

# The Role of Innovation in Synchronising Rural Development Projects with Target Expectations

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## Abstract

Despite the intervention of numerous development projects, poverty persists in rural Madagascar. The main reasons for the failure of rural development activities often stem from the unsuitability of the project to the socio-cultural and economic context of the areas where it is implemented. In order to remedy this situation, it is necessary to resort to innovation, but is innovation really necessary in order to synchronise rural development projects with farmers' expectations?

Based on the hypothesis that innovation conditions the synchronisation of the actions of development projects with farmers' expectations. A survey of a sample of 200 rural farmers was used to examine the role of innovation in synchronising the actions of development projects with farmers' expectations.

**Keywords: Projects, Innovation, Development, Rural Environment**

## 1. Introduction

According to Jean Bruno (2007), appropriate development in rural areas means meeting the needs and expectations of local communities, in harmony with their socio-historical reality. So the question is, is innovation really necessary to synchronise rural development projects with farmers' expectations?

Based on the hypothesis that innovation conditions the synchronisation of the actions of development projects with farmers' expectations, the analysis will focus on the match between the actions undertaken by the projects and the expectations of the farmers. The coincidence between the actions, and more specifically the aid provided by the project, and the farmers' expectations will be analysed. Based on the results of this analysis, it will be determined whether or not innovation has been integrated into these programmes.

In order to verify the hypothesis, the data from the surveys of a sample of 200 rural individuals were subjected to various statistical tests using SPHINX software. First, the results of the surveys on farmers' expectations of social development projects and financial support projects will be presented. These will then be followed by the results of the surveys concerning the actions of these different types of project, again according to farmers' perceptions. A cross-tabulation of expectations and project actions according

to farmers' perceptions will be carried out, followed by a  $\chi^2$  test of independence, with a confidence interval of 95% or a margin of error of 5%, in order to determine whether there is any dependence between these two variables. After presenting the results of the surveys concerning the observation of innovation, a cross-tabulation between the actions and the expectations of the farmers will be carried out, but considering only the stratum of respondents who observed innovations. This is to determine the role of innovation in the synchronisation between farmers' expectations and the actions initiated by the projects.

### **Conceptual Basis**

For the Fonds d'Appui aux Sociétés Civiles du Sud (FASCS) in 2015, a project is an idea driven by a group of individuals willing to work together with the aim of improving their environment, moving from an unsatisfactory initial situation to an improved one. It must meet a need expressed by a population in a given area. In concrete terms, this means federating players to set up activities that meet this need. By joining forces, these players are able to draw up a long-term action program designed to respond positively and sustainably to the expectations of the beneficiaries. Based on a thorough analysis of the context, local factors and expressed needs, the identification process consists of reflecting on possible directions and interventions, and defining the broad outlines of the project. Above all, the project must respond to a need expressed and formulated by a group of beneficiaries.

Historically, rural development projects initiated by the administration and various stakeholders have not brought much improvement to Madagascar's economic situation. Various development activities have been initiated, but poverty persists among rural households. These development operations, inconsistent with the economic orientation of rural areas, have generated a certain reluctance on the part of the local population. Farmers' expectations, based on their traditional cultural, economic and social roots and the experience gained from previous projects, and the technical considerations and technological innovation advocated by project initiators, can collide. This discrepancy between farmers' expectations and the actions of the projects could then constitute blocking factors to the success of the projects.

## **2. Results**

Farmers' experiences of development projects have given rise to expectations. However, still based on their convictions, they nevertheless have perceptions concerning expectations that they could have asserted before the implementation of these projects. Two project categories, namely Social Development Projects (SDP) and Financial Support Projects (FSP), were identified by the resource persons, and their level of knowledge was assessed on the basis of the surveys. Of those surveyed, 75.75% confirmed the existence of financial support projects and 66.11% of social development projects. In other words, the level of awareness of rural development projects in the area is fairly high, especially for financial support projects.

### **2.1. Social Development Projects (PDS)**

Faced with the poverty that persists in the study area, even with the intervention of projects, farmers have many expectations.

#### **2.1.1. Farmers' Expectations of Social Development Projects**

As a result of their past experiences, farmers have many expectations of social development projects.

**Table 1: Farmers' Expectations of PDSs**

<b>Expectations of PDS</b>	<b>Fréq.</b>
Eradicating Insecurity	46,5%
Maternal and Child Health	43,5%
Access to Education	34,2%
Access to Drinking Water	26,2%
No Expectations	21,3%
Nutritional Quality	13,0%
Improved Housing	12,6%
Improved Oven	2,0%
<b>Total Obs.</b>	<b>100%</b>

Source: Authors, 2023

The results of our study show that, among the expectations of the farmers surveyed, the eradication of insecurity (46.5%) and the improvement of maternal health (43.5%) are the farmers' top priorities. Thus, according to the  $\chi^2$  value = 209.44,  $ddl = 8$ ,  $1-p = 99.99\%$ , which shows a highly significant difference with the reference distribution, these two points generally constitute the social priorities of farmers in the study area. The importance of eradicating insecurity is emphasized by the farmers, since it is one of the factors blocking development in the area. Indeed, insecurity discourages farmers from producing more, for fear of attack by brigands, which is imminent as soon as the money is received after the sale. Maternal and child health is also a priority, given the difficulty of accessing health services at village level, since mother and child have to travel several kilometers, sometimes at quite late hours in the event of illness. Other social factors are seen as secondary, not really a priority and of little importance, since their effects are not directly felt in the immediate future.

### 2.1.2. PDS Actions in Relation to Farmers' Expectations

Following their expectations from a social point of view, the farmers spoke of the projects' responses to this.

**Table 2: PDS Actions to Meet Farmers' Expectations, as Perceived by Farmers**

<b>Actions of PDS</b>	<b>Fréq.</b>
Maternal and Child Health	49,50%
Nutritional Quality	35,22%
Access to Drinking Water	16,28%
Access to Education	16,28%
Housing Improvement	8,64%
Improved Oven	1,66%
Eradication of Insecurity	1,33%
<b>Total Obs.</b>	<b>100%</b>

Source: Authors, 2023

According to the survey results, and given the result of the  $\chi^2$  conformity test with values of  $\chi^2 = 314.81$ ,  $ddl = 7$  and  $1-p = 99.99\%$ , which shows a highly significant difference with the reference distribution, the actions of the social development projects, according to the knowledge of the farmers in the study area, focus above all on improving maternal and child health. Admittedly, the majority of the population is not affected by these actions, but they have made themselves felt by the villagers, given the activities and posters displayed in almost all the Fokontany chief towns. Other actions have been carried out by successive projects, whether in terms of nutritional quality, education or housing, but they have gone almost unnoticed and their results were not really perceptible by the majority of rural people.

### 2.1.3. Comparison of Expectations and Actions PDS

The comparison shows whether the social development projects have met the farmers' expectations.

**Table 3: Comparison of SDP Actions with Expectations, as Perceived by Farmers**

PDS Expectations/ PDS Actions	Access to Drinking Water	Access to Education	Maternal and Child Health	Improved Housing	Nutritional Quality	Improved Oven	Eradication of Insecurity	Total
No Waiting	15,6%	6,3%	50,0%	3,1%	25,0%	0,0%	0,0%	100%
Access to Education	14,7%	14,1%	34,6%	7,9%	26,7%	1,0%	1,0%	100%
Maternal and Child Health	12,5%	13,3%	38,3%	5,6%	28,2%	1,2%	0,8%	100%
Housing Improvement	15,9%	14,6%	30,5%	11,0%	26,8%	1,2%	0,0%	100%
Access to Drinking Water	12,1%	12,8%	36,9%	7,1%	29,1%	0,7%	1,4%	100%
Eradication of Insecurity	11,9%	16,1%	36,9%	6,5%	26,2%	0,6%	1,8%	100%
Nutritional Quality	16,3%	10,9%	30,4%	10,9%	29,3%	0,0%	2,2%	100%
Improved Oven	9,1%	18,2%	27,3%	9,1%	36,4%	0,0%	0,0%	100%
<b>Total</b>	<b>13,5%</b>	<b>13,6%</b>	<b>36,0%</b>	<b>7,4%</b>	<b>27,7%</b>	<b>0,8%</b>	<b>1,1%</b>	<b>100%</b>

Source: Authors, 2023

After carrying out the  $\chi^2$  test of independence, cross-referencing farmers' expectations and the actions of social development projects, there is no dependency. Indeed, with  $\chi^2 = 20.02$ , a  $ddl = 42$  and  $1-p = 0.17\%$ , which allows us to draw the p-value of 0.998, well above the value of  $\alpha = 0.05$ , thus validating the null hypothesis, the actions of social development projects do not correspond to farmers' expectations. Admittedly, they have undertaken actions that coincide with farmers' expectations, but these actions have not reached all those concerned (only 1.8% of those who wanted the eradication of insecurity were satisfied, and 38.3%, for maternal and child health), in this sense, the majority of respondents did not feel that these projects met their expectations. What's more, some of the expectations raised by the farmers were not considered at all, or only to a limited extent, by these projects, such as the eradication of insecurity, access to education and access to drinking water; while

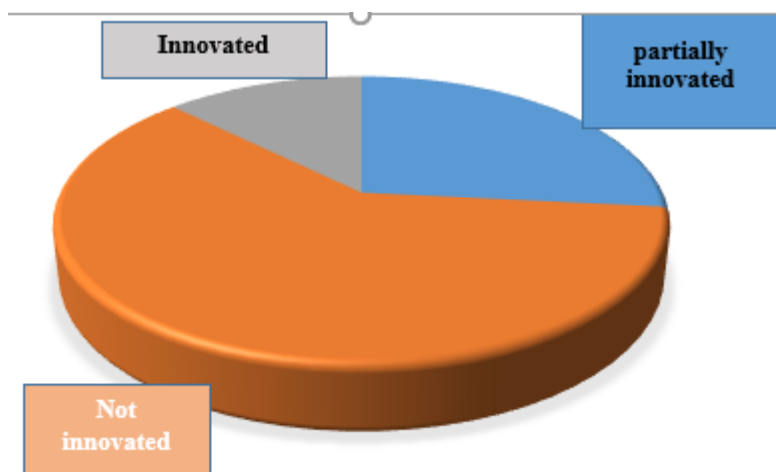
others, considered not to be really important to the farmers, such as nutritional quality, were perceived more positively.

In conclusion, the actions of social development projects have not also met farmers' expectations.

#### 2.1.4. Integration of Innovation of PDS

In relation to the hypothesis that innovation conditions the synchronization of development projects' actions with farmers' expectations, an analysis of the presence of innovation in projects is required.

**Figure 1: Innovation in PDS**



Source: Authors, 2023

According to 60.80% of respondents, the answers obtained indicate that innovation does not exist at all. This is valid for the whole study area, given the  $\chi^2$  value = 15.31,  $ddl = 2$ ,  $1-p = 99.95\%$ , which shows a significant difference with the reference distribution. However, some (26.60%) still noted a partial innovation in their programs, and only 12.3% claimed to note innovations.

## 2.2. Financial Support Projects (PAF)

Financial support projects also attracted interest, as they tried to meet the expectations of rural people.

### 2.2.1. Farmers' Expectations Regarding the Actions of the PAF

Lastly, the farmers spoke of their expectations with regard to financial support projects.

**Table 4: Farmers' Expectations with Regard to PAF**

Expectations of PAF	Fréq.
Zero-interest Financing	49,5%
Training	26,9%
Credit for IGA Development	23,3%
Social Loans	15,3%
Savings Accumulation	11,0%
<b>Total Obs.</b>	<b>100%</b>

Source: Authors, 2023

According to the survey results, almost one in two people mentioned that their expectation of financial support projects was for zero-interest financing. This result can be generalized to the entire population of the study area, given the result of the  $\chi^2$  conformity test, with  $\chi^2$  value = 108.66,  $ddl = 6$ ,  $1-p = 99.99\%$ , which shows a highly significant difference with the reference distribution. But some farmers also noted the need for credit to develop their IGAs (23.3%), which should be followed by training (26.9%), especially in managing the funds granted. However, some of the respondents did not formulate any expectations (33.9%), since according to the results, on the one hand they believe that meeting social and economic expectations is more than enough to solve their financial problems, but on the other hand, most of them did not really adhere to the concept of credit, the use of which could undermine their social status, and also does not correspond to their lines of conduct. Indeed, in their view, having debts makes them feel ashamed, and could damage their credibility in society. What's more, asking for credit is contrary to their mentality, since they believe that households should make do with what they have or what they can get, without having to resort to credit.

### 2.2.2. PAF Actions in Relation to Farmers' Expectations

In relation to the expectations mentioned, the farmers surveyed also formulated responses in relation to the actions of the financial support projects to meet them.

**Table 5: PAF Actions to Meet Farmers' Expectations, as Perceived by Farmers**

Actions of PAF	Fréq.
Credit for IGA Development	51,83%
Building up Savings	18,60%
Training	17,94%
Interest-free Financing	2,66%
<b>Total Obs.</b>	<b>100%</b>

Source: Authors, 2023

According to the survey results, the most frequently mentioned action of the financial support projects is the provision of credit for the development of IGAs (51.83%). After carrying out the  $\chi^2$  conformity test, which gives  $\chi^2$  values = 171.41,  $ddl = 5$ ,  $1-p = 99.99\%$ , showing a highly significant difference with the reference distribution, it can be concluded that for more than one in two people in the study area, the provision of credit for the development of IGAs is the action most perceived by financial support projects. Other products are also offered by these microfinance institutions, but are not really known to farmers, such as the possibility of building up savings (18.60%) or loans to solve temporary social problems (0%). What's more, a significant proportion of respondents (8.97%) don't even know or don't want to know about the products offered by these financial institutions, given their reluctance to contract debts.

### 2.2.3. Comparison of Expectations and Actions PAF

The comparison shows whether the actions of the financial support projects have met farmers' expectations.

**Table 6: Comparison of PAF Actions with Farmers' Expectations, According to Farmers' Perceptions**

PAF Expectations / PAF Actions	Credit for the Development of IGAs	Social Loans	Training	Interest-free Financing	Total
Zero-interest Financing	59,1%	18,8%	18,8%	3,2%	100%
Credit for IGA Development	50,6%	23,5%	21,0%	4,9%	100%
Social Loans	40,8%	29,6%	26,8%	2,8%	100%
Training	43,1%	25,5%	28,4%	2,9%	100%
Savings Accumulation	47,5%	25,0%	27,5%	0,0%	100%
<b>Total</b>	<b>50,0%</b>	<b>23,4%</b>	<b>23,4%</b>	<b>3,1%</b>	<b>100%</b>

Source: Authors, 2021

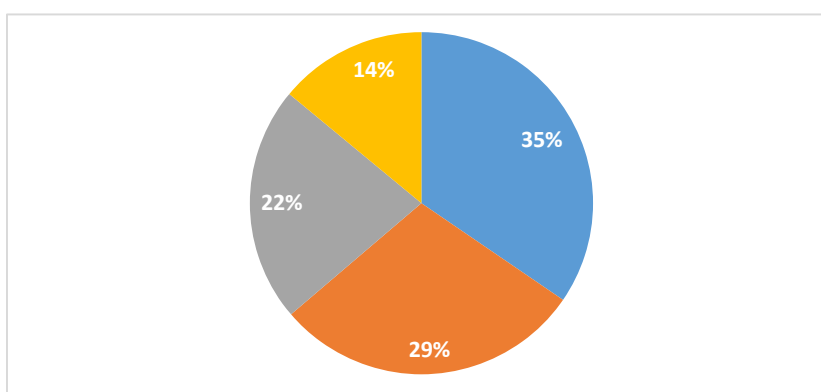
After cross-referencing actions with farmers' expectations of financial support projects, eliminating non-responses, the chi<sup>2</sup> test, which gives chi<sup>2</sup> = 62.80, ddl = 12 and 1-p = 62.80%, giving a p-value = 0.372, well above  $\alpha=0.05$ , allowing us to reject the alternative hypothesis and validate the null hypothesis, shows that the two distributions are independent. This means that the actions of the PAFs and the related expectations of the farmers did not coincide.

On the one hand, some expectations were met by the financial support projects, such as credits for IGA development, but did not reach the entire population concerned (50.6% of those who wanted credits to develop their IGAs were satisfied). On the other hand, other expectations were not really considered in the actions of these projects, such as social credits (0%) and zero-interest financing (3.2%).

#### 2.2.4. Integration of Innovation in PAF

As for the two other types of projects, the existence of pre-project surveys could explain this trend in terms of information.

**Figure 2: Innovation in PAF**



Source: Authors, 2023

If non-response is not taken into account, the survey results suggest that financial support projects have generally not been innovative, with only 22% claiming to have seen total innovation in this type of project. Given the result of the chi<sup>2</sup> conformity test, with values of chi<sup>2</sup> = 16.15, ddl = 2, 1-p = 99.07%,



which shows a significant difference with the reference distribution, this is valid for the entire population of the study area.

### 3. Discussions

According to the results of surveys and related analyses, according to farmers' perceptions, the actions of rural development projects only partially meet their expectations. And in order to verify the place of innovation in rural development projects, it is now necessary to analyze the dependence of this situation on the integration of innovation.

#### 3.1. Correspondence between PDS Actions and Farmers' Expectations in the Case of Innovation

The analysis will therefore focus solely on results that mention the existence of innovation.

**Table 7: Coincidence between PDS Actions and Farmers' Expectations in the Case of Innovation**

<b>PDS Expectations/ PDS Actions</b>	<b>Access to Drinking Water</b>	<b>Access to Education</b>	<b>Maternal and Child Health</b>	<b>Improved Housing</b>	<b>Nutritional Quality</b>	<b>Eradication of Insecurity</b>	<b>Total</b>
<b>No Waiting</b>	0,0%	14,3%	57,1%	14,3%	14,3%	0,0%	<b>100%</b>
<b>Access to Education</b>	13,9%	13,9%	38,9%	2,8%	30,6%	0,0%	<b>100%</b>
<b>Maternal and Child Health</b>	9,6%	11,5%	38,5%	5,8%	32,7%	1,9%	<b>100%</b>
<b>Housing Improvement</b>	14,3%	14,3%	35,7%	7,1%	28,6%	0,0%	<b>100%</b>
<b>Access to Drinking Water</b>	14,3%	19,0%	38,1%	0,0%	28,6%	0,0%	<b>100%</b>
<b>Eradication of Insecurity</b>	13,3%	16,7%	36,7%	6,7%	23,3%	3,3%	<b>100%</b>
<b>Nutritional Quality</b>	11,1%	11,1%	33,3%	11,1%	29,6%	3,7%	<b>100%</b>
<b>Improved Oven</b>	0,0%	33,3%	33,3%	0,0%	33,3%	0,0%	<b>100%</b>
<b>Total</b>	<b>11,6%</b>	<b>14,2%</b>	<b>37,9%</b>	<b>5,8%</b>	<b>28,9%</b>	<b>1,6%</b>	<b>100%</b>

Source: Authors, 2023

The actions of social development projects did not meet farmers' expectations, despite the innovation they brought. Only 3.3% of those expecting to eradicate insecurity and 38.5% to improve maternal and child health were satisfied. This is confirmed by the results of the  $\chi^2$  test of independence, with  $\chi^2 = 12.45$ ,  $ddl = 35$ ,  $1-p = 0.02\%$ , and therefore a  $p$ -value = 0.98, well above 0.05, validating the null hypothesis, which shows that dependence is not significant. Indeed, if we refer to the results, innovations have certainly been made, but only those actions that coincide with the vocations of the intervening projects have been carried out. In this sense, the essential expectations of farmers have not been taken into account by these social development projects, in addition to the fact that these projects have not really reached the whole population.



### 3.2. Correspondence between PAF Actions and Farmers' Expectations in the Case of Pre-project Surveys

It is also important to see the synchronization between actions and farmers' expectations for PAF in cases where innovations have been introduced.

**Table 8: Coincidence between PAF Actions and Farmers' Expectations in the Case of Innovation**

PAF Expectations / PAF Actions	Credit for the Development of IGAs	Building up Savings	Training	Interest-free Financing	Total
Zero-interest Financing	52,6%	21,1%	23,7%	2,6%	100%
Credit for IGA Development	40,9%	36,4%	22,7%	0,0%	100%
Social Loans	35,7%	35,7%	28,6%	0,0%	100%
Training	44,4%	25,0%	27,8%	2,8%	100%
Savings Accumulation	42,9%	28,6%	28,6%	0,0%	100%
<b>Total</b>	45,2%	27,4%	25,8%	1,6%	100%

Source: Authors, 2023

Despite the innovations made to the projects, the actions did not meet farmers' expectations. Only 40.9% of those expecting credit for the development of their IGAs, and 2.6% expecting interest-free financing, were satisfied. This is confirmed by the  $\chi^2$  test of independence, which shows a  $\chi^2$  value = 4.13,  $ddl = 12$ ,  $1-p = 1.91\%$ , generating a  $p$ -value = 0.98, well above the value of  $\alpha = 0.05$ , allowing us to validate the null hypothesis, which shows that the dependence is not significant. In fact, even if farmers feel that innovations have been introduced, their expectations of these projects are not really being met.

These analyses show that, even if innovation brings improvements in the detection of beneficiaries' expectations, the synchronization of actions with farmers' expectations does not depend on this innovation, but on project choices in terms of aid programs. The hypothesis that innovation conditions the synchronization of development project actions with farmers' expectations.

### Conclusion

In conclusion, according to the results of the surveys and related analyses carried out on a sample of 200 farmers in the study area, it was found that the actions of rural development projects, whether social or financial, did not really coincide with the expectations of the target farmers, despite the innovations made. This invalidates the hypothesis that innovation conditions the synchronization of development projects with farmers' expectations.

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