

Sustainable Improvement in Agricultural/Livestock Production in Marginal and Isolated Communities in Latin America

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Abstract

Improving living conditions in marginal and isolated areas in Latin America poses an especially difficult challenge because it calls for viable and sustainable interventions. That is why it is necessary to identify methodologies that can effectively address the main issues recognized by these rural communities themselves. The families and organizations interviewed in areas with conditions of marginalization and isolation regarded food insecurity as the major problem, and most related it to their lack of resources to improve inputs and tools. Local organizations have handled this situation in two ways: by delivering these elements directly or by granting credits to make it possible to acquire them. A comparative analysis of these two options indicates that credit has yielded the best results in terms of the methodology's continued applicability and the amount of capital generated for the community.

Keywords: Donation; Microcredit; Marginal and isolated areas; Food security.

JEL classification: I3, O1, Q1.

1. Introducción

In the marginal and isolated areas of Latin America, it is especially difficult to carry out development actions with farm families living in conditions of poverty and extreme poverty, because of the cost of reaching them. These families' low human development indices are therefore perpetuated generation after generation.

With a long trajectory of work in communities located in those areas, the local non-governmental organizations (NGOs) have been able to develop fundamental methodologies aimed at addressing some of the main needs identified.

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For example, in the area of food insecurity, families consider it essential to improve agricultural/livestock inputs but usually do not have the means to do so. The local NGOs have addressed this issue through two basic methodologies: donations and credits. Both of these are analyzed herein, on the basis of the outcomes achieved by three organizations that have been applying donations and credits in their work. The analysis is aimed at identifying the results that best respond to the particular characteristics of farm families that live in marginal and isolated areas and are subject to food insecurity.

2. Marginal and Isolated Areas from the Standpoint of Food Supplies

The authors that have influenced the concepts of marginalization and rural isolation by shifting away from a focus on geographical issues to a focus on human rights, and especially poverty, include Leonard (1989), Pender *et al.* (1996), Hazel (2007), and Smael (2009).

Sebastian (2009) specified the characteristics of marginal and isolated areas and also made quantitative estimates. She defined marginal areas as the land within the agricultural frontiers in middle- and low-income countries² where the growing season is shorter than 150 days (arid or semi-arid) or the least arable land (highland plains, hilly and mountainous areas and rough-terrain lowlands).

As for the isolation condition, Sebastian (2009) considered that a community was extremely isolated if it was located more than eight hours away from the market; very isolated, at four to eight hours away; and fairly isolated, at two to four hours away. Community access to markets would of course be inversely correlated with distance.

In 2008, 20 % of the farming population (542 million) of the low and middle-income countries was living in conditions of marginalization and isolation (Sebastian (2009)).

²These are low-income countries whose inhabitants make US \$1035 or less per year; between US \$1036 and US \$4085 are low-to-middle-income countries; between US \$4086 and US \$12,615 are middle-to-high-income countries. The per capita income in high-income countries is equal to or higher than \$12,616 (WB (2013)).

3. Needs Identified in Marginal and Isolated Areas

To identify needs in marginal and isolated areas, 12 interviews were conducted with a view to obtaining quantitative and qualitative information. The interviews included a total of 32 people working in five local non-governmental organizations (NGOs) involved in Marginal and Isolated Communities (MICs) in Mexico, Peru and Ecuador. Seven of the interviews were held with groups, and five were individual. In addition, visits were paid to 23 MICs, and 79 people living there were interviewed (53 individually and 19 collectively). All of the interviews were conducted using the same ten closed-ended questions and five open-ended ones, during the period between 2006 and 2014.

In Mexico, two interviews were done with the Oaxaca delegation of the Mexican NGO known as *ENLACE*, which had almost ten years of experience in implementing development projects in northeastern Oaxaca, in the Chiapas highlands, and along the border with Guatemala. All of these are isolated and marginalized areas. In Oaxaca, ENLACE has programs in the following areas: sustainable natural resource management and food security, organizing capacity, training, promotion, gender equity, and institution-building.

From 2006 to 2011, ENLACE implemented 20 development cooperation projects with support from a number of domestic and foreign partners: *Asociación para la Cooperación con el Sur (ACSUR)-Las Segovias, Nantik Lum, Ayuda en Acción, Bread for the World, Diakonia, Friederich Evert, Oxfam Novib, Save The Children, the Inter-American Foundation, Fundación Mercedes, Fundación Axtel, the MetLife Foundation y the Rosa Luxemburg Foundation*. ENLACE organized four visits to three of the MICs in the area, with the participation of 28 people.

In Ecuador three meetings were held with the directors of the *Fondo Ecuatoriano Poppulorum Progressio (FEPP)*, at its offices in the city of Loja. FEPP-Loja has been working since 1998 to improve the living conditions of peasant farmers in marginal and isolated areas of the southern Province of Loja, along the border with Peru. Its initiatives support the production and commercialization of farm products and strengthen community financing as a tool for improving both socioeconomic conditions and food security in the area, with a focus on environmental sustainability.

Between 2006 and 2011, FEPP-Loja worked with Save the Children, the Spanish Agency for International Development Cooperation (AECID) and Education without Borders to implement seven cooperation projects, using a large percentage of its own funds, which come mostly from the Catholic Church. FEPP-Loja representatives arranged visits to five MICs in the Province of Loja, and five meetings were held with the participation of 55 people.

In that same province of Loja, two interviews were held with coordinators from the local women's organization known as the *Unión Popular de Mujeres de Loja* (UPML), which has been active in marginal and isolated communities since 1984, pursuing economic, political and social development with special attention to reducing the gender gap and to serving the interests of children.

From 2006 to 2011 three development cooperation projects were implemented with UPML funds and support from AECID. UPML representatives took part in visits to three MICs along with border with Peru, where 17 people were interviewed.

In Loja three meetings were also held with the directors of *Fundación GRATOS*, which since its creation in 2008 has been implementing four cooperation projects with support from *Comunidad de Madrid* and using its own funds. Among its objectives, eradicating extreme poverty in marginal and isolated areas should be highlighted, as well as improving skills and tools to improve family and social contexts. With *GRATOS* representatives, three five-person group interviews were held in three MICs in the area bordering on Peru.

In Peru two meetings were held with the directors of the Rural Business Development Area of the *Centro de Investigación y Promoción del Campesinado* (CIPCA). Since 1972, CIPCA has been working with peasant farmers in marginal and isolated areas in northern Peru, through three core actions: generation of income and food security, human and social development, and improved participation and democracy processes.

Two communities were also visited in the Province of Piura, in the northern region of the country near the border with Ecuador, where ten people were interviewed. Representatives from the Ecuadorian organizations *GRATOS* and FEPP participated in these visits.

As indicated in Figure 1, the main problems identified were food insecurity and poverty. These were followed by the lack of access to health care; forced migration, understood as responding to the difficulty or impossibility of exercising human rights in the place of origin; and the lack of access to a quality educational system.

4. Causes of Food Insecurity in Marginal and Isolated Areas

As can be seen in Figure 2, 83% of the people who lived in MICs or who worked in the local organizations coincided that food insecurity in marginal and

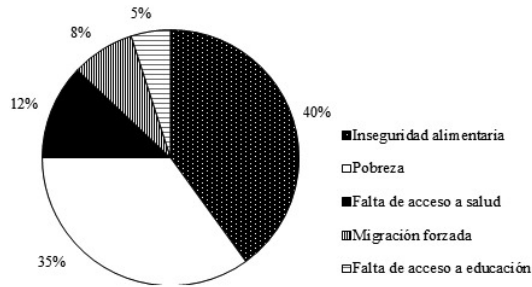


Figura 1: Main Needs Identified for MICs and the Organizations Interviewed. **Source:** Author’s own compilation using data from interviews of MIC inhabitants and representatives of local organizations

isolated areas responded to inadequate inputs due to the fact that no type of investment was made. Meanwhile, 75 % attributed food insecurity to the lack of technical know-how, 73 % to low prices for agricultural/livestock products, and 71 % to the lack of knowledge about nutrition.

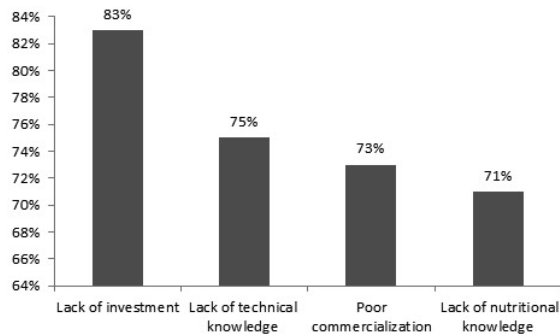


Figura 2: Most Common Causes of Food Insecurity in MICs, According to Interviewed Organization Representatives and Community Members. **Source:** Author’s own compilation using data from interviews of MIC inhabitants and representatives of local organizations

Of those interviewed, 53 % felt that food insecurity was due to the four factors mentioned previously. So, these would call for broad, multi-pronged interventions. This article, however, will concentrate only on the first cause identified:

the lack of investment.

5. Methodologies for Improving Agricultural/Livestock Investment in Marginal and Isolated Areas

Agricultural/livestock inputs are renewed and adapted primarily through two methodologies commonly used in the framework of development cooperation: (1) donations from projects, and (2) investments through credits.

Donations consist of the cooperation project's budget allocations for changing inputs, which are bought directly and then delivered to the beneficiary families. Investment through credits consists of families' requesting a credit or loan to finance part of the agricultural/livestock improvements with the pertinent technical advising. The loan is to be repaid as products are sold.

The effects of the two methodologies are analyzed below on the basis of three development cooperation projects implemented in Mexico, Peru and Ecuador between 2006 and 2012.

Project name	Implementation	Implementer
Solidarity Economy and Gender Equality: Economic-Productive Initiatives for the Comprehensive Development of Mixtec Indigenous Communities in Oaxaca (Mexico)	2010-2012	Tlaxiaco, ENLACE
Reduction of Poverty Levels and Improvement of Food Security through Farming Initiatives among Migrant Families in Piura, Peru	2007-2009	Fondo Ecuatoriano Poppulorum Progressio (FEPP)
Eradication of Extreme Poverty and Improvement of Food Security in Isolated and Marginal Communities in the Ecuadorian Andes	2010-2012	Fundación GRATOS

Cuadro 1: Projects Selected for the Analysis. **Source:** Author's own compilation.

In order to analyze the best strategies, the documents indicated in Table 2 have been used. These contain quantitative, qualitative and comparative information on the projects:

Documents Used	Project
Initial baseline assessment	Mexico, Peru and Ecuador

Mexico, Peru and Ecuador	Mexico, Peru and Ecuador
Semester I report	Mexico, Peru and Ecuador
Semester II report	Mexico, Peru and Ecuador
Intermediate assessment	Mexico, Peru and Ecuador
Semester III report	Mexico and Peru
Final report	Mexico and Ecuador
Final assessment	Mexico, Peru and Ecuador

Cuadro 2: Documents for the Projects Selected for the Analysis. **Source:** Author's compilation.

In addition, 41 quantitative and qualitative interviews were held in the communities in which the projects were being carried out. Twenty people took part in group interviews, and 21 in individual ones. Fifteen were done in Mexico, 15 in Ecuador and 15 in Peru. In addition, 17 interviews were done (five in Mexico, seven in Ecuador and five in Peru) among members of the boards of directors, technical experts and people involved in the operational aspects of the three organizations responsible for project implementation. The interviewed organizations were ENLACE in Mexico, *Fondo Ecuatoriano Poppulorum Prograssio* (FEPP) in Ecuador, and *Fundación GRATOS* in Peru.

All of the interviews were conducted using the same set of seven closed-ended questions and three open-ended ones during the 2006-2014 period.

The three selected projects used both donations and credits to improve agricultural/livestock inputs, so it was possible to differentiate effects. Table 3 indicates the main advantages of each option in MICs.

Advantages	Donations	Credits
Lowers the cost of dedicated project personnel	X	
Eliminates the risk that families will not be able to repay a loan because of a low level of financial knowledge or a contingency	X	
Encourages families' greater involvement in the project because they consider the inputs their own		X
Makes it possible to renew inputs during and after project implementation, and to make additional investments after the project ends		X(*)
Enables other families that did not participate in the project to improve their inputs and tools		X(*)

Cuadro 3: Advantages of MIC Investing through Donations and Credits. (*) If the credit option is maintained beyond the project implementation period. **Source:** Author's compilation.

5.1. Donations

The main positive effects of using donations are: the savings in costs for technical experts and the simplicity of the instrument itself, which eliminates the risk of possible delays in repayment and defaults.

The savings in costs for technical experts is because once the inputs are bought and implemented, periodic monitoring by an agricultural/livestock expert to ensure good use is sufficient. This fact translates into an approximately 15 % reduction in the cost of local personnel, if the unpublished budgets of the three projects analyzed herein are taken as a basis. In addition, when it is not necessary to hire a specialist in microfinancing, it is not necessary to conduct any selection process or be concerned with labor obligations, which can affect project viability. That was the case of the project implemented in Ecuador, in which the turnover among the people in charge of the credit, on three occasions, entailed an unforeseen 24 % cost increase.

Another basic advantage of donations is its simplicity, given that the process ends with the delivery of inputs and any monitoring done afterwards by the technical team. That was the case of the project implemented in Peru, in which the process of buying and delivering the inputs provided by the donation lasted only one month. However, it took five months for the necessary tools and instruments needed to in fact become available. This affected project viability. Likewise, in the project implemented in Loja, the delay in implementation of the credit systems meant that the families began incorporating their agricultural/livestock improvements during the rainy season. This influenced the productivity of the investments, as well as the families' ability to repay the loans.

5.2. Credits

The main advantage of using credits to renew agricultural/livestock inputs is that families are more closely tied to the project goals because they feel more of a sense of ownership of the inputs purchased. Furthermore, if the credits are maintained beyond the project implementation period, the families can have access to more credits to repair or renew the inputs, and they can have resources to make more improvements in the future, outside the project per se.

The families' debts involve them in the project and thus better guarantee the efforts they will make to effectively improve agricultural/livestock production. The families' work is essential not only in growing crops but also in following up on the other project outcomes that they themselves have chosen as priorities. In fact, a fundamental difference can be seen between the participation of families

that have received credits and of those that have received donations. In the case of the project implemented in Ecuador, the families were especially involved with the productive processes whose inputs had been purchased using credits, in comparison with those that used tools acquired through donations.

If the credit option is maintained beyond project implementation, the families also have the possibility of repairing or replacing the elements that have become worn or damaged over time. That was the case of the beneficiary families of the project implemented in Ecuador, where it was possible to repair two irrigation systems that required maintenance and to buy a new variety of broccoli to replace the one that was originally being grown and thus obtain higher yields in less time.

Likewise, if the credits continue after project implementation, the families have the option of implementing new improvements once the project has ended. This implies that the development process will continue after project implementation. That was the case of the project implemented in Mexico, in which at the time the project officially ended, a second round of credits had been requested, in order to undertake new improvements beyond those foreseen in the framework of the project.

6. Conclusions

Following the analysis of improvements in inputs through donations or investments, credits are considered more suitable than donations in the case of MICs. Since similar results were obtained regardless of the instrument used to provide more suitable inputs, this selection does not respond to most of the evaluation criteria proposed in the sphere of development cooperation, as defined in Arredondo *et al.* (2007). Those criteria included a sense of ownership, participation, harmonization, alignment, coverage, coherence, effectiveness, efficiency, and impact.

Instead, selection of the credit option responds to the possibility of dealing with the difficulties posed by each methodology with regard to the criteria of appropriation³ and sustainability,⁴ which are especially relevant when dealing

³The criterion of appropriation analyzes to what extent the people at whom projects are aimed actually appropriate the work and the development process supported through cooperation (Arredondo *et al.* (2007)).

⁴A sustainability study seeks to evaluate whether a project's effects will endure over time, once the project itself has ended. This is directly related to the conclusions of the analyses of the other criteria (Arredondo *et al.* (2007)).

with MICs, as well as to the ability to contribute to the path chosen and to the generation of social capital.

Donations involved less empowerment of the families, less capacity to maintain and renew the new inputs and tools, and limitations for continuing development once the project ended. Therefore, they posed real difficulties when dealing with families that lived in marginal and isolated areas. So, such families would wait for a new national or international action that might choose the community in question as a focus of development, either to continue its development or to renew the inputs and tools they needed to repair or replace.

As for the disadvantages of using credits, higher project costs cannot be avoided. However, through training or by including suitable clauses in loan contracts, it is possible to mitigate the risk that a family will not be able to repay its debt due to a low level of financial culture or because of some contingency related to the characteristics of MICs.

As Cámara et al. (2001) note, the path chosen refers to the need to understand development as a process of expanding capabilities so that the beneficiaries can overcome barriers and limitations and achieve autonomous and continued improvements. It is therefore necessary for the development effort not to be carried out independently from the community's own efforts, and to recognize that the development effort should bolster these and take advantage of what has already been achieved in order to underpin and sustain it. In the case of credits, families in the communities were familiar with how loans worked because most of them had had to recur to a lender. By the time the projects ended, the families had the knowledge necessary to apply for and manage their own credits and to continue improving their inputs and tools in the future.

The components of social capital are the ties of social trust forged by relationships among individuals, families, public, private or mixed (public-private) organizations and social networks and the group of formal and informal regulations or guidelines that influence the options, decisions and transactions of the different actors (ideologies, customs, attitudes, cultural perceptions, relationships of trust, culture of respect for agreements, and resources) on which culture and traditions, history, and the current social and political context have a special impact, according to Coleman (1988 and 1990). As the World Bank has noted (1997 and 1999), when an action bolsters a population's social capital, it promotes development because it strengthens the inputs that people use as a springboard for reinforcing their capabilities beyond the development actions implemented. In the case of credits, by the time the projects end, the participating families have learned to procure financial instruments that they can even manage within their own communities by organizing themselves and

coordinating in order to work towards a shared goal.

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