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Full Length Research Paper

Impact of rural development projects on agricultural productivity in selected regions of Benin

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In this study, data collected from 120 rural households located in two distinct socio-cultural locales of Benin was used to assess the impact of 20 development projects on agricultural productivity. A 'with-without' approach of impact evaluation is followed using ANOVA and econometric regressions. Results reveal no significant differences of projects on agricultural productivity between participants in the two study zones. Econometric regression estimates show significantly positive impacts on agricultural productivity for two selected project indicators in the two study zones. However, the goal achievement index was more remarked in the Adja area, where the projects were found to have better addressed development problems and provided higher impact. The results suggest the need to improve management of agricultural projects to enhance their impact. Likewise, objectives and activities of the projects should be oriented to deal better with development problems of rural people, in particular those of the poorest and marginalized communities.

Key words: Productivity, rural projects, impact, Benin.

INTRODUCTION

Most less developed countries depend on rural areas for most of their survival and development resources. Agriculture, which is the main activity of these areas, employs between 70% and 80% of the working population. Besides, local rural populations ensure food consumption from agricultural production, thereby guaranteeing household food security (World Bank, 2008). In spite of this key role of rural areas in development, they are confronted more and more with severe problems, which retard their progress with consequent problems for livelihood survival of the local people. Natural resources such as land, forest and water do not stop degrading gradually. The decline in land fertility has resulted in decreased agricultural productivity. For decades, developed countries, international institutions such as the World Bank, FAO, UNDP, as well as non-governmental organizations NGOs) have been fighting ceaselessly to contribute to the development of rural areas via actions and interventions implemented through rural development projects. Such projects have often been designed, planned and implemented to help the rural people to develop their agriculture and to have better access to farm inputs to increase their income. In addition, most projects tend to strengthen the capacities of rural farmers through education, training and institutional support.

Given the key role that project interventions play in the rural development process, it is imperative to assess both the specific and overall impacts of implemented projects. Several approaches to evaluate rural development projects have evolved over time. According to Kirkpatrick (1994), various appraisals of most projects have focused on cost-benefit or cost-effectiveness approaches by assessing project costs (monetary or non-monetary), in particular, their relation to alternative uses of the same

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resources and to the benefits being produced by the projects. However, some outputs of rural development projects such as capacity building and improvement of food security are sometimes difficult to measure and/or provide unsatisfactory results via the cost-benefit approach. Indeed, the decisive issue of a measure of project success is not whether the planned results have been achieved, but what impact the activities of the project have provided and whether they satisfy all the stakeholders.

Consequently, project evaluations in recent times have focused on the impact evaluation approach, whereby project success emphasizes more broadly on whether the project had the desired effects on individuals, households and institutions and whether those effects are attributable to the project intervention. Accordingly, evaluating the impact of rural development projects on agricultural productivity becomes a challenge to deal with (GTZ, 2008).

In evaluating projects, the central problem is how to isolate and to estimate their impacts on target groups. Since many other exogenous factors that are not related to project execution (government policy, market conditions, former experiences, etc.) also have an influence on target groups' evolution, appraisal approaches of projects seem to be difficult. The literature proposes two main approaches with different concepts of measurement: the 'before-after' and 'with-without' approaches as illustrated in Figure 1 (Bauer, 2000) . According to Kerr and Kolavalli (1999) and Adekambi (2005), if the 'with-without' approach is designed in a consequent way to isolate the exogenous influences and to carry out the project impact only; it may provide more reliable results. This paper therefore focuses on the use of the 'with-without' approach to estimate the impact of rural development projects on agricultural productivity of farmers in two regions of Benin.

Review of impact of projects on household livelihood

Various authors have in the past focused on impact evaluation of development projects on sustainability. In Central America for example, a number of projects have promoted soil conservation or soil recuperation technologies that benefitted farmers through increase in productivity (Brunch, 2001). Likewise, Doppler and Bothe (1999) showed that the adoption of *Cassia siamea* in rural Benin improved soil fertility and agricultural productivity and led to an increase in the overall family income. This helped to reduce poverty of many rural farming households. As a result of increase in productivity and income due to the adoption of new technology for bean growing in South-Benin, Allogni et al. (2008) found that food expenditure increased and food security in households showed some improvement.

Data from (2006) also show that, increases in agricultural productivity and income over the years due to rural development projects have undoubtedly raised food availability and kept food prices low, providing critically important benefits for extremely poor households that spend more than half their income on food (Kerr and Kollavali, 1999). Arguing in the same way, IFPRI (2001) reported that the project "Improving Food Security in Bangladesh" implemented since the 1980s resulted in a significantly increased availability of and access to food in rural areas of Bangladesh. In countries where starvation is disastrous for rural people, various projects are implemented to avoid malnutrition diseases and death, mainly among children. For example, (IDRC, 2003) found that 30 projects implemented in Ethiopia that focused on agriculture and water management saved more than 25% of rural communities from starvation, malnutrition diseases and death.

The foregoing discussion shows an optimistic view of the adoption of technology leading to poverty alleviation through positive effects on consumer food prices, producer incomes and labourer waged incomes. In this scenario, higher productivity, better natural resource management and poverty alleviation are mutually reinforced and may lead to achievement of a sustainable food system (Winkleman, 1998).

In contrast to this optimistic point of view, the pessimist sees the overall process of project implementation and technology adoption in agriculture biased towards wealthy people so that the poor are made worse off. The rich get richer while the poor get poorer resulting in social unrest and a decidedly unsustainable food system. The key relationship according to this framework is that technologies, policies and institutions are biased in favor of wealthy farmers who have unequal access to assets to begin with. Their income rises when they adopt the improved technologies while the income of non-adopting farmers fall, many agricultural workers are displaced and some of those who remain, suffer from overexposure to poisonous chemicals (Winkleman, 1998; Kerr and Kolavalli, 1999).

Finally, in impact, evaluation of a rural development project, another decisive discourse regarding success is whether the impacts are maintained after the project is completed, or in short, whether the project is sustainable (GTZ, 2008). Sustainability is seen as a result of the impact on sustainability of the production system where the project is implemented and of a long-term duration of the impact, even after the termination of the projects. Typically, sustainable projects are those designed and financed to build local capacities and to develop the ability of local people to manage and utilize the development activities themselves, that is institutional and empowerment supports (Clayton et al., 1998; Uphoff, 1989; McAllister, 1999) . The capacity building is particularly viewed as very important for sustainability and many institutions such as GTZ, World Bank, UNDP, etc.

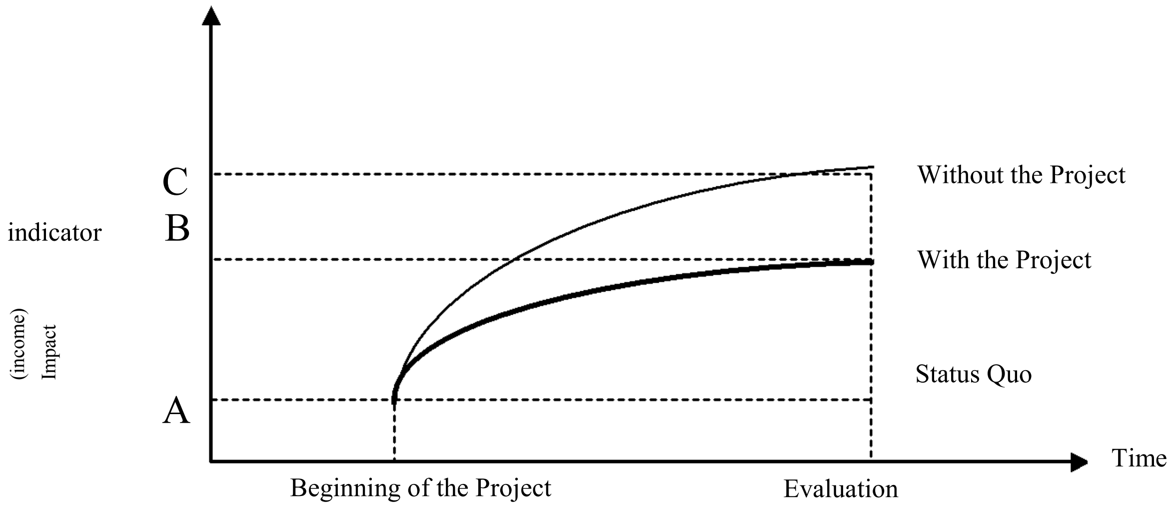

Figure 1. Illustration of project impact (Bauer, 2000).

have directed their supports towards more technical assistance to achieve better capacity building of local people (Rudovist and Woodford-Berger, 1996; GTZ, 2008).

METHODS AND ANALYSIS

Theoretical and empirical modelling

Methods for impact evaluation provided in the literature include systematic comparison, indicator trend function, econometric models and more complex system modelling (Bauer, 2000; Yabi, 2004). To estimate direct changes in agricultural productivity when the participation in project changes, the study focussed mainly on econometric models to evaluate the impacts. Supposing that *IP* is an index of projects and *Y* represents agricultural productivity, then if a unit change in index *IP* induces α unit change in *Y*, then:

$$\partial Y / \partial IP = \alpha \quad (1)$$

By taking an integral of both sides of the equation (1), we obtain:

$$\frac{\partial Y}{\partial IP} dIP = \alpha\, dIP \quad (2)$$

It is evident from equation (2) that *Y* can be a function of *IP* and the general mathematical form of the regression model is expressed as:

$$Y = f(X_1, \ldots, X_n, IP, Z_1, \ldots Z_m, \mu) \quad (3)$$

Where, μ is the error terms supposed to be a $N(0,\sigma^2)$, the $X_1, \ldots, X_n$ are production inputs and $Z_1, \ldots, Z_m$ other explanatory variables such as economic, social or human capital variables, etc.

Considering its computational ease and extensive use in many studies, the Cobb-Douglas functional form is applied to Equation (3) to estimate the impacts of participation in projects on agricultural productivity. The empirical model estimated in this paper can be specified as:

$$\ln(y_i) = \alpha + \kappa_1 \ln(LAND_i) + \kappa_2 \ln(LABOR_i) + \kappa_3 \ln(CAPI_i) + \beta IP_i + \lambda_1 PRO_i + \lambda_2 AGE_i + \lambda_3 SEX_i + \lambda_4 EDU_i + \lambda_5 ALPH_i + \lambda_6 TEN_i + \varepsilon_i \quad (4)$$

Where:

1n(.) = the natural logarithm;
i = the i^{th} farmer;
y_i = the value of agricultural productivity expressed in FCFA/ha(FCFA is the local currency for Benin. 1 =655 FCFA).

The productivity is computed for major cultivated crops such as maize, cotton, cassava, nuts, beans and yams. LAND is the overall cultivated area in hectare (ha) while LABOUR, the total family labour used is expressed in man-days per ha and CAPITAL, the total capital used in FCFA per ha. The total capital is calculated as the total amount of input expenditures (seed, fertilizer, pesticide, hired labour, etc.). PRO is a dummy variable representing the project type; PRO = 1 if the project is integrated and 0 if it is single activity project; *AGE* is the age of the farmer (year); *SEX* is a dummy variable expressing the sex of the farmer; SEX = 1 for a man and 0 for a woman; EDU is a dummy education variable; EDU =1 if the farmer is formally educated and 0 if not. ALPH is a dummy informal education variable; ALPH = 1 if the farmer had received informal education and 0 if not; TEN is a dummy variable of land tenure; TEN = 1 if the cultivated land is secured and 0 if not. Socio-economic and demographic variables that were essentially measured in this study as dummy variables can accordingly not be logged.

The *IP* are indicators of agricultural projects at a beneficiary level. By the nature of the approaches employed during the project implementation in the study zone, most local people had the opportunity to participate in several projects at the same time without any restrictions. In order to appreciate the presence of the projects at a beneficiary level, two indicators, relative to the projects in which each stakeholder was involved, were computed, namely: contact index *(IC)* and goal achievement index *(IS).* The *IC* is expressed as the sum of contact frequency at stakeholder level and mathematically defined as:

$$IC_i = \begin{cases} 0 & \text{if the farmer } i \text{ was involved in no project} \\ \sum_{k=1}^{n} f_{ki} & \text{if farmer was involved in } n \text{ projects; n = 1, 2, …, p} \end{cases}$$

Where; IC_i represents the contact index of stakeholder *i, f_{ki}* the frequency of contact this stakeholder *i* made per week with the team of the k^{th} project, *n* the number of projects in which he participated.

As defined, the contact index considers only the frequency of contacts with the beneficiaries. It fails to take into account success in achievement of activities that were implemented through projects. Conversely, the goal achievement includes the overall success in achievement of objectives and activities of the projects, and thus computing its index could help in appreciating these aspects at the beneficiary level. As suggested by Sarbeck (1994), the utility value of the projects can be defined as:

$$UA = \frac{1}{\sum_i g_i} \sum g_i * GA_i \qquad (6)$$

Where; *UA* is the utility value with 0<*UA*<1, g_i the grading or weight and GA_i the achievement of goal i.

By introducing in equation (5) the utility value computed in equation (6), it is possible to define the goal achievement index *(IS)* as:

$$IS_i = \begin{cases} 0 & \text{if the farmer } i \text{ was involved in no project} \\ \sum_{k=1}^{n} UA_k \cdot f_{ki} & \text{if farmer was involved in } n \text{ projects; n = 1, 2, …, p} \end{cases} \qquad (7)$$

Where; IS_i represents the goal achievement index of stakeholder *i*, UA_k the utility value of the *kth* project in which he was involved as defined in equations (6). The f_{ki} and n are defined as in equation (5). The ε_i are the error terms and the κ, α, β and λ are parameters to be estimated. α is the origin ordinate, the κ gives the elasticities of the productivity with respect to the corresponding farm- supplied factors {(excluding land(Since the productivity is the output per unit of land, the parameter of land represents the return to scale)} and the λ the percentage increases in productivity in response to a unit increase in the related variables. The β are estimates of project indicators. According to a hypothesis of positive impact of agricultural projects on agricultural productivity, they are supposed to be positive and significant. From Equation (4), the elasticity of productivity ε_{IC} and ε_{IS} with respect to *IC* and *IS* can be thereby computed as:

$$\varepsilon_{IC} = \frac{\partial Y / Y}{\partial IC / IC} = \frac{\overline{IC}}{\overline{Y}} \frac{\partial Y}{\partial IC} = \beta_{IC} \frac{\overline{IC}}{\overline{Y}} = \beta_{IC} \overline{IC} \qquad (8)$$

$$\varepsilon_{IS} = \frac{\partial Y / Y}{\partial IS / IS} = \frac{\overline{IS}}{\overline{Y}} \frac{\partial Y}{\partial IS} = \beta_{IS} \frac{\overline{IS}}{\overline{Y}} = \beta_{IS} \overline{IS} \qquad (9)$$

Where; α_{IC} and α_{IS} represent respectively the parameters of IC and IS in Equation (4), $\overline{IC}$ and $\overline{IS}$ their means computed from the study sample. The elasticities ε_{IC} and ε_{IS} gives the percentage of variation in the impact due to 1% variation in the project indicator.

Study area and data

Datas were collected from two distinct socio-cultural locales of Benin (Adja and Nagot), where 20 selected agricultural projects were implemented. For the ‘with-without’ approach, Kerr and Kolavalli (1999) and Pitt and Khandker (1996) suggested the randomisation of the “with” and “without” groups selected for the study. According to the authors, if the sample is not drawn randomly, or if there are hidden relationships determining between - relationships of interest, the findings will be biased, that is, the statistics estimated for the sample will not represent those for the entire population. Therefore, representative samples of agricultural households were chosen by randomisation according to the number of projects in which they were involved. However, three stages of stratification were distinguished for prior to the final random sampling. In each socio-cultural area of the study zone, three villages were selected: one without a project, one with a single project and one with 2 or more projects. On the basis of this typology, three categories of households were identified for the study. The first concerned the “without project” group of households which had not participated in any development project. The second category involved “with one project” group of households that had participated in a single project. The third category of households was the “with two or more projects” group of households who had participated in two or more projects. In each of the identified villages, twenty (20) households were selected at random from each group. In total, a sample size of one hundred and twenty (20 × 3 × 2 = 120) was drawn for the study. As much as possible, the intensity of participation in agricultural projects remained the key criteria for selecting respondents for the randomisation between the two groups in each socio-cultural area. Data collected related to outputs, inputs such as labour, fertilizer, pesticides, etc. and socio-economic and demographic characteristics of producers (sex, age, education level and frequency of participating in projects).

RESULTS

Descriptive statistics of variables used in the models

The descriptive statistics showed on one side low indexes of contact *(IC)* with no significant difference for the two areas of the study zone. The fact is that the projects’ teams did not work with the stakeholders as frequently as supposed. At the same time, the farmers did not also respect the appointments that they got from the projects’ teams to work together. As a consequence, the effective frequency of meeting with the project teams

Table 1. Descriptive statistics of variables used in the models.

Qualitative variables	Adja area (N = 60)		Nagot area (N = 60)	
	Count	**(%)**	**Count**	**(%)**
Type of Project				
Not Integrated	23	57.5	14	35.5
Integrated	17	42.5	26	64.5
Total	40	100	40	100
Sex				
Woman	1	1.67	13	21.67
Man	59	98.33	47	78.33
Total	60	100	60	100
Education				
No	37	61.67	26	43.33
Yes	23	38.33	34	56.67
Total	60	100	60	100
Alphabetisation				
No	38	63.33	34	56.67
Yes	22	36.67	26	43.33
Total	60	100	60	100
Land security				
No	16	26.67	4	6.67
Yes	44	73.33	56	93.33
Total	60	100	60	100
Ratio variables	**Means**	**Variation coefficients (%)**	**Means**	**Variation coefficients (%)**
Age (year)	39.77	26.54	41.63	33.13
Contact Index (IC)	1.6	8.7	1.6	5.6
Goal Achievement Index (IS)	0.54	20.4	0.49	20.41
Cultivated Areas (ha)	0.65	54.00	2.81	67.45
Family Labour (man-day/ha)	86.71	54.56	63.88	51.68
Capital Used (FCFA/ha)	44,328.64	45.81	71,914.5	38.82
Productivity (FCFA/ha)	178,925.29	39.84	162,578.63	29.00

was lower than expected during the project design and the planning phase such that the indexes were as well low. Besides, the indexes of goal achievement (IS) were lower than those of contact. This result may be explained by a very poor goal achievement of these projects.

Conversely, the percentage of secured land remained very high in the Nagot area where lands were more available and fertile. Consequently, access to and conservation of land did not seem to have been a previous (prior to project implementation of projects considered in this study) problem of farmers in this area. This situation might explain the lower agricultural productivity in the Nagot area as compared to the Adja (Table 1). Since Nagot farmers found their soil to be still relatively fertile, they did not care much about modern cultural techniques diffused by the projects and continued to employ local methods of soil conservation.

With regards the use of inputs, land pressure was higher in the Adja area and agricultural households had an average of 0.65 ha of endowed land as compared to 2.81 ha in the Nagot area. In order to facilitate the adoption of modern technologies, Adja farmers utilized more family labour. However, they used less mineral fertilizers, pesticides and hired labour than farmers of the Nagot area, though, they produced more intensively. The situation could be explained by improved availability of and access to inputs in the Nagot area. Indeed, by producing more cotton, the existing agricultural policy that guarantees availability of and access to agricultural inputs to cotton producers favoured them. However, pro-

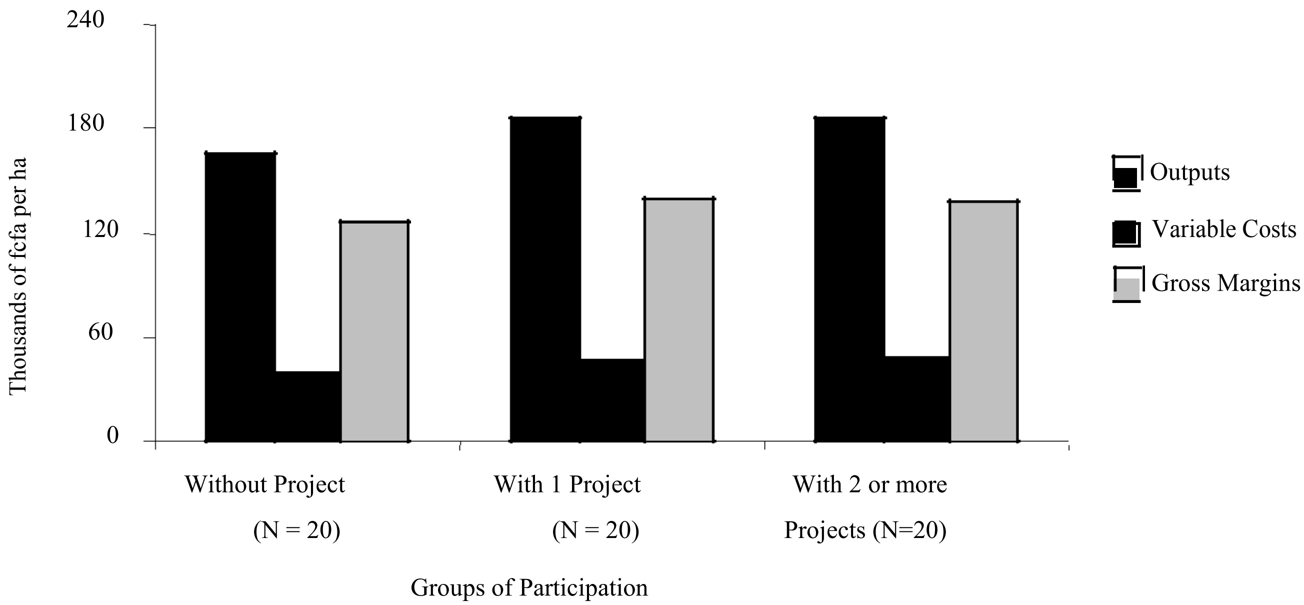

Figure 2. Outputs, variable costs and gross margins (in thousands of FCFA per ha) of agricultural production according to groups of participation in projects in the Adja area.

producers of the Nagot area had lower agricultural output than those of the Adja area (Table 1).

Groups of participation in projects and agricultural productivity

The analysis (ANOVA) of economic indicators of agricul-tural production showed no significant difference between their averages according to the groups of participation in projects in the two socio- cultural areas. Nevertheless, the farmers that participated in the projects had agricultural outputs higher than non-project participants. Even though, the variable costs of production were higher for project participants, their gross margins were also better in comparison with farmers without project. Additionally, the results demonstrated that farmers with a single project had higher gross margins than those with 2 or more projects (Figures 2 and 3). This could be due to the fact that those with a single project were more efficiently involved in the project than those with 2 or more projects. In addition, the effects of projects would be counter-productive to each other instead of being complementary. These results challenge the positive effects of simulta-neously implementing several agricultural projects at the same place and as well the necessity for farmers to con-currently participate in such multiple projects at the same time. But, an absence of significant difference between the groups of a participa-tion in projects does not expli-citly imply similar conclusions on impacts of project. For example, the absence of observed differences noted in this study may suggest that there is no correlation bet-ween groups of participation and the intensity of participation in projects.

The results also reveal statistically significant diffe-rences between the selected economic indicators in the two distinct locales investigated in this paper. Specifically, agricultural outputs and gross margins were significantly higher in the Adja area than in the Nagot area (178,925.29 FCFA/ha against 162,578.63 FCFA/ha and 134,596.64 FCFA and 90,664.15 FCFA; Figures 2 and 3). Nevertheless, a comparison of economic indicators with respect to areas of implementation fails to give the desired level of the impact of the projects on agricultural productivity in each area.

Impact of the projects on agricultural productivity

The results of the econometric models are generally sta-tistically significant and overall satisfactory for the two socio-cultural areas (Tables 2 and 3). The parameters of indicators *IC* and *IS* are found in all cases to be signi-ficant and positive. The results from this study show that the projects had positive impact on productivity. Indeed, they popularized and diffused modern production techniques, which allowed farmer beneficiaries involved in the project to significantly improve their productivity.

Enhanced capacity building resulting from training and group formation did strengthen the managerial capacities of producers. However, the regression results call for two types of analyses and interpretations.

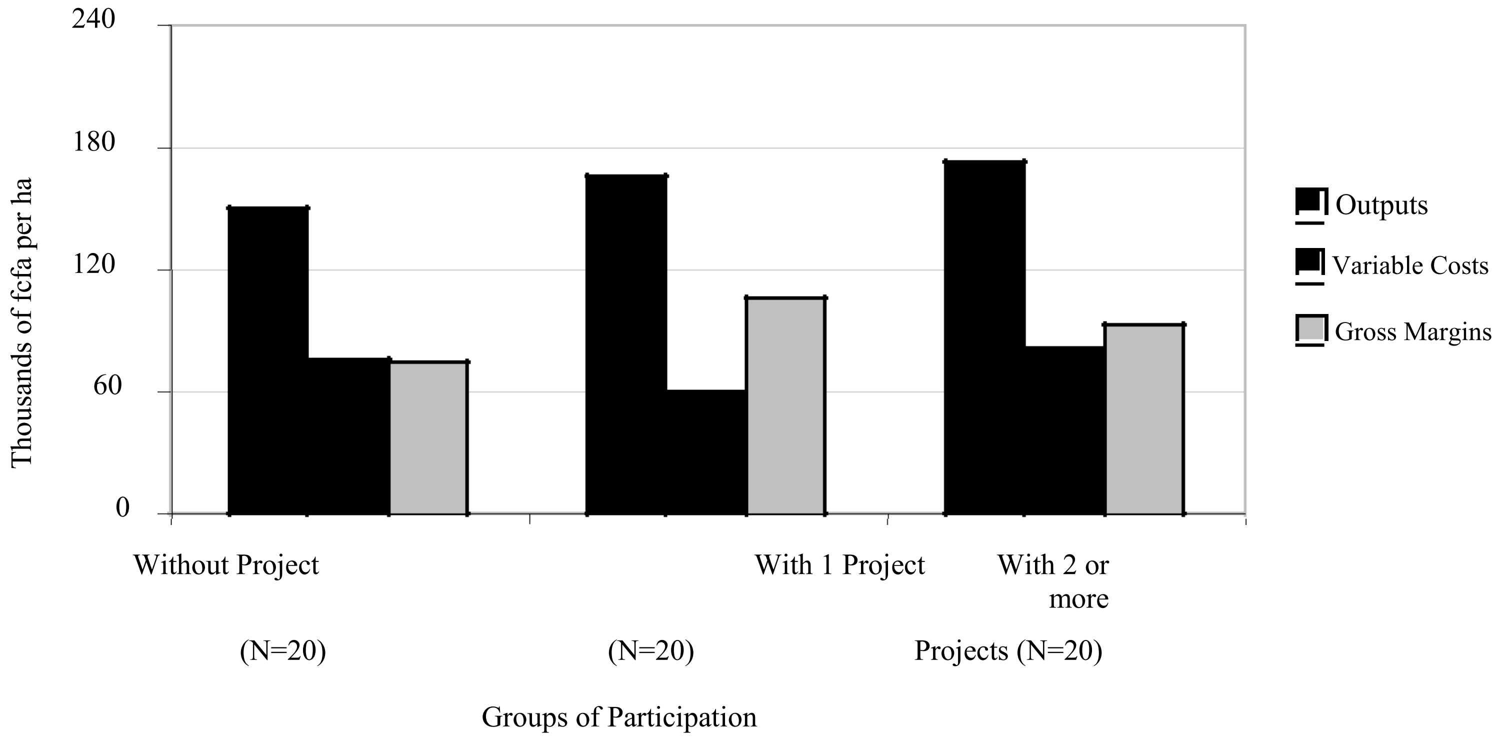

Figure 3. outputs, variable costs and gross margins (in thousands of FCFA per ha) of agricultural production according to groups of participation in projects in the Nagot area.

Table 2. Estimated parameters of factors affecting agricultural productivity in Adja Socio-cultural area.

Independent Variables	Notations	Model with IC		Model with IS	
		B	**Statistic t**	**B**	**Statistic t**
Constant	-	9.402***	14.882	6.112***	3.799
Family Labour (Man-day/ha)	LABOUR	0.120**	2.043	0.526***	4.057
Capital (FCFA.ha^{-1})	CAPI	0.145***	2.837	0.235*	1.802
Cultivated Area (ha)	LAND	0.018	0.420	0.048	0.460
Type of Project	PRO	0.08	0.976	0.187	0.836
Formal Education	EDU	0.135***	2.979	0.034*	1.968
Sex	SEX	-0.011	-0.163	-0.072	-0.424
Age (yr)	AGE	0.001	0.533	0.004	0.809
Informal Education	ALPHA	-0.081	-1.550	-0.071	-0.548
Land Security	TEN	0.251**	2.031	0.325	1.131
Contact Index	IC	0.639**	2.314	-	-
Goal Achievement Index	*IS*	-	-	3.616***	5.648
Adjusted R2		0.55		0.80	
F Statistic		9.17***		23.96***	
Observations Number		60		60	
Dependent Variable	y	Output (FCFA.ha^{-1})			
Elasticity of Productivity with respect to project indicators	ε	1.02		1.95	

*** Significant at 1%; ** Significant at 5%; * Significant at 10%.

Table 3. Estimated parameters of factors affecting agricultural productivity in Nagot Socio-cultural area.

Independent Variables	Notations	Model with IC		Model with IS	
		B	Statistic t	B	Statistic t
Constant	-	7.230***	14.420	5.519***	8.170
Family Labour (Man-day/ha)	LABOUR	0.080*	1.691	0.439***	4.500
Capital (FCFA.ha^{-1})	CAPI	0.364***	8.290	0.274***	4.149
Cultivated Area (ha)	LAND	-0.026	-0.870	0.131*	1.909
Type of Project	PRO	0.119*	1.823	-0.146	-1.105
Formal Education	EDU	0.111***	2.713	0.166*	2.166
Sex	SEX	0.179	1.224	0.323	0.903
Age (yr)	AGE	0.003	1.331	0.009*	1.886
Informal Education	ALPHA	-0.017	-0.383	-0.054	-0.463
Land Security	TEN	0.051	1.060	-0.023	-0.195
Contact Index	IC	0.448***	3.247	-	-
Goal Achievement Index	*IS*	-	-	2.181***	4.455
Adjusted R2		0.84		0.9	
F Statistic		36.15***		54.9***	
Observations Number		60		60	
Dependent Variable	y	Output (FCFA.ha^{-1})			
Elasticity of Productivity with respect to project indicators	ε	0.72		1.07	

*** Significant at 1%; ** Significant at 5%; * Significant at 10%.

Firstly, the impact level varied according to indicator considered. The computed elasticities from regression coefficients reveal that a variation of 1% of *IC* induced a variation of 1.02 and 0.72% in productivity in the Adja and the Nagot areas, respectively. When considering only the goal *IS* of the projects, a variation of 1% of *IC* induced a variation of 1.95 and 1.07% in productivity in the Adja and the Nagot areas, respectively (Tables 2 and 3). These results show that *IS*, which includes overall aspects of management and the achievement of objectives, provides the highest impact on productivity. In fact, besides the direct contact and working with beneficiaries, the projects helped their organizations to acquire organizational skills of inputs distribution and product commercialization. They also built rural infrastructures such as rural roads, informal education centres, hospitals, etc. These additional activities, which were considered in the goal achievement evaluation, also affected productivity indirectly. Using the IS in the regressions has helped to estimate full impacts of the projects on productivity of beneficiaries.

Secondly, the impacts were more pronounced in the Adja area than in the Nagot area (ε_{IC} =1.02 for Adja against ε_{IC} =0.72 for Nagot and ε_{IS} = 1.95 for Adja against ε_{IS} = 1.07 for Nagot; Tables 2 and 3). These results confirm the findings of our descriptive statistics, which showed that agricultural outputs and gross margins gained by producers in the Adja area are significantly higher than those of Nagot area producers. As previously explained, lands in Adja area had already reached levels of degradation with decline in fertility to such an extent that the adoption of modern production practices and techniques resulted in considerable positive effects on productivity. In contrast, since lands in the Nagot area remained relatively fertile and more available soil nutrients for crop growth, the impacts of modern production practices popularized by rural development projects, although positive, stay even lesser. Indeed, producers of the Nagot area still extended their cultivated areas, instead of intensifying their agricultural production to sustain the management of natural resources.

Conclusion

The positive impacts provided by *IS* of the projects at the beneficiaries' level suggest that a scenario of improvement on design, management and monitoring, which leads to better goal achievement of the projects may improve the impact. Therefore, agricultural policy in Benin should focus more on efficiency in designing, managing and monitoring rural development projects. In addition, the results show that the impact was strongly related to the locale where the projects were implemented. Consequently, policy makers in Benin sholud place emphasis on implementing projects at the level of small scale, in order to tackle effectively development problems encountered by target beneficiaries, in particular the poorest. Likewise, as suggested by various authors cited in the literature review section, it is important to support the sustainability of the impacts by strengthening capacity of stakeholders and their organizations. Thus policy implication, conception, design, implementation and monitoring of rural development projects should also include aspects related to capacity building of stakeholders such as: training, reinforcement of organisational and management skills, etc. These inevitably call for a combination of financial and technical support.

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