined, limited and accessible, which will form the reference for the selection of the sample" according to (Arias Gómez & Villasís-Keever, 2016) while the population under study is made up of 240 beneficiaries who have unsatisfied basic needs, made up of poor families in the scope of intervention of the PROCOMPITE Program.

The Sample: It is the part of the population, it is determined by simple random sampling for proportions, which determines the optimal sample size, thus being able to explain the behavior of the facts and events in the beneficiaries constituted by the families of the beneficiaries. Selecting randomly from the population under study, according to William G. Cochran (1971) in such a ratio there are 126 beneficiaries.

### Data collection techniques and instruments

The Survey: It is the information gathering technique used for the collection of statistical data, applied to organized economic agents directly, obtaining primary and reliable information on the management of public social policies and rural development of high Andean communities. of Apurimac. Based on the Likert Scale.

**Table 1**

Likert scale for variables under study

Technique	Instrument	Valuation
Poll	Variables "The Management of Social Public Policies (PROCOMPITE) of technology transfer. Sustainable Rural Development" Instrument that contains 26 items distributed in its dimensions.	Always = 5 Almost always = 4 Sometimes = 3 Hardly ever = 2 Never = 1

## Statistical treatment

Descriptive, data processing using frequency tables to tabulate, graph and analyze the results and Inferential using the Chi-Square methodology using the Pearson coefficient to measure the relationship between the management of social public policies insofar as they can explain relevant behaviors and its influence on rural development (Hernández, Fernández, & Baptista, 2018).

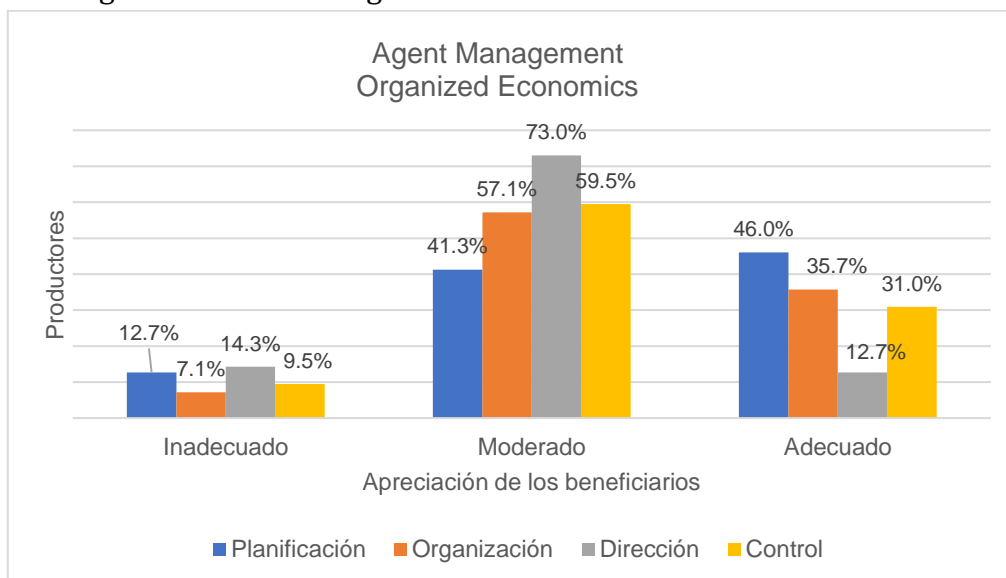
## Process

The processing of data collected through the survey is with the SPSS 26.0 program, and the analysis and interpretation of the results obtained by student researchers of the Doctorate in Public Management and Governance of the postgraduate school of the Cesar Vallejo University Peru obtaining the Data was on date (July 31, 2021).

## 3. RESULTS

**Figure 1.**

Management of organized economic agents



Source: Organized Economic Agents (Survey)

Figure one shows the appreciation of AEOs. About the work carried out as community representatives in reference to the management of the PROCOMPITE program, finding that the planning carried out is adequate with 46.0%. According to the fulfillment of their functions and responsibilities of the representatives of the AEO. in the formulation and implementation of the investment project and/or business plan, as well as the fulfillment of the programming, distribution of machinery, equipment, allocation of goods and material resources for the fulfillment of the agricultural campaign in its different productive stages such as the land preparation, planting, cultivation and harvesting of the production of native potatoes that, for a better production in quantity and quality,

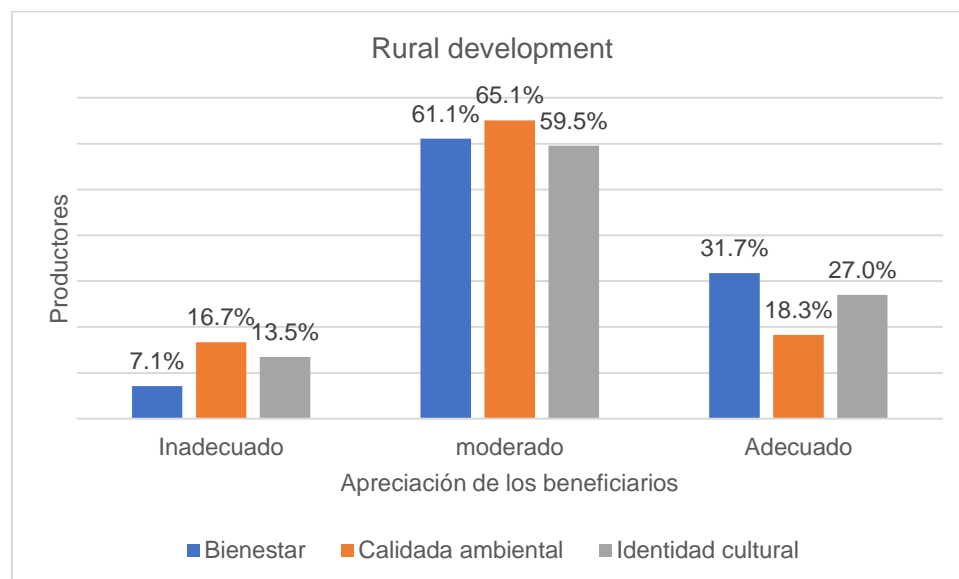
In the same way, it shows that the organization carried out is considered moderate with 57.1%, because those responsible in fulfilling their functions issue orders to achieve their control

strategies, causing discomfort in the other beneficiaries, not understanding that such attitude of firmness of the ordinances in the distribution of work and resources and compliance with schedules, it is with the purpose of AEO to achieve the proposed goals of production per agricultural campaign described in the documents of investment projects and business plans consequently commercialize larger amounts of native potatoes that contribute to improving economic income, these utilities are mainly intended to cover, satisfy the food of family members, contributing for that reason to try to improve food conditions and consequently the quality of life of the beneficiaries

The results on the direction of the PROCOMPITE program were found to be moderate with 73.0% acceptance, where managers strategically through persuasion, motivation, achieve the fulfillment of their agricultural tasks seeking the best personal performance through collaborative work between beneficiaries to achieve individual and community objectives and thus be able to obtain a good participation in the productivity of native potatoes, which affected the families of the beneficiaries of the program.

59.5% of the beneficiaries interviewed state that the control carried out by the people in charge was moderate in compliance with the monitoring and evaluation of the results obtained in the agricultural campaign, measured in volumes of native potato production in relation to the planning of the production established in the stages of production, measuring the variations in production, identifying the deficiencies that have occurred and being able to correct, reprogram some bad productivity practices hoping to achieve an increase in the production of goods in the following agricultural campaigns, of the AEO.

**Figure 2**  
Rural development.



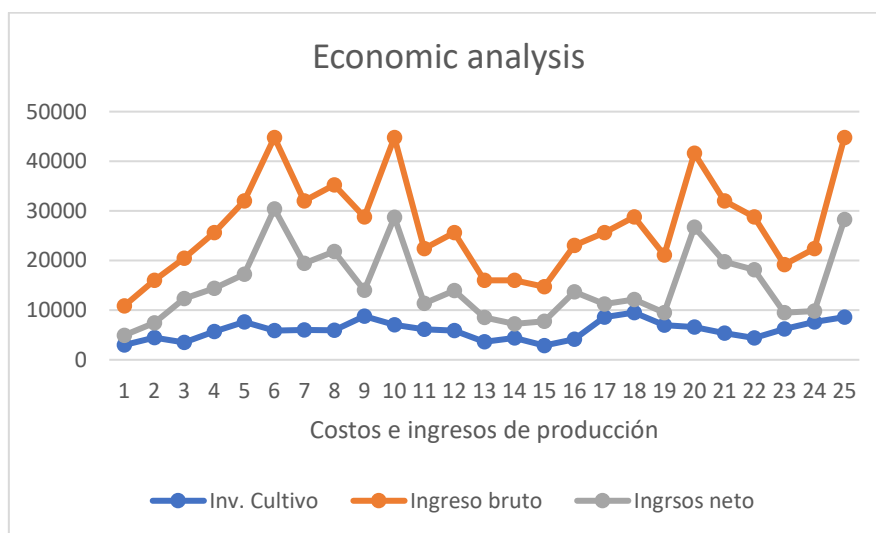
Source: Organized Economic Agents (Survey)

The well-being of the beneficiaries is considered moderate, with 61.1% referring to economic activity, health, and education by receiving money from the sale of their products, which can now be used for education, health, food for their children and the family.

In reference to environmental quality, it is considered moderate by the beneficiaries with 65.1%, due to the acquired knowledge of coexistence and respect for the environment in the elimination of the use of chemical products, preserving agricultural traditions with natural products, achieving availability due to the agricultural campaign and that now they can have greater amounts to spend on their basic needs.

Cultural identity is represented by 59.5% of the beneficiaries who consider it moderate due to the time available and their direct participation in the investment project and competitive business plan identified as organized economic agents, the appropriate cultural identity achieving integration with the members of the PROCOMPITE project and in community and social organizations,

**Figure 3**  
**Economic analysis**



Source: Organized Economic Agents (Survey)

The Apurímac Region located in the central mountain range and consequently is made up of different microclimates with complex and very heterogeneous farming lands, consequently, from the socioeconomic, ecological, and cultural point of view. This problem implements great challenges and governments implement rural development policies implemented by subnational governments with local development initiatives through competitive business plans for production chains through technology transfers, in relation to community organizations that are protagonists of rural development directly responsible for production. of goods native potatoes, who are the protagonists of the use of production factors such as land, labor, technology, and capital in exchange for the program by the PROCOMPITE Program with the beneficiaries, the knowledge factor is encapsulated in the in the wisdom of the eternal farmers commoners for generations linked to the Andean ideological conceptions and the cult of the Pachamama (Cult of the Earth).

The producers are also responsible for the integration with the local and national markets for the commercialization of the native potato in an unfair competition with the intermediaries who pay low prices for their products, reducing their profits for the producers; consequently, they suffer the effects of reducing the opportunities to improve your expected quality of life. Driving these populations to migrate to the big cities in search of better opportunities for personal development as parents and their children, generating the abandonment of the countryside and the reduction of labor and this is scarce in agricultural activities and any form of development.

Despite all these limitations, native potato production activities continue to be the main source of subsistence economic income generation for these populations, while we observed that in a sample of 25 AEO beneficiaries of the PROCOMPITE Program, from whom the corresponding information was obtained of the 2019 agricultural campaign, despite the limitations of confinement due to COVID-19.

the agricultural campaigns did not stop, they continued with the production despite everything but in the expected magnitudes.

**Table 2**  
**Native potato production in soles 2019**

	Agricultural campaign investment	Gross income	cultivated hectares	Net income
Total	148725	672640	127	378262
Average	5949	26906	5	15130
standard d.	1869	9770	2	7326
Minimum	2875	10880	2	4942
Maximum	9518	44800	9	30411

Source: Organized Economic Agents (Survey)

The consolidated organized economic agents The production of native potatoes with an adequate and optimal use of productive resources such as: land preparation, planting, cultivation, and harvesting in operating costs a motorcycle of 5949 soles on average, achieved after an agricultural campaign of 5 months an income of at least 4,942 soles in the beneficiaries who cultivate smaller extensions of land and 30,411 soles in those beneficiaries who cultivate approximately 9 hectares of land, showing an inequality in the positioning of land among the community members, being decisive in the generation of their income, according to the Ministry of Agriculture and Irrigation, the average price of the native potato is 1.20 soles placed in the field and a production of 13.3 t/ha, with differences between prices with the producers of the program that the farmers being lower than that of the Ministry of Agriculture, the AEO claim to have sold at 0.80 soles per kilogram of native potato. That having made multiple efforts to achieve the expected production of native potatoes through participation in the PROCOMPITE program, it is unfortunate to obtain these prices.

The AEO managed to cultivate approximately 2.5 to 9 hectares of land, one of their limitations being the expansion of agricultural land, which is decisive in the production and generation of income that, consequently, is influential in improving the quality of life. Consequently, we can mention that the average cultivated land is 5 ha. That represents 56% of the beneficiaries, who in real income obtain an average of 15,130 soles per campaign, being unique during the year,

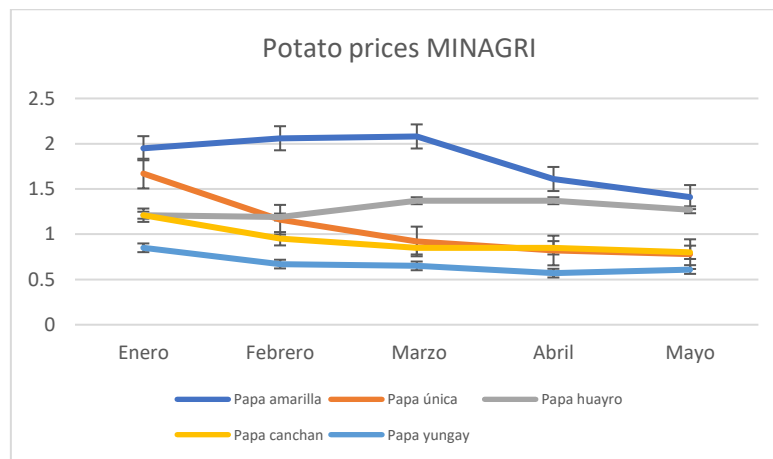
therefore we can say that they achieve an average monthly income of 1,315.6 per month, consequently, their productivity becomes self-consumption.

**Table 3.**  
**Potato varieties.**

potatovarieties	Jan-17	Feb-17	Mar-17	Apr-17	May-17
yellowpotato	1.95	2.06	2.08	1.61	1.41
uniquepotato	1.67	1.16	0.92	0.82	0.78
papa huayro	1.21	1.19	1.37	1.37	1.27
papa canchan	1.21	0.95	0.85	0.85	0.8
papa yungay	0.85	0.67	0.65	0.57	0.61

Source: Potato PricesMINAGRI

**Figure 4**  
**Potato Prices**



Farmers benefiting from the PROCOMPITE program market their products at farm prices, reducing any possibility of improving their income, since these prices are unpredictable at harvest time, generally tend to fall due to the high productivity globally by the associated producers in organized economic agents, the monopolies generated by the intermediary merchants reaching the agricultural lands and the ignorance of the beneficiaries about market price behavior as well as managing the transport that brings them closer to the markets where they can obtain competitive prices.

**Table 4**  
**Esterification of income campaign 2019**

Income	Accumulatedincome	N°EconomicAgents organized	%
0	7805	4	16
7805	15130	12	48
15130	22456	6	24
22456	mas	3	12



The Organized Economic Agents who are beneficiaries of the PROCOMPITE program achieve the income generated after an agricultural campaign in very heterogeneous proportions where 64% of the participants achieve income of less than 15,130 soles in a successful campaign, without taking into account the unpredictable risks that they have with the natural challenges that often lead to the partial and total loss of crop fields causing loss of their crops and a total discouragement of farmers who start the next agricultural campaign with the same forces, associated with this temporality is the lack of management of the experts in agriculture not to continue with their orientations of their specialized technical knowledge for a longer period to achieve true sustainability of these beneficiary communities of PROCOMPITE and to be able to meet the challenges proposed by Law No. 29337 and contribute with the development of communities in poverty to get out of this social inequality of poverty by contributing to improve the conditions of a quality of life.

#### 4. CONCLUSIONS

The management of the PROCOMPITE program, in a sample of 126 AEO. on the behavior of community representatives, where 65.9% have a moderate appreciation of community management and 18.3% adequate and 15.9% inadequate; likewise, in the quality of life variable 55.6% moderate, 34.1% adequate and 10.3% inadequate, these results indicate that the management of the beneficiaries responsible for the implementation of the investment project and business plan moderately fulfilled with the planning, organization, direction and control aspects of the PROCOMPITE program.

Achieving an identification with the organization, complying with the planning, organization, direction, and control of the agricultural activity in the production of native potatoes, improving technological knowledge and production levels, in relation to other previous campaigns that had an impact on economic improvements. Generating better living conditions, social and cultural integrity, and coexistence with the environment.

The economic results show a minimal increase in agricultural production in the production of native potatoes, where 64% of the beneficiaries of the PROCOMPITE program do not reach the average production per hectare of potato production that standardizes the mystery of agriculture that subscribes to 66.6% ha. not being achieved with the magnitude of the productive proposals in the business plans proposed by the public managers that strengthen the development of the beneficiary communities of PROCOMPITE technology transfer.

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