

## **IMPACT OF MICROPROJECTS PROGRAMME ON RURAL HOUSEHOLDS INCOME IN SWAZILAND**

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### **Abstract**

*The Microprojects programme (MPP) in Swaziland was formed to contribute towards poverty alleviation by a process of empowering Swazis through establishment of self-help infrastructure projects in the rural and semi-urban areas. The main purpose of the study was to assess impact of the Microprojects programme on rural households who are beneficiaries projects established through MPP. To determine the impact of the project, households were stratified into two groups consisting of beneficiaries and non-beneficiaries. The study employed household level data collected from the Hhohho region constituencies using a well-structured and pre tested questionnaires. Data were analysed using Logit analysis and propensity score matching (PSM). PSM was used to select a group of households that participated in the project and comparison groups that did not participate in the project. Logit analysis was used to identify factors affecting the dependant variable which was MPP projects participation. The results indicated that the independent variables such age, education and occupation were significant*

*and education were significant at 10% level while occupation was significant at 1%. The propensity score was matched to find the closest comparison group from a sample of non-beneficiaries. This indicated a mean gain of E 1056.90 per household beneficiary. The results indicate that Microprojects programme had a positive impact on household income.*

*Keywords: Impact assessment, propensity score matching, Microprojects, poverty alleviation*

## **INTRODUCTION**

Swaziland is rated 141 out of 187 on human development index, (UNDP, 2012) with the population of 1,186,056 and 40% of the population living below the poverty line and surviving on US\$1.25 per day (WFP, 2012). According to IFAD (2008), Swaziland is ranked as a lower middle-income country yet the income distribution within the country is extremely unequal. The wealthiest 10% of the population account nearly half the total consumption and there is an ever widening gap between urban and rural developments. About 84% of the country's poor people live in the rural areas, where per capita income is US\$1.25 per day which is about 4 times lower than in urban areas. Economic growth of Swaziland is sluggishly increasing due to the expanding population and increasingly uneven distribution of resources. Other factors aggravating poverty are the rise in unemployment, the HIV and AIDS pandemic and the fact that larger parts of the country are vulnerable to drought and climate change.

Thompson (2009), Most of the people who live on Swazi Nation Land survive on subsistence farming and also participate on off farm income generating activities. Dwellers on the SNL are still under abject poverty as a result a number of obstacles that prevent them from breaking through poverty. The low agriculture production of the land is attributed to a number of factors including difficult road access, poor linkages to market, limited availability of irrigation water and vulnerability, illiteracy and lack of access to financial institutions, climatic changes and lack of health facilities.

In 2000 the Government of the Kingdom of Swaziland formulated a poverty reduction strategy and action plan to tackle declining economic growth and increasing poverty. The government pledged to reduce poverty by more than half by 2015, and ultimately to eliminate it by 2022.

The specific objectives of the rural development strategy include legislation to improve smallholders' access to water, land and credit, support for the development of irrigation and the commercialization of agriculture, resettlement act to ensure that women are allocated land and obtain the same rights of land management as men, livestock development policy to improve

the management of livestock and access to markets and access to domestic water for all rural households. The government intends to pursue crop diversification and is improving economic conditions to encourage foreign investors. The target of development is the rural areas which its population is very poor and 40% rely on subsistence agriculture to feed their families and accumulate income for their households.

## **MICROPROJECTS PROGRAMME**

The purpose of the programme is to eradicate poverty through improvement of socio-economic status of the rural dwellers which therefore increase the consumption rate and standard of living the rural areas and peri-urban areas. The Government of Swaziland has made rural development its priority and has intensively engaged a number of International organizations on the verge to better the lives of rural areas. One of the unit that was established in 1988 is the Microprojects Programme which is semi- autonomous unit operating under the Government of Swaziland in the Ministry of Economic Planning and Development depending on Government funds to operate and achieve the mission of poverty alleviation.

According to MPP coordinator Mr T.S Mbingo, personal interview (2013), for the past 5 years the programme has evolved and attracted other donor funds from Japanese Government and Kellogg foundation. The Japanese grant supports the neighbouring care points for orphans and vulnerable children with food production back yard gardens. The Kellogg grant supports capacity building activities in beneficiary communities.

The mission of the Microprojects programme is to empower grassroots communities to develop themselves through full involvement of all levels of development. The programme is responsible for recommending the best projects from amongst many applications from communities, supervision and monitoring of new projects and evaluation of completed projects. Currently, the programme focuses on the integration of the funded projects at community level along with the Government of Swaziland. These different funding sources cannot be considered in isolation because they are linked within the same communities and other different opportunities for disbursement based on their overall objectives and flexibility in procedures.

To date, the programme operates both as development agency and as an implementing agency for governmental small scale capital projects. In fulfilling the community development function, the programme administers community driven projects, while fulfil the community development function, the programme administers community driven projects, where communities play a central role in project conception, implementation and sustainability.

The programme has conceived another role after being observed for the exceptional delivery of community projects. Three ministries, that are the Ministry of Education and training,

Ministry of Tinkhundla administration and development and Ministry of Health and social welfare, engaged the unit in the implementation of government capital projects.

According to the Ministry of Economic Planning and Development the objectives of Microprojects Programme are to:

- Targets poverty alleviation and promote rural socio-economic development with equal opportunities in accessing social facilities.
- Supports the process of capacity building and empowerment of beneficiary communities through the process of training and direct disbursement of funds for the establishment for self- help infrastructure.
- Promotes a proactive approach to development, where individual communities are continually challenged to reflect on their potentials and identify project areas, which will meet their natural and human resource capacities.

According to MPP Co-ordinator Mr T.S Mbingo, personal interview (2013), the unit for the past years has been able to use the participatory approach provide assistance in the education, health, agriculture and infrastructure sectors. It provides exceptional approach and expertise in project assessment, implementation, monitoring and evaluation following the stages of project cycle. High priority is given to poverty alleviation and promotion of economic development of rural areas, through enhancing the production of small scale-scale farming, promoting productive employment opportunities and provision of basic and economic infrastructure facilities as sustainable utilization of the service facilities. The expected outcome of the projects is improved standard of living and well-being of grassroots communities through the satisfaction of their needs.

The Microprojects Programme (MPP), therefore focuses on the community demand sectors are; Social infrastructure projects that include; (1) Education consisting of classes, teacher's houses, school water supply, fencing and tree planting, basic facilities for secondary schools, vocational and training facilities; (2) Health under which are health facilities, social welfare projects, self-help rehabilitation programmes, pit latrines, neighbouring care points; (3) Community facilities consisting of woman, youth groups, adult literacy centres, recreational centres; (4) Natural resource and environment, consisting of small dams and water conservation, forestry and grazing schemes; Rural water. Economic projects include; agriculture, rural electrification and industry and markets.

According to Microprojects (2013) projects are implemented when there have been awarded desk appraisal and field area assessment has been done. The Programme use the participatory approach to development, trains the project committee members who work

cordially with the Monitoring and Evaluation officers to equip the beneficiaries who should be involved in the implementing of the projects.

According to the Government of Swaziland (2006), there has been a meaningful decline in poverty between 2000/1 and 2009/10, that is, a poverty headcount from 69.0% to 63.0% compared to the continent's average of 44%. However, people living in abject poverty have not seen because of an improvement in their standard of living over the same period and the country is still rated 141/187 on human development index. Several entities were established in the country with the intention of poverty alleviation to about 30% by 2015 and eradicate completely by 2022. These include Microprojects programme, National emergency response council, World vision, African cooperative action trust just to mention a few.

The Government of Swaziland with the assistance of European Union injected funds for poverty alleviation in Swaziland through the Microprojects Programme, however there has been no impact assessments carried out to ascertain the contribution of the economic infrastructure projects in rural areas of Swaziland. This has resulted in meaningful decline to the funding of this programme. Consequently, some projects started under the programme have failed because of the lack of sustainability. Hence the need for this study. According to World Bank (2008) development policy states that projects implemented by the participatory approach for rural development need to be assessed for maintenance and sustainability done by the beneficiaries in the long run. The main objective of this paper is to evaluate the impact of Microprojects programme on rural households income and and also identify challenges faced by beneficiaries of the projects.

## LITERATURE REVIEW

Dixon and Macarov (1998) reported that poverty is the lack of basic human needs, such as clean water, nutrition, health care, education and shelter because of in ability to afford them. While McGreevy (1980) summarises poverty as a state of being unable to access sufficient income to provide certain physical or social needs. Poverty in rural areas is inflicted by several factors which include; illiteracy, unemployment, lack of land for commercial farming, unconducive climatic conditions, lack of water resources, poor infrastructure development which opens opportunities for investment.

According to the United Nations Organisation (2010), women are more vulnerable to poverty on contrary they can own land and manage their finances. However traditional systems discriminate against them and this limits their potentials to be able to be produce to sustain their households since most of the land is under Swazi Nation Land which its laws could not allow them to own their own land through kukhonta without a man or husband. Poverty is

concentrated mainly in areas where the climate is most unfavourable and agriculture productivity is lowest. Most of the people farm small plots, cultivating maize, keeping cattle, occasionally producing cash crop.

Rural Development is a veritable tool for fighting poverty and achieving economic prosperity at grassroots level it simply connotes a sustained improvement in the quality of life of rural people. According to Forsberg (2013), it implies consistency in micro and macro-economic, social, political, and cultural and technology are designed combined and implemented as an organic and dynamic whole for benefit of people. Furthermore, Keller (1996) describes development as ensuring conditions for viability and long-term sustainability of rural areas which is diversification of economic bases and improvement of living conditions and communication / infrastructure.

Rural communities in developing countries are still faced with challenges related to access to basic services, economic opportunities and some degree of incoherence with regard to planning related to rural-urban divide. Investments in environmental protection, rural infrastructure and in rural health and education are critical to sustainable rural development can enhance national well-being. Beyond meeting basic needs, investments must be linked to the potential to raise productivity and income. The vulnerabilities of the rural poor to the economic and financial crisis and to climate change and water shortage must be addressed. The success of sustainable rural development depends on, developing and implementing comprehensive strategies for dealing with climate change, drought, desertification and natural disaster elaborated Naude (1999).

### **Rural Development Projects**

Project planning and implementation involves proper planning to assess its feasibility and viability hence forth it undergoes certain stages which is identification after a constraint in that rural habitant realised, preparation of the project which include the feasibility study to assess if the project is doable in that environment to satisfy the need of the rural people in a large group the need of development project by the rural people.

The term project is usually applied to activities which are discrete in terms of time period, people involved, desired outcomes and perhaps above all the resources required explained Forsberg (2013). Projects usually have a clear parameter within which they are implemented and inclusion of elements such as the need for accountability, measurable impact and value of money have grown into importance projects implemented stated Naude (2013).

Lack of sustainability by either the Unit or the beneficiaries has resulted in lack of maintenance, tracking of the initial need for the project being met and implemented, project

committee disintegrating furthermore, those providing the latter understandably want the most impact for the resources allocated, as a result there has been an increase in the use of tools such as logical framework to help set clearly defined goals and means of assessing whether they have been reached. In an establishment of projects the goals to be achieved should be clearly defined, project in that community, the outputs and the activities needed to produce outputs.

The bottom line really is poverty alleviation consequent upon increase in rural productivity, income and diversification of rural economy, improvement in the supply of rural infrastructure (physical, social and institutional), enhancement of social participation and radical improvement of the quality of life of the rural people. The achievement of the Millennium Development Goals is at the centre of sustainable development. Sustainable rural development is vital to the economic, social and environmental viability of nations stated Yabi (2004).

The concept of rural development has been broadened in recent times to accommodate non – economic issues, especially those relating to social, political, legal, cultural and environmental issues. This broadened rural development concept, otherwise known as the sustained rural development, takes a long – term view of which meets the needs of the present generation without compromising the needs of future generation adds Afari-Sefa (2007).

Adenipekum (2013), a healthy and dynamic agricultural sector is an important foundation of rural development generating strong linkages to other economic sectors. Rural livelihoods are enhanced through effective participation of rural people and rural communities in the management of their own social, economic and environmental objectives by empowering people in rural areas, particularly women and youth, including through organizations such as local cooperatives and by applying the bottom-up approach .

Many farmers in the rural settings participate in farming as the activity of generating income for their households and also selling part of the produce for community settlers. There have been low agriculture production hence the people are struggling to meet their needs, this has been because they lack some of the resources to improve their productivity. Lack of clean water to use for domestic purposes, irrigations of their gardens, Lack of rural electricity to help them have poultry production, Lack of dip Tanks and the most problematic is the issue of degradation of grazing lands for their livestock and this is mainly because community owned land has no well-defined land for grazing.

Close economic integration of rural areas with neighbouring urban areas and the creation of rural off-farm employment can narrow rural-urban disparities, expand opportunities and encourage the retention of skilled people, including youth, in rural areas. There is considerable potential for rural job creation not only in farming, agro processing and rural

industry but also in building rural infrastructure, in the sustainable management of natural resources, waste and residues.

### **Approaches to Rural Development**

Participation is one of the recommended approaches to development according to World Bank (2005), it means the active involvement of communities in need assessment determination of priorities, planning and execution of projects. It also refers to the contribution of potential beneficiaries to the realization of a project on their own development and everyone has a stake in the intervention. Community-based participatory approach of development is described by IFAD (2012) as an umbrella term for anti-poverty programmes that involves beneficiaries in their design and management.

Participatory Approach to Development is one of the methods used in initiating development in rural areas. It has been recommended is the most effective method for development since it carries with it the feelings of ownership and builds a strong base for the interventions in the community. It reflects the mission and goals of grass roots and community based organization with its collaboration, inclusiveness and empowerment, a participatory approach embodies the ideals that form the foundations of most grass roots and community-based organizations.

Stock (1995) also states that development strategies in Africa have to focus more on issues of self- help and community self-reliance. These strategies do find with World Bank assertions about the need to foster participatory approaches to development.

### **Infrastructure Developments**

Infrastructure development refers to a project for, or related to the provision of infrastructure beneficial to a community such as the provision of water, electricity, fencing of grazing pastures and bridges. It is necessary for governments to have a department of infrastructure and planning because it plays a role in the strategic planning, coordination and provision of infrastructure to support the economic and social developments of rural communities. The department is also active in coordinating, planning and delivering industrial land, water, energy and transport infrastructure to support export industries, including agricultural produce. Additionally, the department brings together internal and external financial experts to develop preliminary value for money assessments, early stage budget forecasts and other project-related forecasts (government of Australia 2010).



### **Income generating projects**

According to a report submitted to the International Relations Department (1994) income generating projects are initiated to encourage households to develop small businesses which would allow them to become self-sufficient and their dependence on charitable agencies. The families should be provided with short-term loans to purchase needed tools and raw materials and given training in the particular business which they chose.

An article by the Friedkin Conservation Fund (2010) asserts that governments should recognise the necessity of finding long term solutions to alleviate rural poverty. They should strive to empower local communities with the means to see tangible benefits from their natural resources and the environment through sustainable income –generating projects. In order to have a lasting impact the main focus should be enabling people to help themselves through projects that provide sustainable livelihoods. Through income-generating projects governments will be able to focus on what the villagers do well and improve their capacity to be self-reliant and support themselves in the long term.

### **Impact of rural development projects**

A number of projects aimed at giving the maximum positive impact to that community, households for improved livelihood, socio-economic status, and production in agriculture for self- sufficiency. This improvement has a number of factors that need to be addressed in the communities to eradicate poverty. Rural development studies also show that development projects increase productivity in income in households which undoubtedly contributes to raised food availability and providing critically important benefits for extremely poor household that spend more than half their income on food Kerr and Kollavalli, (1999).

Finally 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 projects sustainable. Sustainability is seen as a result of the impact, even after termination of projects. Typically, according to Naude (2013) 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.

McAllister K. (1999), the capacity building is particularly viewed as very important for sustainability and many institutions such as World Bank, European Union, UNDP, etc have directed their support towards more technical assistance to achieve better capacity building of local people. According to Sahee (Sustainability of Agriculture, Health, Education and Environment), a project is likely to be successful if its beneficiaries took initiative and formulated

the outline of the project. According to Capacity building if done carefully during the setting up of the project is also vital in project success, other components are the fact that beneficiaries have to have a highly developed sense of ownership over the project, the project has to be managed by group with clear structures and is more successful if leadership is comprised of majority of woman, it has to include a system for financial sustainability such as saving scheme.

### **Project evaluation**

For decades, developed countries, international institutions such as the World Bank, European Union, UNDP, FAO as well as non-governmental organizations have been fighting ceaselessly 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 livelihoods to increase their income.

Kirkpatrick (1999), various appraisals of most projects have focussed on the cost-benefit or cost effectiveness approaches by assessing projects cost (monetary and non-monetary, in particular, their relation to alternative uses of the same resources and to 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 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 the activities of project have been provided and weather they satisfy all stakeholders.

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 policies, organizations, former experiences, etc) also have an influence on target groups evolution, appraisal approaches of projects seem to be difficult. This study will use with-without approach to measure the impact of the rural development projects. 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.

## **METHODOLOGY**

### **Research Design**

The unbiased data were collected using self designed and pre tested questionnaires. Data were analysed though Logit and the propensity score matching method to assess the impact of Microprojects Programme on rural household income. A list of comparison groups/schemes of 40 beneficiaries in communities were selected using with and without approach. The

comparison group was matched to the treatment group on the basis of predicted probability of participation given observed characteristics (propensity score) from the same economic environment as treatment group and same questionnaire was administered. The dependent variable is participation or non-participation in the projects by MPP through the provision of economic infrastructure which included Dip tanks, Markets and electrification. The independent variables that affected the impact included the sex, age, marital status, education, occupation, family size and the amount contributed by group/scheme members also descriptive analysis which includes the use of frequency, percentages, means, standard deviations.

### **Target Population**

The study was conducted in the Hhohho region of Swaziland which comprised of: Lobamba lomdzala, Mayiwane, Hhukwini, Motjane constituencies. The target population were the beneficiaries of the programme on economic infrastructure projects and those who have not benefited from the economic infrastructure projects. There were 200 beneficiaries of the economic projects in the Microprojects up-to-date list where by 40 (20% of total beneficiaries) beneficiaries were sampled and 40 non-beneficiaries were also sampled making a total of 80 respondents.

### **Study Area**

The Study area was the Hhohho region and constituencies with group/schemes of beneficiaries of Microprojects Programme. Hhohho is the mountainous region of Swaziland with the coolest temperature ranging from 19°C-28°C and with the highest annual rainfall of 1500mm annually. The major part of the region is comprised of rural area where poverty is dominant. The main activities occurring there includes administration (in the capital city) and agriculture is the major activity occurring in the rural area hence why it is considered the rural economy.

### **Sampling Frame**

The data were sourced from project sector for agriculture, rural electrification, industry and market in the communities using with-without approach. Adequate sample size of schemes with 40 beneficiaries and non-beneficiaries of the MPP projects. From the target population of 200 (total number of beneficiaries from the three types of projects funded by MPP 2007-2009 with the intention of improving their businesses in communities). Stratified random sampling method was employed on the basis of the three economic projects (Dip tanks, Rural electrification and Markets) and a sample of beneficiaries n=40 were reached for the study. 40 non-beneficiaries were also sampled using the convenience sampling method. The names of the schemes as per

project type were put into slips of paper which were grouped according to constituency and put into a container.

### **Data Collection and Analysis**

A structured survey instrument was used for data collection as to source primary data. Structured questions were elicited on the household demographics and socio-economic characteristics, source of income attributable to Microprojects, factors affecting participation, community participation on the programme and challenges faced within the schemes. Secondary data were obtained from the Microprojects Programme office.

Data were encoded on Microsoft excel and appropriate statistical analyses through statistical software (SPSS) was used. Limdep version 7.0 was also used to run the propensity scores were computed using binary Logit regression models. The dependent variable being project participation and independent variables as sex, age, marital status, education, occupation and amount contributed and the propensity score matching was used to determine the impact of the programme intervention by the use of income which is one of the indicators towards poverty alleviation that measures impact of a project intervention on rural households (Singh, 2009).

### **Specifications of the models**

#### **LOGIT**

A dependent variable, Y, is a binary variable taking the value 1 indicating project participation. Since Y is binary the error term in the model also binary. The independent variables (sex, age, marital status, education, occupation, family size and amount contributed) are used to measure probability of the variable.

Logistic regression was used to analyze relationships between a dichotomous dependent variable and metric or dichotomous independent variables. Logistic regression combines the independent variables to estimate the probability that a particular event occurred. Any given case, logistic regression computes the probability that a case with a particular set of values for the independent variable is a member of the modeled category.

Assessing the impact of an intervention requires making an inference about the outcomes that would have been observed for project beneficiaries had they not participated in the project (counterfactual). Here an ideal comparison group from the study was picked. The comparison group is matched to the treatment group on the basis of a set of observed characteristics or using the predicted probability of participation given observed characteristics

(propensity score). A good comparison comes from the same economic environment as the treatment group and was administered using the same questionnaire.

### Logit model

$$L_i = \ln\left(\frac{P_i}{1-P_i}\right) = \beta_1 + \beta_2 X_i + \mu_i$$

Where  $L_i = \ln\left(\frac{1}{0}\right)$  if a beneficiary

$L_i = \ln\left(\frac{0}{1}\right)$  if a non-beneficiary

$P_i = 1$ , if a beneficiary

$P_i = 0$ , if a non beneficiary

$X_i =$  independent variables

(Age, Sex, Marital status, Education, Occupation, Family size & contr. amount)

$\beta_i =$  Coefficients

$\mu_i =$  error term

### The steps in propensity score matching

The aim of matching is to find the closest comparison group from a sample of non- participants. Typically there are many potential characteristics that's when propensity square matching comes in. the main steps in matching is based on propensity scores as follows.

Step 1: obtain a representative sample survey of eligible nonparticipants as well as one for the participants.

Step 2: pool two sample and estimate a Logit model of program participation as a function of all the variables in the data that you are likely to determine participation ( sex, age, marital status, education, family size, occupation, amount contributed by a member of a group.

Step 3: created values of the probability of participation from the Logit regression; these were the propensity scores. Got a propensity score for every sampled participant and non-participant.

Step 4: some of the nonparticipant sample were excluded at outset because they had propensity score that is outside the range (typically too low) found for the treatment group. The range of the scores estimated for the treatment group had to correspond closely to that for the retained subsample of nonparticipants.

Step 5: for each individual in the treatment sample, you now want to find the observation in the nonparticipant sample that has the closest propensity score, as measured by the absolute difference in scores. This is called the nearest neighbour. Attained the nearest five neighbours.

Or you can instead use all the nonparticipants as potential matches, but weigh them differently according to how closely they are (Heckman and others 1998).

Step 6: Calculated the mean value of the outcome indicator (income monthly) for the five nearest neighbours. The difference between that mean and the actual value for the treated observation is the estimate of the gain due to the programme for that observation.

Step 7: Calculated the mean of the individual gains to obtain the average overall gain of the programme intervention.

## **EMPIRICAL RESULTS AND DISCUSSIONS**

### **Household demographic characteristics**

The findings indicated that there are more woman or primary care givers of the households who benefited from the projects with 52.5% and the least dependents of 12.5%. Contrary more head of the families are seen to have not benefited from the projects with 72.55 and only 5% were dependents in the study.

The findings further demonstrated indicated that there were more females with 65% on the beneficiary schemes which is also supported by existing literature that women dominate in rural development projects (Dlamini, 2011). While the non-beneficiaries in contrast to the literature had more males with 55% in the schemes.

The highest age group of the beneficiary of the projects is between the ages 41-50 years with 42.5% and the beneficiaries is 31-40 with 32.5% and the least age group in both respondents was the age group from 20-30.

Table-1 shows the marital status of the respondents. The results reveal that 32.5% of the beneficiaries, 42.5% of the non-beneficiaries in participating on the projects were married. This implied that married individuals participate more in the Microprojects economic infrastructure projects compared to the others.

Result demonstrates that most respondents have only attended educational institutions till primary school or through the adult learning programmes called Sebenta. Both groups had 40% respectively. This results satisfies the literature existing that most rural people are illiterate or have gone as far as primary education. 5% beneficiaries have attended educational level till tertiary and none on the non-beneficiary groups.

Result shows that both groups in the study indicated that respondent's occupation is farming with 50% beneficiaries and 55% non-beneficiaries. This findings are supported by literature existing that agriculture is the predominant activity occurring in the rural areas since Agriculture is considered the village economy (Singh, 2009). Very low percentage was shown on those working for government and private sectors on both groups.

Family size is a measure of the human capital that can be supplied by individual household. The results reveals that the majority of the beneficiaries with 57.5% and 62.5% on non-beneficiaries had household size ranging from 6-10 members

Table 1 shows that 52.5% were members of the project committee on the beneficiary group and 47.5% were not. Whilst 35% are part of the scheme committee and 65% are not part of the committee with the non-beneficiary group.

### **Source of income**

Result shows that 55.5% beneficiaries are involved in livestock farming which includes cattle, goats rearing which are kept for their milk they sale to communities and sell some livestock and poultry production (layers and broilers), 20% are producing crops like vegetables they sell to informal retailers in towns, 25% are active in off-farm activities which include sewing, salons, welding, handcrafts they sell to Gone rural and even in South Africa and also Vaseline production. Only 5% appeared to be earning their income from formal wages. The non-beneficiaries indicated 19.5% indicated that they earn income from crop production, 55.5% from livestock keeping, 22.5% from off-farm activities and only 2.5% are earning from formal wages.

### **Project type**

The study included dip tanks with 32.5%, rural electrification 22.5% and 45% on industry and market as beneficiary respondents in the study. While dip tanks with 52.5%, rural electrification with 17.5% and market and industry with 30% respondents in the study as the projects non-beneficiaries (Table-2).

### **Type of Contribution by the respondents**

Results in Table 3 indicated 50% of the beneficiaries contributed by both monetary and labour in the projects implementation while the non-beneficiaries have only contributed cash as per membership requirement of the scheme or group.

### **Factors affecting participation of respondents on the projects**

An a priori probability of  $p \leq 0.05$  was set at the data analysis. The age, occupation have a negative impact on the Logit and education has a positive impact. The results concur with these expectations, although sex, marital status, family size and amount contributed coefficients. The sample size was greater than 30 hence z (standard normal) rather than the t test.

Age and occupation of the respondents are significant at 10% while age is negatively related, education is fully related to participation in the programme. This implies that there is

more than 70% probability of elderly people not to participate in the projects (unit increase in age, the odds that members participate will decrease). Education is positively related participation on the projects (increase unit in education, the odds of members participating will increase). Likewise, the respondent's occupation has a negative relationship with their participation in the project, therefore more than 30% probability of respondent's occupation affect non participation to the projects.

Table 1. Socio economic distribution of the respondents

<b>Respondents</b>	<b>Beneficiaries</b>	<b>Non-beneficiaries</b>
	<b>Frequency (%)</b>	<b>Frequency (%)</b>
<b>Position in the household</b>		
Head	(35.0) 14	(72.50) 29
Care Giver	(52.50) 21	(22.50) 09
Dependent	(12.50) 05	(05.00) 02
<b>Sex of Respondent</b>		
Male	(35.00) 14	(55.00) 22
Female	(65.00) 26	(45.00) 18
<b>Age</b>		
20-30	(15.00) 06	(02.50) 01
31-40	(25.00) 10	(12.5.0) 05
41-50	(32.50) 13	(27.50) 11
51-60	(22.50) 09	(42.50) 17
61-70	(05.00) 02	(15.00) 06
<b>Marital status</b>		
Single	22.5 (09)	07.5 (03)
Married	47.5 (19)	57.5 (23)
Divorced	05 (02)	2.5 (01)
Widowed	25 (10)	32.5 (13)
<b>Education</b>		



Never	(07.50) 03	(22.50) 09
Primary/Sebenta	(40.00) 16	(40.00) 16
Secondary	(27.50) 11	(35.00) 14
High school	(20.00) 20	(02.50) 01
Tertiary	(05.00) 02	-
<b>Occupation</b>		
Housewife	(02.50) 01	(20.00) 08
Self-employed	(42.50) 17	(17.50) 07
Government	(02.50) 01	(05.00) 02
Private sector	(02.50) 01	(02.50) 01
Farmer	(50.00) 20	(55.00) 22
<b>Family size</b>		
1-5	(30.00) 12	(07.50) 03
6-10	(57.50) 23	(62.50) 25
10 & more	(12.50) 05	(30.00) 12
<b>Position held in group</b>		
Committee Member	(52.50) 21	(35.00) 14
Non- Committee member	(47.50) 19	(65.00) 26
<b>Source of Income</b>		
Crop production	(20.00) 08	(17.50) 07
Livestock keeping	(50.00) 20	(55.00) 22
Formal salary/wages	(05.00) 02	(02.50) 01
Off-farm activities	(25.00) 10	(25.00) 10

Table 2. Distribution according to Type of Project

Project type	Beneficiaries Frequency (%)	Non- Beneficiaries Frequency (%)
Dip Tank	13 (32.50)	21 (52.50)
Rural electrification	10 (22.50)	07 (17.50)
Market and industry	18 (45.00)	12 (30.00)
Total	40 (100.0)	40 (100.0)

Table 3. Type of Contribution of Members to Groups

Contribution type	Beneficiaries Frequency (%)	Non- Beneficiaries Frequency (%)
Monetary	09 (22.50)	40 (100)
Labour	11 (27.50)	-
Both monetary & labour	20 (50.00)	-
Total	40 (100.00)	40 (100)

Table 4. Community perception

Community Perception	Beneficiaries		Non- Beneficiaries	
	Mean	St. Deviation	Mean	St. Deviation
MPP training is relevant in giving out successful outcomes	1.075	0.267	1.350	0.483
MPP unleashes potential in oneself through their capacity building training	1.6	2.6675	1.500	0.641
Encourages community to take responsibility in their development	1.675	0.526	1.625	0.705
Improve collaboration	1.4	0.496	1.6	1.766
Empower communities to take initiative on their own development	1.5	0.599	1.675	1.789
Improves personal growth of beneficiary	1.725	0.599	1.925	0.694
Improves self-reliance	1.850	0.816	1.850	0.790
Acquisition of life skills	1.75	0.809	2.150	0.802
Ability to meet social obligations	1.7	0.687	2.750	3.3372
Provision of future opportunities	1.65	0.662	1.600	0.632
Trains leadership	1.5	0.555	1.7	0.648

Assist in community identification of project areas	1.4	0.446	1.7	0.670
Gives beneficiary sense of project ownership	1.225	0.480	1.475	0.751

Table 5. Factors affecting participation on the projects by respondents

Variable	Constant	S. Error	b/Sat. Er	P[z]>Z
Characteristics in numerator of probability [y=1]				
Constant	2.285	1.870	1.222	0.2216
Sex	0.920	0.620	1.484	0.1379
Age	-0.748*	0.399	-1.878	0.0604
Marital Status	-0.451	0.345	1.307	0.1912
Education	0.703*	0.362	1.942	0.0552
Occupation	-0.337**	0.107	-3.165	0.0016
Family size	-0.164	0.109	-1.506	0.1320
Contributed Am.	0.697E-04	0.345E-03	0.202	0.8400

\* Significant at 10%

\*\* Significant at 1%

### Total gains from Microprojects intervention

The propensity score was matched to find the closest comparison group from a sample of non-beneficiaries. Closest is measured in terms of observable characteristics which in the study was the households monthly income of the beneficiaries that is attributed to the programmes intervention. Income of the beneficiaries was subtracted from the mean monthly income from the scores to ascertain the gains in Emalangeni from the project intervention. This indicated a mean gain of E 1056.90 per households. The results reflect that Microprojctcs programme has a positive impact on the household income of beneficiaries (Table-6).

Table 6. Propensity Score of the Beneficiaries with non-beneficiaries

Income of Beneficiaries	Mean Income of Non-Beneficiaries	Gain from Intervention (E)
1200	975	225
2500	900	1600
1900	1150	750
2000	820	1200
900	666.7	233.3
7000	820	6180
1800	1425	375
1000	950	50
1500	920	580
1300	660	640

900	700	200
1300	650	650
<b>Total gain</b>		<b>126 833</b>
<b>Mean gain</b>		<b>1056.9</b>

## SUMMARY AND CONCLUSION

The study assessed impact of the Microprojects programme on rural households who are beneficiaries. To achieve these objectives, the study employed household level data collected from the Hhohho region constituencies. These data were analysed using descriptive statistics and inferential statistics. The PSM was used to select a group of households that participated in the project and comparison groups that did not participate in the project but had comparable socio-economic and biophysical characteristics as the selected project beneficiaries. To determine the impact of the project, the households were stratified into two groups the beneficiaries and non-beneficiaries.

The study was on assessing the impact of the projects on rural households in the Hhohho region of Swaziland and was only conducted based on a few economic infrastructure projects (dip tanks, rural electrification, market and industry) funded by Microprojects, therefore a more comprehensive study could be conducted using all other infrastructure projects funded by Microprojects. Such study could provide comprehensive information reflecting the impacts of all the projects implemented, thus would provide a very strong basis for Microprojects into prioritising projects to be funded.

Findings indicate that more women are beneficiaries of the Microprojects programme supporting Dlamini (2011), who found out that women dominate the agricultural development projects implemented by non-governmental organizations in the rural areas of Swaziland.

MPP is perceived to bring about change in attitudes of the rural people which therefore contributes to poverty alleviation of the rural areas. With the use of participatory approach and training they are able to unleash community members potentials so that they able to identify project areas to alleviate poverty.

According to the results, Microprojects has a positive impact on rural households of E 1056.90 as gain on income due to income sources attributable to Microprojects. Hence the null hypothesis is rejected in the study (There is no impact of Microprojects on rural households). The programme intervention plays a role in poverty alleviation of the rural households even though a gap exist among all the necessary resources for the beneficiaries to maximise income gain that will significantly improve their standard of living.

Challenges the beneficiaries face include internal and external conflicts of the community. Also the inability of members to contribute dues towards the sustainability of the infrastructure they benefited and this results in project failure and beneficiary standard of living retrogressing.

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