Utilization and Impact of Microfinance Credit on Performance of Microenterprises among Entrepreneurs who are Members of Self-Help Groups in Butere, Mumias, Matungu and Khwisero Sub-Counties, Kenya

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Abstract

Self-help groups (SHGs) are important institutions at the grassroots through which members can exploit existing institutional linkages with other stakeholders, within Kenya's development framework, to enhance their development activities. For instance, members of SHGs in Butere, Mumias, Matungu and Khwisero Sub-Counties, which comprised the study area, operate micro enterprise (ME) to generate employment and improve their incomes. However, shortage of capital, which is occasioned by the unwillingness of the mainstream financial institutions such as banks to provide credit to majority of entrepreneurs, remains one of the major obstacles to the performance of MEs. Thus, a number of microfinance institutions (MFIs) have developed 'special' ME-sector credit lending programmes, preferable for entrepreneurs in SHGs, in a bid to address the problem of shortage of credit. It is, however, not clear how such microfinance credit impacts ME capitalization, incomes and employment in the study area, which this study sought to investigate. Both descriptive and experimental research designs were used in this study to ascertain and assess the impact of microfinance credit on MEs variables. An experimental sample of 267 entrepreneurs who were members of SHGs and owners of credit-assisted MEs, located in 40 centres, was drawn using stratified and proportional random sampling techniques for study. Also, a control sample of 155 entrepreneurs operating MEs that were not credit-beneficiaries was drawn in the same 40 centres surveyed. Data, sourced mainly from entrepreneurs and MFIs, was collected using a semi-structured questionnaire. Observations, mini-case studies, and key informant interviews were also used to collect data. Data generated was analyzed using: descriptive statistics; and chi-square. The study found out that between the year 2008 and 2011, entrepreneurs had secured loans totaling Ksh 18,448,100 and spent 69.2 per cent of this amount on MEs. Microenterprise capitalization was the largest beneficiary, accounting for 79 per cent of the money spent on MEs. The loan money spent on MEs met 86.3 per cent of all MEs needs. Also observed was that credit impacted significantly on MEs incomes and capitalization levels, with insignificant impact observed on ME employment levels. The study recommends that MFIs and SHGs should come up with institutional control mechanisms to ensure appropriate utilization of credit so as to ensure better performance of MEs resulting from microfinance credit secured. MFIs can also consider lending to potential entrepreneurs who want to start new businesses in the informal sector, other than entrepreneurs already operating MEs. This will ensure significant growth in ME employment, as a ME performance indicator.

Keywords: Entrepreneurs, Impact, Microfinance, Micro enterprise, Enterprise Performance and Self-help Groups.

Abbreviations:
BFSA = Butere Financial Services Association.
CBOs = Community Based Organizations.
EFSA = Ekero Financial Services Association.
K-Rep = Kenya Rural Enterprise Programme.
KFSA = Khwisero Financial Services Association.
LDCs = Developing Countries.
MEs = Micro enterprises.
MFIs = Microfinance Institutions.
NGOs = Non-governmental Organizations.
PDP = Pioneer Development Programme.
SHGs = Self-help Groups.
SCDCs = Sub-County Development Committees.

1.0 Introduction and Background to the Research Problem

In many developing nations (LDCs) grassroots initiatives, and more particularly, the nexus between non-governmental institutions (NGOs) and self-help groups (SHGs), are conceived to be important alternative and or complimentary avenues through which people's development needs can be pursued. For instance, SHGs act as access points through which locally and externally available development resources can be mobilized or channeled for investment (ADF, 2005). This conception is partly based on the fact that, unlike grassroots initiatives, most government development programmes embody a planner's top-down view of rural development. Further, they do not actively involve the people at the grassroots and have failed to provide adequate resources to address people's development needs at the local level. Moreover, they exhibit centralized institutional management and bureaucratic procedures that cannot easily be accessed by the intended beneficiaries (DFID, 2000; ADF, 2005; and Waitathu, 2013).

Consequently, many development ideologies and practitioners prefer to reorient their approach to development and work with institutions at the grassroots. For instance, the mainstream neo-liberal and alternative ideologies to development, international trade agreements such as COTONOU, NEPAD, AGOA, as well as NGOs, and international funding and development agencies show greater concern and interest in working with institutions at the grassroots. (DFID, 2000; ADF, 2005; East Africa Law Society, 2005; UNDP, 2007/8). This is because grassroots institutions embrace the concept of territorialism, hence more relevant to the people at the local level (ADF, 2005). Also, they provide a level-playing field between sponsors of a programme and the beneficiaries in making decisions concerning development. This fosters greater self-reliance, while ensuring relevance, popular and wider participation and sustainability in development (UNDP, 2007/8). There are, therefore, calls from among scholars, especially those from developing nations for an alternative approach to development that focuses on self-determined grassroots development initiatives (ADF, 2005; UNDP 2007/8).

In Kenya, the successive five-year development plans, policy documents (Such as Poverty Eradication Plan (1999); Poverty Reduction Strategy Paper (2000); Economic Recovery Strategy for Wealth and Employment Creation (2004); and Vision 2030) and development approaches since independence (Such as Constituency Development Fund (CDF); Economic Stimulus Fund (ESF); Poverty Eradicating Fund (PEF); Community Development Trust Fund (CDTF); Local Authority Transfer Fund (LATF); Youth Enterprise Development Fund (YEDF); Women Development Fund (WDF); and Uwezo Fund) recognize the centrality of grassroots and popular participation in national development (The Link Writers, 2006; KIPPRA, 2007; Republic of Kenya, 2008a; and 2013a; Munuhe, 2013).

The Sub-Counties Development Committees (SCDCs) for Butere, Mumias, Matungu and Khwisero Sub-Counties in which the proposed study was conducted, acknowledge the role of MFIs/NGOs and SHGs as both agents and (alternative) avenues through which community development can be pursued (Republic of Kenya, 2013b). Agriculture is the backbone of the sub-counties' economies, employing over 60 per cent of the labour force (Republic of Kenya; 2002b; 2008c; and 2013b). However, employment level and per capita income in this sector are declining. Besides agriculture, other important sectors generating employment and incomes in the sub-counties are: fisheries, mining, public sector wage employment and urban self-employment (including commercial businesses and the informal sector). Comparatively, the informal sector comprising mainly micro enterprises (MEs), has continued to register remarkably higher levels of growth in employment and income generation for the increasing labour force than any other sector in the sub-counties (Republic of Kenya, 2002b; 2008c; and 2013b). However, shortage of credit is one of the major constraints to the development of the ME-sector (Republic of Kenya, 2002b; and 2008c; 2010). Shortage of credit is occasioned by the unwillingness of the mainstream financial institutions such as banks to provide the much needed capital to entrepreneurs in the informal sector. Thus, the SCDCs have intensified the call for the support and participation of the private sector and NGOs/MFIs in the provision of credit to the ME-sector (Republic of Kenya 2002b; 2008c; and 2013b).

Thus, a number of MFIs operate 'friendly' credit programmes in the sub-counties to assist preferably entrepreneurs who are members of SHGs access the much needed credit. Such credit is meant to grow their MEs, through increased business capitation, incomes and employment (Republic of Kenya, 2008b; and 2008c; BSFA, 2011; and EFSA, 2011). However, it is not certain how credit secured by entrepreneurs from MFIs was spent and its subsequent impact on MEs capitation, incomes and employment, which the study sought to investigate. Information generated by this study has important development implications especially for planners, policy makers, SHGs, MFIs and other stakeholders in Kenya's ME development framework.

2.0 Theoretical Framework

This study was informed by two theories: the Social Work and Community Radicalism Theory and Flexible Specialization Model. According to Midgley (1986a), the Social Work and Community Radicalism Theory espouses the emerging policy change in development approach, where development partners prefer working directly with grassroots institutions in development programmes. This is because grassroots institutions: embrace

the concept of territorialism and not space alone; and provide a level-playing field between sponsors' of a programme and the beneficiaries in making decisions concerning development (ADF, 2005). This fosters greater self-reliance, wider participation, relevance and sustainability in development (Galtung *et al*, 1980; Kitching, 1982; Bwalya, 1985; Midgley 1986**b**; and 1986**c**; and Pickering *et al*, 1995; UNDP, 2007/8). The reorientation in approach to development is partly in view of the fact that most government ministries, organizations and development programmes: embody a planner's top-down view of rural development; lack effective administrative frameworks to channel development resources at the local level; lack adequate funding due to reducing domestic revenue base; and are characterized by red-tape syndrome associated with government bureaucracy. Moreover, they are coupled with corruption and politics, which hinder the realization of government efforts in ensuring resources reach the needy for development purposes (Leys, 1996; Republic of Kenya, 1999; 2008a; and 2008b; CARE International, 2000; DFID, 2000; UNDP, 2005; Wanzala, 2012).

The flexible specialization model as originally proposed by Piore and Sabel (1984), explains how MEs utilizing either internal or external resources or both will develop characteristic changes besides compete, survive and grow in a competitive market. For instance, credit influences the decisions an entrepreneur is likely to take regarding operation of a business. According to the model, an entrepreneur can: (a) hire more raw materials and labour to increase output and income; (b) use multiple skills his/her employees have to diversify output and raise income; (c) invest in more assets and better forms of technology in order to raise and diversify output and improve on quality of products; (d) relocate to better sites conceived as either having a ready and bigger threshold for goods and services produced or create more space for expansion of business (Piore and Sabel, 1984). House (1981), Schmitz (1989) and Sengendo, *et al*, (2001) have used this model in studying MEs characteristic changes resulting from utilization of resources in the development of MEs. Thus, evidences of rising: output levels, technical efficiency, profitability, capital stock and employment of a firm are all indications of enterprise growth (Bannano and Brandolini, 1990). Thus, the two theories provide a framework that can be used to assess the effectiveness of policy change in development and the impact of credit on growth of MEs.

3.0 Assumptions of the Study
All MEs (whether credit beneficiaries or not) within a particular category of capitalization level and production line (service, trade and manufacturing) and located in a given market/town centre, were faced with similar socioeconomic and, business constraints. Further, lack of credit was one of the major constraints in the development and expansion of MEs owned by entrepreneurs, who were members of SHGs.

4.0 Study Area and Research Methodology
4.1 Study Area
Butere, Mumias, Matungu and Khwisero Sub-counties, which comprised the study area, are located in Kakamega County, Kenya. The four sub-counties cover a total area of 939.3km^2 (Republic of Kenya, 2002b; and 2008c; IEBC, 2012). In 2009, the sub-counties had an estimated total population of 601,796 people and an average density of 641 people per km^2, with an average annual population growth rate of 2.6% p.a (Republic of Kenya, 2002b; and 2008c; IEBC 2012). Agriculture is the mainstay of the sub-counties' economies, employing 65% of the labour force and contributing over 50% of households' incomes. However, both incomes and output in the agricultural sector are on the decline due to: reducing land sizes; continued use of traditional farming practices; and high cost of modern farm inputs. Thus, 65 per cent of the populations in the sub-counties are living below the nationally defined rural poverty income line of Ksh. 1,239 per month (CBS and ILRI, 2003; Republic of Kenya, 2002b; and 2008c). Other sectors that contribute to employment and incomes to the labour force are wage employment (5%), medium commercial businesses (6%) and informal sector activities (24%). The Informal sector, comprising mainly MEs, has continued to register remarkably higher levels of growth rates in both employment and income generation than any other sector (Republic of Kenya, 2002b; and 2008c; and Butere and Mumias Districts Labour and Statistical Offices, 2011). Mumias Town accounts for the lion's share of MEs (22%) due to its location within the sugar cane scheme and proximity to Mumias Sugar Cane Scheme (Republic of Kenya, 2002b; and 2008c)**.** Despite the important role the ME-sector plays in the economy of the study area, credit has been identified as one of the major constraints to its development. However, a number of MFIs have come up with 'friendly'credit programmes that target, preferably members of SHGs engaged in small scale farming and MEs (Republic of Kenya, 2002b; and 2008c; and Butere and Mumias Sub-counties' Trade and Social Services Offices, 2011).

4.2 Research Methodology
Both experimental and descriptive research designs were used in this study. First, the target population comprised 1779 members of SHGs (entrepreneurs) operating MEs located in 40 town/ market centres and who had secured and serviced (or were still servicing) loans from five MFIs (including: K-Rep, PDP, EFSA, BFSA,

and KFSA) between July, 2008 and July, 2011 (BFSA, 2011; EFSA, 2011; KFSA, 2011; K-REP, 2011; and PDP, 2011). Second, comprised a control group population, totaling 1033 enumerated (through an exploratory survey) owners of non-credit-assisted MEs (which were similar to sampled credit-assisted MEs) located in the same town/market centres surveyed where the target population was located. Mosley (2012) notes that a control group approach brings out clearly the quantitative impact of a project, in this case, credit in relation to non-credit influences. Such an approach ensures high precision, validity and reliability of sample estimates. Stratified and proportional random sampling techniques based on source of ME credit, town/market centre in which the MEs were located and type of ME, were used to select: (a) a sample size of 15% (267creidt-assisted entrepreneurs) of the target population, with 241 covered in the survey (representing 90% of the selected sample); and (b) a sample size of 15% (155 non-credit assisted entrepreneurs) of the control group population, with 137 covered in the survey (representing 88% of the selected sample). According to Kathuri and Pals (1993), Peter (1994), Chappell (2003) and Rice (2003), a sample size of 15%, if carefully and scientifically selected, can be objective and representative of the population.

Data was sourced from entrepreneurs and MFIs through a pre-tested and refined semi-structured questionnaire. Observations, mini-case studies and informal interviews with Key Informants provided additional primary data. Secondary data was sourced from: business records for owners of MEs; records kept by officials of SHGs; credit officers of MFIs; sub-counties' officials of the Ministry of Labour, Social Security and Services; and officials of local *Jua Kali* Associations. This was done through reviewing, photocopying and purchase of relevant official records. Data was analyzed through the use of descriptive statistics, cross-tabulations and chi-square statistic. Specifically, descriptive statistics were used to determine ME variables *before and after* receiving credit. Whereas, chi-square was used to test if selected ME variables between credit-assisted and non-credit assisted businesses were statistically different. Analysis and interpretations were both inductive, deductive and context bound. For instance, data was categorized and analyzed based on: source of credit (MFI); ME capitation levels; and ME category. This ensured effective and valid comparisons to be made between issues being investigated. Moreover, mini-case studies were done to shed more light on the individual entrepreneurs and MEs, regarding the impact of microfinance credit on MEs.

5.0 Data Analysis and Discussion of the Findings
5.1 Credit Secured
Between July, 2008 and June, 2011, credit-assisted entrepreneurs had secured credit totaling Ksh.18, 448,100 from four different sources, including banks, cooperatives, MFIs and informal credit sources such as groups' merry-go-round/ASCRAs/ROSCAs. MFIs accounted for 88.1% of the total credit secured, the rest of them being insignificant sources. Table 1 shows this information and other details related to the total loans secured.

Table 1: Total Loan Amounts Secured by Entrepreneurs from Different Sources.

Source of Loan	Number of Beneficiaries (% Total Entrepreneurs)	Average Number of Loans	Total Loan Amount (Ksh)	Source of loan Percentage of Total	Minimum Loan Borrowed (Ksh)	Maximum Loan Borrowed (Ksh).
Formal MFIs	241 (100%)	2.5	16,253,100	88.1%	2,500.00	590,000.00
Groups	111 (46.1%)	2.3	881,000	4.8%	2,000.00	6,000.00
Banks	9 (3.7%)	2.5	535,000	2.9%	5,000.00	100,000.00
Cooperatives	20 (8.3%)	1.8	779,000	4.2%	3,000.00	120,000.00
Total/Average	241 (100%)	2.5	18,448,100.	100.0%	3,750.00	69,750.00

Source: Computed from Survey Data, 2011.

5.2 The Expenditure Pattern of Credit Secured
Table 2 below shows the frequencies of entrepreneurs and percentage levels of total loan amounts (from all the credit sources) spent by entrepreneurs on MEs needs based on each formal MFI. Comparatively, there were

Table 2: Percentage Levels of the Loan Money Spent on ME Businesses Based on each Formal MFI.

Percentage Level of Total Loan Money Spent on ME Businesses	Formal MFIs and Frequencies of the Entrepreneur					Total Number of Entrepreneurs
	EFSA	PDP	KFSA	BFSA	K-REP	
0	3(3.8%)	1(1.4%)	0(0.0%)	0(0.0%)	0(0.0%)	4(1.7%)
10	0(0.0%)	0(0.0%)	0(0.0%)	2(7.7%)	1(5.0%)	3(1.2%)
20	0(0.0%)	3(4.1%)	1(2.4%)	1(3.8%)	0(0.0%)	5(2.1%)
30	2(2.5%)	4(5.4%)	0(0.0%)	3(11.5%)	1(5.0%)	10(4.1%)
40	1(1.3%)	5(6.8%)	1(2.4%)	0(0.0%)	1(0.5%)	8(3.3%)
50	8(10.1%)	13(17.6%)	3(7.1%)	3(11.5%)	3(15.0%)	30(12.4%)
60	5(6.3%)	10(13.5%)	4(9.5%)	4(15.4%)	0(0.0%)	23(9.5%)
70	17(21.5%)	15(20.3%)	10(23.8%)	5(19.2%)	3(15.0%)	50(20.7%)
75	1(1.3%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	1(0.4%)
80	20(25.3%)	11(14.9%)	13(31.0%)	3(11.5%)	3(15.0%)	50(20.7%)
90	1(1.3%)	1(1.4%)	8(19.0%)	0(0.0%)	0(0.0%)	10(4.1%)
95	0(0.0%)	0(0.0%)	1(2.4%)	0(0.0%)	0(0.0%)	1(0.4%)
100	21(26.6%)	11(14.9%)	1(2.4%)	5(19.2%)	8(40.0%)	46(19.1%)
Total	79(100%)	74(100%)	42(100%)	26(100%)	20(100%)	241(100%)
Average	74.1%	64.2%	73.9%	60.1%	74.0%	69.2%

X^2cal= 108459; df = 48. X^2c = 55.76. $X^2 > X^2$c. The difference is significant at 95% confidence level.
Source: Compiled from Survey Data, 2011

Significant differences (P<0.05) noted in the proportions of the total loan amounts spent on MEs variables among entrepreneurs who secured credit from various MFIs. Only 19.1% of the sampled entrepreneurs spent all the credit secured on their businesses. However, 1.7% of the entrepreneurs acquired credit but did not spend it on their businesses; rather on household and other personal needs. Overall, however, 69.2% of the total loan money acquired by entrepreneurs was utilized on their businesses, while 31.8% was spent on household and other personal needs. These findings confirm that MFIs lack proper mechanisms to: asses and determine entrepreneurs' business credit needs; and monitor how the loan money is utilized by entrepreneurs. Despite 31.8% of the loan money having been spent on household needs, Table 3 shows that 211 entrepreneurs, representing 87.6% of the sampled entrepreneurs, met over 50% of their business financial needs. More so, 77.6% met between 76-100% of their business financial

Table 3: Total Loan Percentage Level that Met Business Needs Based on Formal MFIs

Loan Percentage Interval Level that Met Business Needs	Formal MFIs					TOTAL
	EFSA	PDP	KFSA	BFSA	K-REP	
0-25	3(3.8%)	2(2.7%)	1(2.4%)	1(3.8%)	0(0.0%)	7(2.9%)
26-50	11(13.9%)	5(6.8%)	2(4.8%)	3(11.5%)	2(10.0%)	23(9.5%)
51-75	4(5.1%)	9(12.2%)	4(9.5%)	2(7.7%)	5(25.0%)	24(10.0%)
76-100	61(77.2%)	58(78.4%)	35(83.3%)	20(76.9%)	13(65.0%)	187(77.6%)
Total	79(100.0%)	74(100.0%)	42(100.0%)	26(100.0%)	20(100.0%)	241(100.0%)
Average	86.3%	87.1%	86.4%	87.9%	84.0%	86.3%

Source: Compiled from Survey Data, 2011

needs. Overall, 86.3% of the businesses financial needs of the sampled entrepreneurs were met. It is evident that substantial financial resources that are meant to improve MEs are, therefore, being diverted to other uses.

Table 4 shows the finer details of how the total loan money was spent by entrepreneurs on MEs and household needs. It is evident from Table 4 that significant differences (P<0.050) were noted in the way credit secured was spent by entrepreneurs on MEs needs based on credit source. Overall, however, entrepreneurs spent

Table 4: Expenditure Pattern of the Total Loan Money Secured by Entrepreneurs on ME and Other (Household) Needs Based on MFIs.

Total Loan Money Secured (in Kshs):		Formal MFIs					
		EFSA	PDP	KFSA	BFSA	K-REP	
		4,214,000	3,088,500	2,975,600	1,821,000	4,154,000	Frequenccy of Entre-preneurs
Percentage average Loan Money Spent on:	ME Business Needs	74.1%	64.2%	73.9%	60.1%	74.0%	
	Household Needs	20.3%	31.6%	24.7%	33.8%	23.0%	
	Other Needs	5.6%	4.2%	1.4%	6..1%	3.0%	
[I] Percentage Distribution of Loan Money Spent on ME Needs:							
	*Purchase of Business Stock	68.28%	63.12%	59.82%	62.63%	62.55%	237
	*Purchase of Tools	9.81%	9.93%	13.17%	14.23%	14.25%	9
	*Purchase of Raw Materials	3.63%	5.02%	3.24%	3.40%	2.00%	12
	Improvement in Products & Technology	5.00%	4.41%	6.73%	3.96%	6.20%	18
	Skills Training	0.00%	0.00%	0.00%	0.00%	0.50%	1
	Hiring More Labour	3.63%	1.60%	2.24%	0.00%	0.00%	15
	Product Diversifica-tion	5.00%	4.54%	4.00%	3.46%	6.50%	49
	Improvement, relocation or Purchase of Business Premise	5.5%	6.42%	3.46%	3.25%	4.00%	17
	Maintenance of Equipment	1.70%	1.08%	0.24%	0.38%	0.50%	13
	Loan Part-Repayment	0.75%	1.95%	4.19%	7.88%	1.00%	38
	Others	2.78%	0.54%	0.00%	1.15%	1.00%	10
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	237
[II] Percentage Distribution of Loan Money Spent on Household and Personal Needs:							
	Food	29.5%	20.10%	26.25%	24.24%	30.00%	112
	School Fees	39.55%	41.20%	35.02%	39.60%	59.16%	147
	Medical Expense	5.14%	7.38%	10.24%	8.57%	7.5%	45
	Marriage/ Dowry	0.00%	0.15%	2.19%	0.00%	1.66%	2
	Shelter/ House Repair	3.00%	0.00%	4.50%	2.90%	0.00%	10
	Funerals	1.47%	3.49%	0.78%	2.38%	0.00%	8
	Farming	10.00%	8.24%	6.20%	7.30%	0.00%	189
	Purchase of Land	0.00%	0.00%	7.92%	9.40%	0.00%	5
	Transport Business	5.30%	4.50%	2.95%	3.70%	0.00%	13
	Savings	6.07%	9.94%	4.75%	1.81%	1.68%	61
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	195

- Note: Percentages on expenditure rounded- off to the nearest decimal point.
- Σ* = ME Capitalization Level (Business resources directly used in output/income generation).
- MEs: X^2 = 65.064; df = 40; P = 0,046 (P<0.05). The difference in expenditure pattern is significant based on source of credit.
- Households: X^2 = 56.032; df = 36; P = 0.035 (P<0.05). The difference in expenditure pattern is significant based on source of credit.

Source: Compiled from Survey Data, 2011.

79.2% of the total credit spent on MEs on ME capitalization. Expenditure on hiring labour (2.4%), training in skills (0.5%) and maintenance of equipment (0.78%) were the ME variables that benefitted the least

from the total credit spent on MEs. Training in labour skills was undertaken by an entrepreneur in the artisan/manufacturing category, who was a loanee of K-Rep. Obulinji (2013) observed in his study that, unlike MEs in the trade category, those in artisan category require specific skills for one to be able to operate. Table 4 also shows how 31.8% of the total credit secured was expended by entrepreneurs on household needs, which was also significantly different (P<0.05).

5.3 Loan Repayment

Repayment of credit was done in monthly installments for all loan sources covered in the study, with the length of the repayment period varying depending on amount of credit secured. However, the minimum and maximum repayment periods were 6 and 36 months, respectively. Table 5 shows details of the total credit secured and repayment for all the credit sources covered in the study. MFIs had a longest repayment period than any other credit source. According to the Central Bank of Kenya (2007), a longer repayment period gives investors adequate time within which they can post better returns from their investments. Interest rates charged were between 15-20%

Table 5: Sources of Loans Secured from Different Sources and the Loan Balances as at June, 2011.

	Entrepreneurs' Sources of Loans	Total Amount of Loan Secured (In Ksh)	Average Loan Repayment Period (In Months)	Mean Interest Rate (In % p.a)	Total Loan Balance (In Ksh)	% of Total Loan Paid Back
1	MFIs	16,253,100	7.3	16.35	1,467,076	90.9%
2	SHGs'ASCRAs & ROSCAs	881,000	5.8	9.0	53,788.38	93.9%
3	Banks	535,000	6.0	15.0	18,000	96.6%
4	Cooperatives	779,000	6.0	12.0	1,329.60	99.8%
Total		18,448,100			1,540,193.98	91.7%

Source: Computed from Survey Data, 2011.

per annum for all credit sources, with MFIs charging the highest interest rate. Despite this, interest rates charged by MFIs are stable and do not fluctuate like those charged by banks (BFSA, 2011; EFSA, 2011; Central Bank Kenya, 2012). Further, it is evident from Table 5 that entrepreneurs, who had secured credit from MFIs between July 2008 and June 2011, had repaid 90.9% of the borrowed money. Further, it is evident from Table 4 that entrepreneurs used debt-conversion strategy in servicing part of the outstanding loans they had secured from MFIs, with an average of 3.2% of the total credit secured used for this purpose. Overall, entrepreneurs had repaid 91.7 per cent of the total loans secured from various credit sources by June, 2011.

5.4 Impact of Credit on MEs Variables

A number of scholars have recommended the use of a control group besides the experimental group in assessing the impact of microcredit programme on MEs performance (Gaile and Foster, 1996; Sebstad and Chen, 1996; and Mosley, 2012). The incorporation of a control group creates a controlled environment which takes care of extraneous influences such as market demand levels, competition, business site location, pricing of products, among others, in the assessment of the impact of credit on ME variables (Mosley, 2012). Thus, any significant changes in ME variables of credit-assisted MEs can be attributed to an external/exogenous or intervention factor, that is, credit. Alternatively, using time series data, target variables are compared *before versus after,* demonstrating "progress" or the lack of it in the time trend of specified indicators. However, this method is flawed by the impossibility to separate project and non-project influences. For instance, a microfinance project may claim to have achieved poverty reduction, which may be actually the result of many other factors, including: price fluctuations, changes in government policy, improved infrastructure, or simply better weather. To put it differently, a project in which the target group's income declines may still be a success if, without it, the outcome would have been worse (Gaile and Foster, 1996; and Mosley, 2012).

Chi-square and simple descriptive statistics were used to determine and validate the impact of credit on ME variables, that is, if there were any significant differences in ME variables *before and after* securing credit. Enterprise performance (impact) was measured through changes in: ME capitalization (in Ksh); ME income (in Ksh); and ME employment levels (in man-hours).

Three leads were used to determine the changes in ME variables. First, was to stratify MEs based on business category, i.e. whether in service, trade or manufacturing/artisan. Second, MEs were stratified based on location and capitalization levels in the baseline year 2008. The assumption is that MEs within a given town/market centre and capitalization category face more or less similar business characteristics and challenges. Hence, this makes comparisons made on MEs variables for any cohort of MEs between the experimental and

control group samples valid. Third, a comparative analysis of MEs variables (capitalization, income and employment) was done for both the experimental and control group samples.

5.4.1 ME Capitalization

Ondiege (1996) points out that ME capitalization can is determined by summing up the total value (in Ksh) of business assets (fixed and or current) and stock. This approach was adopted by this study in determining ME capitalization levels. Microenterprise capitalization was the only single ME variable that received the lion's share (79.2%) of the total credit secured by entrepreneurs. Table 6 indicates that the frequency of both MEs that were credit-beneficiaries and those that were not decreased with increasing capitalization levels in all ME categories. It is evident in Table 6 that in the baseline year 2008, 47%, 12%, 39% and 2% of credit-assisted MEs had their capitalization levels in the categories of between Ksh. 0-45,000, Ksh. 45,001-90,000, Ksh. 90,001-600,000 and Ksh. 600,001-3,000,000, respectively. Comparatively, MEs that did not receive credit had 50%, 17%, 32%, and 1% of their capitalization levels in the categories of between Ksh. 0-45,000, Ksh. 45,001-90,000, Ksh. 90,001-600,000 and Ksh. 600,001-3,000,000, respectively. Further, Table 6 indicates that MEs within the trade category for both experimental (2%) and control group (1%) samples had the highest levels of capitalization levels of between Ksh. 600,001-3,000,000. The high capitalization level among MEs in trade category is attributed to the fact that this group of MEs grows their business stock over time, unlike those in artisan and service sectors, which are (fixed) asset oriented with small but regular stock to run the businesses.

Using 2008 as the baseline year, Table 7 shows the changes in mean, minimum and maximum capitalization levels for both credit-assisted and non credit-assisted MEs. Differences in the mean, minimum and maximum ME capitalization for the two samples in the baseline year (2008) and the year 2011 were observed. Despite this,

Table 7: Changes in Capitalization Levels for Credit-Assisted and Non Credit-Assisted MEs – July, 2008 to June, 2011

Type of ME		ME Capitalization Levels (in Ksh)			
		Credit-Assisted MEs		Non Credit-Assisted MEs	
		Year 2008	Year 2011	Year 2008	Year 2011
Service	Mean	102,732.00	238,482.10	81,274.20	104,226.00
	Minimum	4,000.00	9,286.00	5,000.00	6,412.00
	Maximum	440,000.00	1,021,416.00	550,000.00	705,320.00
	N	41		31	
Trade	Mean	129,917.00	215,688.00	91,739.00	115,775.00
	Minimum	4,500.00	7,471.00	2,000.00	2,524
	Maximum	3,000,000.00	4,980,600.00	2,000,000.00	2,524,000.00
	N	175		93	
Artisan	Mean	65,120.00	156,808.00	62,282.30	79,410.00
	Minimum	9,000.00	21,672.00	14,000.00	17,850.00
	Maximum	200,000.00	481,600.00	200,000.00	2,055,000.00
	N	25		13	

Source: Computed from Survey Data, 2011

Table 6 shows that the highest percentage change in ME capitalization was registered among the credit-assisted MEs than those MEs that did not receive credit. It is observed from Table 6 that credit-assisted MEs operating in the service, trade and artisan categories registered 132%, 66% and 141% growth, respectively, in capitalization levels, with a mean growth of 113% for the sample. Microenterprises that did not receive credit in the service, trade and artisan categories registered 28.24%, 26.2% and 27.5% growth, respectively, in ME capitalization, with a mean growth of 27.3% for the sample. However, for the credit-assisted MEs, the highest growth was registered among MEs in the service and artisan categories. This can be explained by two reasons. First, entrepreneurs operating these categories of MEs spent a large amount of the credit secured on purchasing assets, tools and raw materials used in the production process. Second, these categories of MEs had lower levels of capitalization compared to MEs in trade category. Hence, any investments made would have significant ramifications on capitalization levels. Despite this, chi-square results (Table 6) show that credit received significantly impacted ($P<0.05$) on average value of ME capitalization levels for credit-assisted MEs. These research finding corroborate those of Bryden (1998) and Kibas (2001), who observed significant growth in ME capitalization resulting from credit invested in business. Further Table 6 shows that the percentage change in ME capitalization levels for credit-assisted MEs was relatively higher for those MEs in the lower than higher levels of capitalization.

5.4.2 ME Incomes

Table 8 gives a summary of the data on MEs net monthly income levels based on ME category and capitalization

levels. Generally, the average net monthly incomes generated from MEs increased with increasing capitalization levels in all the ME categories for both experimental and control group samples. Microenterprise income was significantly correlated with ME capitalization level among the credit-assisted MEs (P=0.000, P<0.05). However, 34.4% and of the credit-assisted MEs in the lower levels of capitalization of Ksh 0-15,000 and Ksh 15,001-30,00, had higher capital: income ratio than MEs in the higher levels of capitalization. The implication is that MEs with a higher capital: income ratios do not necessarily require higher levels of capitalization in order to generate higher net monthly incomes. It is even evident from Table 8 that the average percentage growths in average net monthly incomes were comparatively higher in MEs within the lower than higher levels of ME capitalization for both experimental and control group samples. Further, Table 8 shows that the highest mean percentage growth in incomes was registered among MEs within the trade category, yet Table 6 shows that this category of MEs registered the lowest growth in capitalization levels. This is because income for most MEs (in the trade category) depend more on the rate of business turn-over than the level of ME capitalization.

It is also evident from Table 8 that the highest percentage change in mean net monthly incomes was among the credit-assisted MEs, ranging between 31% and 35% across the three categories of MEs, with a mean of 32.8 per cent for the sample. Microenterprises that did not receive credit registered mean net monthly incomes that were between 19% and 22% for all categories of MEs (control sample), with a mean of 20.7% for the sample. Due to this percentage increases, Table 9 shows that the changes in lowest and highest net monthly incomes for credit-assisted MEs rose from Ksh. 3,000 to Ksh. 4,054 and from Ksh. 40,000 to Ksh. 53,120, respectively, while the highest mean net monthly income rose from Ksh. 18,492 to Ksh. 24,150. Comparatively, the changes in lowest and highest net monthly incomes for MEs that did not receive credit rose from Ksh. 4,000 to Ksh. 4,773 and from Ksh. 31,500 to Ksh. 37,589, respectively, while the highest mean net monthly income rose from Ksh. 11,144 to Ksh. 13,554.

Table 9: Changes in ME Net Monthly Average Incomes Levels for Credit-Assisted and Non Credit-Assisted MEs – July, 2008 to June, 2011.

Type of ME		ME Net Monthly Average Income Levels (in Ksh)			
		Credit-Assisted MEs		Non Credit-Assisted MEs	
		Year 2008 (Baseline Year)	Year 2011	Year 2008 (Baseline Year)	Year 2011
Service	Mean	13,285.00	21,642.50	11,144.20	13,554.00
	Lowest	5,500.00	7,304.00	4,000.00	4,865.00
	Highest	40,000.00	53,120.00	25,000.00	30,405.00
	N	41		31	
Trade	Mean	12,296.00	16,617.00	9,488.00	11,322.00
	Lowest	3,000.00	4,054.20	4,000.00	4,773.20
	Highest	35,000.00	47,299.00	31,500.00	37,589.00
	N	175		93	
Artisan	Mean	18,492.00	24,150.00	10,436.00	12,654.00
	Lowest	4,000.00	5,224.00	7,500.00	9,094.00
	Highest	30,000.00	39,180.00	25,000.00	30,313.00
	N	25		13	

Source: Computed from Survey Data, 2011.

Thus, Chi-square results in Table 8 show significant differences (P<0.05) in the growth of net monthly incomes between credit- assisted MEs and MEs that did not receive credit at all levels of ME capitalization for MEs in trade and service categories. Thus, given that the two samples of MEs face more or less similar business environment, then the significant differences in the growth of net monthly income can be attributable to credit received for the experimental sample. Bryden (1998) in her study of SHGs activities in Butere area observed similar research findings of increases in ME incomes resulting from credit received. However, the changes in the net monthly incomes were not significant (P>0.05) for MEs in the artisan category, though credit-assisted MEs in the artisan category registered relatively higher incomes. The insignificant growth was attributed to constraints and slow growth in market demand for businesses in this subsector, as cited by 70% of the entrepreneurs in the artisan category.

Research findings further indicate that itinerary businesses registered higher business incomes than immobile/site-businesses. Fourteen credit-assisted itinerary businesses within the trade category were covered in the survey (representing 5.8% of the experimental sample). Notably, 4, 6 and 4 of the itinerary MEs had their capitalization levels falling within Ksh. 15,001-30,000, Ksh. 30,001-45,000 and Ksh. 45,001-60,000, respectively. In the same order, they had a monthly mean income of Ksh. 12,000, Ksh. 16,000 and Ksh. 20,000 in the baseline year, 2008 and in the year 2011, their monthly mean incomes had risen to Ksh. 16,000, Ksh.

20,000 and Ksh. 25,000. Comparatively, these income levels were higher than incomes for other MEs in the respective ME capitalization levels within the trade category (Table 8). Itinerary traders cited in the case-studies that higher market turnover was the main factor in influencing higher incomes.

Findings from case-studies further showed that 30 out of the 33 entrepreneurs who registered impressive growth of over 40% in their MEs, acknowledged that: investing credit secured in business; sale of complimentary goods or provision of complimentary services; securing supply/business tenders; sale of consumer-tailored products, for instance through re-packaging; and reliance on business stock-credits (from major wholesale suppliers, especially Indian businessmen) were crucial leads in marketing and business survival strategies that impacted positively on MEs incomes. However, 8 entrepreneurs whose businesses performed dismally, registering below negative 40% ME income growth, acknowledged that diversion of the loan funds on household needs other than business, impacted negatively on MEs incomes. On average, the 8 entrepreneurs diverted 80% of the total loan money secured to non-business needs, yet the entrepreneurs had to service the loans secured using proceeds from their business.

5.4.3 ME employment
Table 10 shows the average levels and changes in ME employment levels between 2008 (baseline year) and 2011 (assessment year) based on ME category and capitalization levels. Further, data on employment levels is given for credit-assisted MEs and MEs that did not receive credit for the years 2008 and 2011.
Microenterprise employment volume (E) per month was determined by the formula:
$E = (L \times T \times D)$, where:

E = Total ME employment volume (in man-hours).
L = Total number of people employed in a given ME (numerical value).
T = Total number of hours worked per day.
D = Total number of days a ME business operates in a week/month.

It is evident from Table 10 that the average number of people (rounded off to the nearest whole number) who were employed in 2008 per credit-assisted ME in the service and trade categories was 3 and 2, respectively. Those employed in artisan category averaged 2 people per ME. For MEs that did not receive credit, businesses in the service, trade and artisan categories employed on average 2, 1 and 2 people, respectively, per ME. More so, when the actual numbers of people employed were considered, it is evident from Table 10 that MEs in the service employed the highest number of people, followed by MEs in artisan category and lower for those in the trade category. It is also evident from Table 10 that the actual number of people employed and the man-hours generated per month per ME increased with increasing business capitalization levels in all the three categories of MEs for both experimental and control samples. Analysis of data also found a significant correlation ($P<0.05$) between the number of people employed and ME capitalization levels for the credit-assisted MEs. Comparatively, the average numbers of people employed in 2011 per credit-assisted ME in the service, trade and artisan categories remained (almost) the same, that is, 3, 2 and 2, respectively. However, when the actual numbers of people employed were computed for credit-assisted MEs in the service and trade categories, they showed slight increases of 17.4% and 14.6%, respectively. No changes were registered in the average number of people employed for credit-assisted MEs in the artisan category. The average number of people employed in 2011 for MEs that had not received credit remained the same in the trade and artisan categories. However, for MEs in the service category, the average number of employees per ME increased from 2 to 3, registering an average growth of 10.5%.

Further, the average man-hours generated per month in 2008 from credit-assisted MEs in the service, trade and artisan categories were 1036, 406.5 and 574.32, respectively. Similarly, those generated from MEs that did not receive credit were 924.3, 292.5, and 524.92, respectively. It is also observed in Table 10 that the average man-hours generated per month increased with increasing ME capitalization levels. From the data on man-hours generated, it can further be observed for both samples of MEs that those in the service category generated higher man-hours than those in the trade and artisan categories. This is because MEs in the service category employed more people and operated for longer hours and days in a week than MEs in trade and artisan categories. When the total changes in man-hours for credit-assisted MEs were computed for 2011, it was observed that MEs in the service, trade and artisan categories were generating average monthly man-hours of 1223, 461 and 574.32, respectively. Thus, MEs in service and trade categories registered growth rates of 18.1% and 13.5%, respectively. Microenterprises in the artisan category registered no growth in man-hours generated per month. Contrary, for MEs that did not receive credit; the average man-hours generated in the year 2011 per month were 1024.9, 295 and 524.93 for MEs in the service, trade and artisan categories, respectively. In that order, this represented increases of 10.9%, 0.9%, 0%, respectively. Comparatively, Table 10 shows that the percentage increase in actual averages of the numbers of people employed per ME and the average monthly man-hours generated from all the categories of MEs and at all levels of capitalization, reveals that credit-assisted MEs generated higher values for both variables than MEs that did not receive credit. Further, the greatest share of the increase in

average number of people employed and the average man-hours generated per month was contributed by MEs within the higher levels of capitalization and in particular, MEs in the service and trade categories. However, there was no growth in employment in MEs within the artisan category.

Despite the above, Table 10 further shows that credit-assisted MEs registered a clear-cut edge over the increases in actual averages in the numbers of people employed and the average man-hours generated per month per ME in the three categories of MEs. However, chi-square analysis show that the changes in the values for both variables for the experimental and control samples were insignificant (P>0.05).

5.4.4 Other Impacts of Credit on MEs

Besides ME capitalization, income and employment levels, data elicited from the questionnaire and case-studies pointed to the fact that credit received by entrepreneurs indeed impacted positively on other ME variables, including:

1. Production technology and improvement in quality, as well as, diversification of products, especially for MEs in manufacturing/artisan category;
2. Skills training;
3. Expansion, renovation, relocation and purchase of business premise/stalls;
4. Maintenance of equipment; and
5. Management of enterprises.

However, it was not possible to carry out an in-depth study to ascertain the extent and magnitude to which credit impacted these ME variables. This was because of technicalities involved in measurement and collection of data on these ME variables. Hence, this is an area where future researchers can investigate.

6.0 Conclusion and Recommendations

From the foregoing discussion, several conclusions can be drawn. First, MFIs were the main sources of microcredit to members of SHGs operating MEs in the study area. Second, members of SHGs, who were entrepreneurs operating MEs and loanees of MFIs diverted substantial amount of total microfinance credit secured to personal and household needs other than using it to improve their businesses. Third, microfinance credit secured by entrepreneurs impacted significantly on both MEs capitalization and income levels. However, credit-assisted MEs seemingly do not generate significant growth in employment; rather they seem to be only important sources of employment to new entrants joining the informal sector activities.

Based on the findings of this study, a number of recommendations are made. First, MFIs need to come up with proper institutional mechanisms that can evaluate and assess entrepreneurs' credit needs besides, monitor and audit how entrepreneurs spend the loan money secured. For instance, initiating SHGs self-control mechanism, where each group member watches-over how other group members spend credit secured and file confidential reports with credit officers of MFIs. In addition, MFIs should train their credit officers on skills that will enable them to effectively monitor and audit credit usage by entrepreneurs. These will minimize diversion of credit to other uses other than business. Also, training and sensitizing group leaders and members on the importance of utilizing credit appropriately is recommended to ensure increased impact of microfinance credit on MEs. Second, MFIs need to source for cheaper financial resources from both internal and external sources for onward-lending to entrepreneurs in the informal sector at cheaper and affordable interest rate(s). Cheap credit will enable entrepreneurs retain more disposable ME income. Third and last, MFIs should consider lending to potential entrepreneurs in the informal sector, other than those already operating MEs. This will have a major effect on ME employment, as the existing units were found not to have significant impact on employment generation. However, investment in new businesses can be enhanced through corresponding expansion in market for MEs products and services so as to sustain new or potential investors in the market.

Besides the conclusion and recommendations above, data elicited from the questionnaire and case-studies pointed to the fact that credit received by entrepreneurs indeed impacted positively on other ME variables, including:

1. Production technology and improvement in quality, as well as, diversification of products, especially for MEs in manufacturing/artisan category;
2. Skills training;
3. Expansion, renovation, relocation and purchase of business premise/stalls;
4. Maintenance of equipment; and
5. Management of enterprises.

This study, however, was not able to carry out an in-depth study to ascertain the extent and magnitude to which credit impacted the above ME variables due to technicalities involved in measurement and collection of data. Hence, these are areas where future researchers can investigate.

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Table 6: Average Levels and Changes in ME Capitalization (in Ksh) Based on ME Category and Levels of Capitalization- July, 2008 to June, 2011.

Type of ME	Range Value of ME Capitalization Levels in July 2008 (in Ksh)	Frequency of MEs		Category Average ME Capitalization Levels in July, 2008 (in Ksh)		Category Average Percentage Change in Average Value of ME Capitalization 2008-2011 (in Ksh)		Category Average ME Capitalization Levels in June, 2011 (in Kshs)	
		Credit-Assisted	Non Credit-Assisted	Credit-Assisted	Non Credit-Assisted	Credit-Assisted	Non Credit-Assisted	Credit-Assisted	Non Credit-Assisted
Service	0-15,000	7	4	10,673.50	14,745.10	180.00%	27.50%	29,885.80	18,800.00
	15,001-30,000	6	8	20,483.20	29,477.10	143.33%	36.25%	49,636.90	40,162.50
	30,001-45,000	6	5	35,935.40	44,945.90	185.00%	48.00%	102,415.90	66,519.90
	45,001-60,000	1	1	52,142.90	59,166.70	250.00%	20.00%	182,500.20	71,000.00
	60,001-75,000	1	1	70,750.00	74,900.00	60.00%	0.00%	113,200.00	74,900.00
	75,001-90,000	4	2	85,120.80	89,085.10	107.00%	17.50%	176,200.10	104,675.00
	90,001-105,000	3	2	102,943.20	104,000.00	102.33%	25.00%	208,285.00	130,000.00
	105,001-200,000	5	6	180,846.70	190,807.70	37.00%	21.67%	247,760.00	232,155.70
	200,001-600,000	8	2	398,011.60	518,461.50	125.62%	30.00%	897,993.80	674,000.00
	600,001-1,000,000	-	-	-	-	-	-	-	-
	1,000,001-3,000,000	-	-	-	-	-	-	-	-
Total Average		41 (17%) -	31 (23%) -			- 132.14%	- 28.24%		
Trade	0-15000	18	23	12,590.00	14,396.70	121.70%	24.13%	27,913.14	17,870.60
	15,001-30,000	42	16	25,610.60	29,824.60	73.78%	17.81%	44,506.10	35,136.40
	30,001-45,000	20	6	40,645.60	44,971.20	82.90%	27.50%	74,340.00	57,338.30
	45,001-60,000	8	4	51,552.20	59,176.50	72.12%	27.50%	88,732.20	75,450.00
	60,001-75,000	3	4	62,756.51	74,864.60	51.67%	20.00%	95,182.80	89,837.50
	75,001-90,000	8	7	89,603.90	85,833.60	23.01%	21.43%	110,221.80	104,227.70
	90,001-105,000	5	7	95,761.90	104,207.70	131.00%	20.71%	221,210.00	125,789.10
	105,001-200,000	32	21	170,613.50	199,948.50	51.66%	27.62%	258,752.40	255,174.30
	200,001-600000	35	4	465,150.50	578,100.00	63.87%	25.00%	762,242.10	722,625.00
	600,001-1,000,000	2	-	997,313.80	-	19.50%	-	1,191,790.00	-
	1,000,000-3,000,000	2	1	2,657,148.00	2,000,000.00	35.00%	50.00%	3,537,149.80	3000,000.00
Total Average		175(73%) -	93(68%) -			- 66.02%	- 26.20%		
Artisan	0-15000	1	1	9,000.00	14,000.00	392.00%	20.00%	44,280.00	16,800.00
	15,001-30,000	9	4	25,063.21	29,299.60	112.22%	37.50%	53,189.14	40,287.00
	30,001-45,000	4	2	41,176.10	43,561.40	147.50%	42.50%	101,910.80	62,075.00
	45,001-60,000	2	2	52,530.90	59,608.70	115.00%	15.00%	112,941.40	68,550.00
	60,001-75,000	-	-	-	-	-	-	-	-
	75,001-90,000	2	2	72,381.00	88,565.20	110.00%	15.00%	152,000.10	101,850.00
	90,001-105,000	1	1	104,000.00	95,000.00	35.00%	00.00%	140,400.00	95,000.00
	105,001-200,000	6	1	180,076.30	200,000.00	73.67%	35.00%	312,738.50	270,000.00
	200,001-600000	-	-	-	-	-	-	-	-
	600,001-1,000,000	-	-	-	-	-	-	-	-
	1,000,000-3,000,000	-	-	-	-	-	-	-	-
Total Average		25(10%) -	13(9%) -			- 140.80%	- 27.5%		

Service – χ^2 = 47.604; df = 30; P = 0.022 (P<0.05). The differences in ME capitalization are statistically significant.
Trade - $\chi2$ = 1.179; df = 66; P = 0.000 (P<0.05). The differences in ME capitalization are statistically significant.
Artisan - $\chi2$ = 32.816; df = 20; P = 0.035 (P<0.05). The differences in ME capitalization are statistically significant.

Source: Compiled from Survey data, 2011

Table 8: Average Net Monthly Levels and Changes in ME Income (in Ksh) Based on ME Category and Levels of Capitalization- July, 2008 to June, 2011.

Type Of ME	Range Valued of ME Capitalization Levels in July 2008 (in Ksh)	Frequency Of MEs		Category Average ME Net Monthly Incomes Levels in July, 2008 (in Ksh)		Category Average Percentage Change In Average ME Net Monthly Income 2008-2011 (In Kshs)		Category Average ME Net Monthly Income in June 2011 (In Kshs)	
		Credit-Assisted	Non Credit-Assisted	Credit-Assisted	Non Credit-Assisted	Credit-Assisted	Non Credit-Assisted	Credit-Assisted	Non Credit-Assisted
Service	0-15000	7	4	11,319.70	7,316.30	38.57%	22.50%	15,685.71	8,962.50
	15,001-30,000	6	8	9,657.80	9,254.30	53.33%	20.62%	14,808.33	11,162.50
	30,001-45,000	6	5	13,310.50	8,121.00	27.50%	24.00%	16,970.83	10,070.00
	45,001-60,000	1	1	8,000.00	11,370.00	60.00%	25.00%	12,800.00	14,212.50
	60,001-75,000	1	1	12,500.00	17,280.00	30.00%	25.00%	16,250.00	21,600.00
	75,001-90,000	4	2	12,500.00	12,500.00	27.50%	17.50%	15,937.00	14,687.50
	90,001-105,000	3	2	12,200.00	21,500.00	16.67%	20.00%	14,233.33	25,800.00
	105,001-200,000	5	6	11,624.00	17,486.10	9.00%	20.00%	12,670.00	20,983.33
	200,001-600000	8	2	28,452.80	21,500.00	32.50%	20.00%	37,700.00	25,800.00
	600,001-1,000,000	-	-	-	-	-	-	-	-
	1,000,000-3,000,000	-	-	-	-	-	-	-	-
Total Average		41 (17%) -	31 (23%) -			- 32.80%	- 21.62%		
Trade	0-15000	18	23	6,495.30	5,296.60	37.77%	20.86%	8,948.61	6,401.50
	15,001-30,000	42	16	10,694.30	8,729.60	34.07%	20.62%	14,337.85	10,529.68
	30,001-45,000	20	6	18,121.50	10,420.80	51.25%	26.67%	27,408.75	13,200.00
	45,001-60,000	8	4	13,974.10	14,711.50	45.00%	16.25%	20,262.50	17,102.08
	60,001-75,000	3	4	5,717.50	10,605.30	53.33%	18.75%	8,766.67	12,593.75
	75,001-90,000	8	7	15,011.20	8,142.20	33.13%	10.71%	19,984.37	9,014.28
	90,001-105,000	5	7	12,771.20	9,255.10	18.00%	17.85%	15,070.00	10,907.14
	105,001-200,000	32	21	13,102.10	11,656.00	29.84%	21.67%	17,011.71	14,182.14
	200,001-600000	35	4	15,228.80	14,760.00	31.71%	20.00%	20,057.85	17,712.00
	600,001-1,000,000	2	-	24,136.40	-	37.50%	-	33,187.50	-
	1,000,000-3,000,000	2	1	25,652.20	31,500.00	15.0%	20.00%	29,500.00	37,800.00
Total Average		175(73%) -	93(68%) -			- 35.14%	- 19.33%		
Artisan	0-15000	1	1	12,500.00	8,000.00	30.00%	15.00%	16,250.00	9,200.00
	15,001-30,000	9	4	9,119.20	8,217.20	32.22%	23.75%	12,055.55	10,168.75
	30,001-45,000	4	2	11,385.70	8,000.00	31.25%	25.00%	14,943.75	10,000.00
	45,001-60,000	2	2	15,360.00	14,400.00	25.00%	25.00%	19,200.00	18,000.00
	60,001-75,000	-	-	-	-	-	-	-	-
	75,001-90,000	2	2	27,725.80	12,500.00	55.00%	20.00%	42,975.00	15,000.00
	90,001-105,000	1	1	31,500.00	12,500.00	10.00%	20.00%	34,650.00	15,000.00
	105,001-200,000	6	1	21,850.90	25,000.00	30.83%	20.00%	28,587.50	30,000.00
	200,001-600000	-	-	-	-	-	-	-	-
	600,001-1,000,000	-	-	-	-	-	-	-	-
	1,000,000-3,000,000	-	-	-	-	-	-	-	-
Total Average		25(10%) -	13(9%) -			- 30.6%	- 21.25%		

Service – χ^2 = 21.926; df = 13; P = 0.050 (P<0.05). The differences in MEs incomes are statistically significant.
Trade - $\chi2$ = 75.333; df = 25; P = 0.000 (P<0.05). The differences in MEs incomes are statistically significant.
Artisan - $\chi2$ = 6.232; df = 8; P = 0.621 (P>0.05). The differences in MEs incomes are not statistically significant.

Source; Compiled from Survey Data, 2011

Table 10: Average Levels and Changes in ME Employment (in man-hours) Based on ME Category and Levels of Capitalization- July, 2008 to June, 2011.

Type of ME	Range Valued of ME Capitalization Levels in July 2008 (in Ksh)	Frequency of MEs		Category Average Number of Employed in a ME in July, 2008		Category Average Man-hours (Employment Volume) Generated in a ME Per Month in July, 2008		Category Change in Average Number of People Employed and the percentage Change in Employment Volume in a ME Between July, 2008 and June, 2011		Category Average Man-hours Generated Per Month in July, 2011 and the Average Percentage Change in Employment Volume in a ME Between 2008 and 2011 (In Man-hours)	
		CA	NCA	CA	NCA	CA	NCA	CA	NCA	CA	NCA
Service	0-15000	7	4	2	2	5,096	2,912	2(0.0%)	2(0.0%)	5,096(0.0%)	2,912(0.0%)
	15,001-30,000	6	8	2	3	4,368	8,736	2(0.0%)	3(0.0%)	4,368(0.0%)	8,736(0.0%)
	30,001-45,000	6	5	3	2	6,552	3,640	3(0.0%)	2(0.0%)	6,552(0.0%)	3,640(0.0%)
	45,001-60,000	1	1	2	2	728	728	2(0.0%)	2(0.0%)	728(0.0%)	728(0.0%)
	60,001-75,000	1	1	4	3	1,456	1,092	4(0.0%)	3(0.0%)	1,456(0.0%)	1,092(0.0%)
	75,001-90,000	4	2	3	3	4,368	2,184	4(33.3%)	3(0.0%)	5,823(33.3%)	2,184(0.0%)
	90,001-105,000	3	2	3	3	3,510	2,340	4(33.3%)	3(0.0%)	4,679(33.3%)	2,340(0.0%)
	105,001-200,000	5	6	2	2	3,900	4,680	3(50.0%)	3(50.0%)	5,850(50.0%)	7,020(50.0%)
	200,001-600000	8	2	4	3	12,480	2,340	5(25.0%)	4(33.3%)	15,600(25%)	3,119(33.3%)
	600,001-1,000,000	-	-	-	-	-	-	-	-	-	-
	1,000,000-3,000,000	-	-	-	-	-	-	-	-	-	-
Total Average		41 (17%) -	31(23%) -	113 2.76	77 2.48	42,458 1,036	28,652 924.3	133(17.7%) 3.24(17.4%)	85(10.4%) 2.74(10.5%)	50,152(18.12%) 1223.22(18.1%)	31,771(10.9%) 1,024.9(10.9%)
Trade	0-15000	18	23	2	1	8,424	4,500	2(0.0%)	1(0.0%)	8,424(0.0%)	4,500(0.0%)
	15,001-30,000	42	16	1	1	9,828	3,744	1(0.0%)	1(0.0%)	9,828(0.0%)	3,744(0.0%)
	30,001-45,000	20	6	2	1	9,360	1,404	2(0.0%)	1(0.0%)	9,360(0.0%)	1,404(0.0%)
	45,001-60,000	8	4	2	1	3,744	936	2(0.0%)	1(0.0%)	3,744(0.0%)	936(0.0%)
	60,001-75,000	3	4	2	1	1,404	936	2(0.0%)	1(0.0%)	1,404((0.0%)	936(0.0%)
	75,001-90,000	8	7	1	1	1,872	1,638	2(50.0%)	1(0.0%)	2,808(50.0%)	1,638(0.0%)
	90,001-105,000	5	7	2	1	2,340	1,638	2(0.0%)	1(0.0%)	2,340(0.0%)	1,638(0.0%)
	105,001-200,000	32	21	2	2	14,976	9,828	2(0.0%)	2(0.0%)	14,976((0.0%)	9,828(0.0%)
	200,001-600000	35	4	2	2	16,380	1,872	3(50.0%)	2(0.0%)	24,578(50%)	1,872(0.0%)
	600,001-1,000,000	2	-	3	-	1,404	-	3(0.0%)	-	1,404(0.0%)	-
	1,000,000-3,000,000	2	1	3	3	1,404	702	4(33.3%)	4(33.3%)	1,872(33.3%)	936(33.3%)
Total Average		175(73%) -	93(68%) -	304 1.74	120 1.3	71,136 406.50	27,198 292.50	349(14.8%) 1.994(14.6%)	121(0.83%) 1.30(0.0%)	80738(13.5%) 461(13.5%)	27,432(0.9%) 295(0.9%)
Artisan	0-15000	1	1	1	1	270	260	1(0.0%)	1(0.0%)	270(0.0%)	260(0.0%)
	15,001-30,000	9	4	2	2	4,860	2,160	2(0.0%)	2(0.0%)	4,860(0.0%)	2,160(0.0%)
	30,001-45,000	4	2	2	2	2,160	1,080	2(0.0%)	2(0.0%)	2,160(0.0%)	1,080(0.0%)
	45,001-60,000	2	2	2	2	1,080	1,080	2(0.0%)	2(0.0%)	1,080(0.0%)	1,080(0.0%)
	60,001-75,000	-	-	-	-	-	-	-	-	-	-
	75,001-90,000	2	2	3	2	1,620	1,080	3(0.0%)	2(0.0%)	1,620(0.0%)	1,080(0.0%)
	90,001-105,000	1	1	3	2	624	540	3(0.0%)	3(0.0%)	624(0.0%)	540(0.0%)
	105,001-200,000	6	1	3	3	3,744	624	3(0.0%)	3(0.0%)	3,744(0.0%)	624(0.0%)
	200,001-600000	-	-	-	-	-	-	-	-	-	-
	600,001-1,000,000	-	-	-	-	-	-	-	-	-	-
	1,000,000-3,000,000	-	-	-	-	-	-	-	-	-	-
Total Average		25(10%) -	13(9%) -	58 2.32	26 2	14,358 574.32	6,824 524.92	58(0.0%) 2.32(0.0%)	26(0.0%) 2(0.0%)	14,358(0.0%) 574.32(0.0%)	6,824(0.0%) 524.92(0.0%)

Service – $\chi^2 = 37.466$; df = 35; P = 0.357 (P>0.05). The differences in MEs employment are statistically insignificant.
Trade - $\chi^2 = 1.005$; df = 68; P = 0.006 (P<0.05). The differences in MEs employment are statistically significant.
Artisan - $\chi^2 = 25.411$; df = 24; P = 0.384 (P>0.05). The differences in MEs employment are statistically insignificant.

CA = Credit-assisted, NCA = Non Credit-assisted

Source: Compiled from Survey Data, 2011