The Impact of Microfinance Credit on Micro Enterprises' and Entrepreneurs' Household Incomes and Livelihoods in Butere, Mumias, Matungu and Khwisero Sub-Counties, Kenya

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Abstract

Grassroots institutions such as self-help groups (SHGs) exploit existing linkages with other stakeholders, within Kenya's development framework, to enhance members' development activities and improve their livelihoods. For instance, entrepreneurs who are members of SHGs in Butere, Mumias, Matungu and Khwisero Sub-counties operate MEs to generate or diversify their incomes so as to improve their households' livelihoods. However, shortage of capital remains one of the major obstacles to the performance of ME-sector. A number of microfinance institutions (MFIs) provide 'friendly' credit to entrepreneurs; preferably those who are members of SHGs, to improve their MEs' income, entrepreneurs' household incomes and subsequently, their livelihoods. This study, therefore, aimed at assessing the impact of microfinance credit on incomes generated from MEs and subsequently, how it affects total incomes and livelihoods of entrepreneurs who are members of SHGs in Butere, Mumias, Matungu and Khwisero Sub-counties, Kenya. Descriptive and experimental research designs were used in this study to ascertain ME variables and assess the impact of microfinance credit on MEs incomes. A ample of 265 entrepreneurs, who were members of SHGs and owners of microfinance 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 who had not received credit was drawn purposely to aid in determining the impact of microfinance credit on MEs incomes. Data, sourced mainly from entrepreneurs and credit officers of MFIs, was collected using a semi-structured questionnaire. Mini-case studies and key informant interviews were also used to collect data. Data generated was analyzed using: descriptive statistics. The study found out that microfinance credit impacted significantly on MEs incomes, entrepreneurs' and households' incomes and subsequently their livelihoods. The study, therefore, recommends that the provision of microfinance credit to entrepreneurs operating MEs and who are members of SHGs, be strengthened in the study area as an avenue in the development of the ME-sector and improvement of entrepreneurs' household incomes and livelihoods at the grassroots.

Keywords: Entrepreneurs, Grassroots, Impact, Livelihoods, Micro enterprise, Microfinance Credit, Household Incomes and Self-help Groups.

Abbreviations:
BFSA = Butere Financial Services Association.
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) the linkages between grassroots institutions such as self-help groups (SHGs) and non-governmental organizations (NGOs) have been used as alternative and or complimentary avenues to mainstream government programmes in pursuing development at the local level (ADF, 2005). The linkages between grassroots institutions and NGOs have lead to a number of development activities at the local level, which create employment, incomes and improve peoples' livelihoods (DFID, 2000; and ADF, 2005). Alternative or complimentary approaches to development arise partly because the mainstream government development institutions or programmes suffer from inadequate development resources as a result of reducing government

revenue base. Moreover, they exhibit centralized institutional management and bureaucratic procedures that cannot easily be accessed by the intended beneficiaries. Hence, there is tendency to partly rely on donor funding and other stakeholders such as NGOs to bridge up deficits in development resources at the grassroots (Leys, 1996; DFID, 2000; ADF, 2005; and Waitathu, 2013). Thus, grassroots approach to development has received a lot of support from many development partners and institutions because it embraces bottom-up approach to development, while ensuring relevance, wider participation and sustainability in development activities (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 nexus and centrality of grassroots initiatives and NGOs 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 NGOs and SHGs as both agents and avenues through which community development can be pursued (Republic of Kenya, 2013b). Thus, to speed up development, the SCDCs have intensified the call for the support and participation of the private sector and NGOs in development of the sub-counties (Republic of Kenya 2002b; 2008c; and 2013b). The ME-sector, which employs 30% of the labour force in the sub-counties, is one of the sectors that have benefitted from the nexus between NGOs and grassroots initiatives in development. Other sectors contributing to employment and incomes to the labour force in the sub-counties are: agriculture, fisheries, mining and public sector wage employment. 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 (Republic of Kenya, 2002b; 2008c; and 2013b). However, there exists shortage of resources and in particular, financial credit to develop the ME-sector. This is because of the unwillingness on the part of the mainstream financial institutions such as banks to provide the much needed credit to entrepreneurs in the informal sector (Republic of Kenya, 2002b; and 2008c; 2010).

Thus, a number of MFIs operate 'friendly' credit programmes in the sub-counties to assist preferably entrepreneurs who are members of SHGs and operating MEs access the much needed credit. Credit provided is meant to grow MEs incomes and subsequently improve entrepreneurs' incomes and livelihoods (Republic of Kenya, 2008b; and 2008c; BFSA, 2011; and EFSA, 2011). However, it is not certain how credit secured by entrepreneurs from MFIs has impacted MEs incomes, entrepreneurs' households' incomes and subsequently, their livelihoods, which this study sought to investigate. The findings generated by this study have important development implications especially for planners, policy makers, SHGs, MFIs and other stakeholders in Kenya's ME development policy and improvement of rural livelihoods.

2.0 Theoretical Framework
This study was informed by two theories: the Social Work and Community Radicalism Theory (SWCRT) and Household Economic Portfolio Model (HEPM). 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 (Midgley, 1986a). This is because grassroots institutions embrace the concept of territorialism, hence more relevant to the people at the local level (DFID, 2000; and 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 (Galtung *et al*, 1980; Kitching, 1982; Bwalya, 1985; Midgley 1986**b**; and 1986**c**; and Pickering *et al*, 1995; UNDP, 2007/8). This is partly in view of the fact that most mainstream government development institutions and programmes suffer from inadequate development resources due to reducing government revenue base. Moreover, they exhibit centralized institutional management and bureaucratic procedures that cannot easily be accessed by the intended beneficiaries (Leys, 1996; Republic of Kenya, 1999; 2008a; and 2008b; CARE International, 2000; DFID, 2000; UNDP, 2005; Wanzala, 2012).

Besides the SWCRT, the HEPM provides a framework for assessing the impact of MEs incomes on entrepreneurs' total incomes and their livelihoods. The HEPM treats the sources of revenues and expenditures of a household as a portfolio to which a small business contributes to (Dunn and Valdivia, 1996). The HEPM looks at sources from which households acquire money or income and where they spend it to understand the (relative) impact of a programme and in this case, how growth in MEs incomes resulting from utilization of microfinance credit affect entrepreneurs' incomes and livelihoods (Dunn and Valdivia, 1996). Further, the HEPM is used to

compliment case studies in determining the impact of income from a project and in this case, MEs incomes on households' or entrepreneurs' livelihoods. Thus, the two theories provide a framework that was used to assess the impact of a grassroots initiative in enhancing development, the impact of microfinance credit on MEs incomes, entrepreneurs' households' incomes and subsequently, their livelihoods. Hence, the empirical findings generated by this study will help in further theoretical developments and understanding of community development issues.

3.0 Study Area and Research Methodology
3.1 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, with an average density of 641 people per km^2 (2002b; 2008c; and 2010; IEBC 2012). In 2011 the average population growth rate stood at 2.6 per cent p.a (Republic of Kenya, 2013b). Agriculture is the mainstay of the sub-counties' economies, employing 65% of the labour force and contributing over 50% of households' incomes, though both per capita income and output are declining in this sector. Thus, 65% 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; 2008c; and 2013b). Other sectors that contribute to employment and incomes to the labour force are wage employment (5%), medium commercial businesses (6%) and informal sector activities, comprising mainly MEs (30%). The ME-sector continues 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%). This is due to the location of the town within the sugar cane scheme and proximity to Mumias Sugar Company (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 for small scale income generating activities, preferably targeting members of SHGs engaged in small scale farming and ME businesses (Republic of Kenya, 2002b; and 2008c; and Butere and Mumias Sub-Counties' Trade and Social Services Offices, 2011).

3.2 Research Methodology
Descriptive and experimental research designs were used in this study. Out of a total of 120,950 registered members of SHGs in the sub-counties, 5500 members (4.55%) were loanees of MFIs (Butere and Mumias Sub-counties' Ministry of Labour, Social Security and Services Offices, 2011). The target population of study 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 June, 2011 (BFSA, 2011; EFSA, 2011; KFSA, 2011; K-REP, 2011; and PDP, 2011). To ensure high precision, validity and reliability of sample estimates, stratified and proportional random sampling techniques were used to select 267 entrepreneurs operating microfinance credit-assisted MEs. This represented 15% sample size, with 241 entrepreneurs covered in the survey, representing 90% of the targeted sample size. Stratification of microfinance credit-assisted MEs was based on: source of credit; town/market centre in which the MEs were located; and type of ME, i.e service, trade or artisan. The assumption is that all MEs 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 ME and entrepreneurs' characteristics as well as business constraints. According to Kathuri and Pals (1993), Peter (1994), Chappell (2003) and Rice (2003), a sample size of 15% when scientifically selected is objective and representative of the population. Besides the target population, the study incorporated a control group sample of 155 entrepreneurs drawn from a population of 1033, which was enumerated from the 40 town/market centres surveyed where microfinance credit-assisted MEs were located. This represented 15% sample size, with 137 entrepreneurs covered in the survey, representing 88% of the targeted sample size Entrepreneurs in the control group sample had not received credit and were operating businesses that were similar to the microfinance credit-assisted MEs. The purpose of the control group sample was to help determine the impact of microfinance credit on MEs incomes, with the assumption that MEs located in the same town/market centre faced more or less similar business challenges and constraints. Hence, any significant increase in MEs incomes for the target population would be attributable to microfinance credit received.

Data was sourced from entrepreneurs and credit officers of MFIs through a pre-tested and refined semi-structured questionnaire. Mini-case studies of entrepreneurs and informal interviews with key informants were also used to generate data. Secondary data was sourced from: entrepreneurs' business records; 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* (small businesses) Associations in the Sub-Counties. Secondary data was accessed through reviewing, photocopying and purchase of relevant official records. Data was analyzed through the use of descriptive statistics such as percentages, tables and graphs. This helped determine ME incomes *before and after* receiving credit, total entrepreneurs' incomes, entrepreneurs' households' incomes and how entrepreneurs' households' incomes were spent on consumption and investment needs. Analysis and interpretations were both deductive and inductive, as well as, context bound. For instance, data was categorized and analyzed based on: entrepreneurs' age and number of income sources. 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 MEs and entrepreneurs.

4.0 Data Analysis and Discussion of the Findings

The World Bank (1994) has indicated that determining the impact of a project on livelihoods of a target population is difficult. This is because of the difficulty in analyzing the fungibility associated with the expenditure of such income, especially where the beneficiary in question has more than one source of income. Despite this, the link between impact indicator (such as livelihoods) and process indicators (such as growth in ME capital, incomes, and employment, etc.) of a project may be well established and used in the assessment of the impact indicator (World Bank, 1994). Such an approach, according to the World Bank (1994), can to a great extent reduce the cost of data collection and save on time. However, in this study the Household Economic Portfolio Model (HEPM) was used to address the issue of fungibilty of income associated with the expenditure of MEs incomes and its impact on livelihoods, especially where the entrepreneur had more than one source of income. According to Dunn and Valdivia (1996), the HEPM can be used to compliment case studies in determining the impact of ME income on households' or entrepreneurs' livelihoods. The HEPM treats the sources of revenues and expenditures of a household as a portfolio to which a small business contributes. The HEPM looks at sources from which households acquire money or income and where they spend it to understand the (relative) impact of a programme and in this case, how growth in MEs incomes resulting from credit received affect entrepreneurs' incomes and livelihoods (Dunn and Valdivia, 1996).

Thus, the HEPM was used to determine: the percentage growth in microfinance credit-assisted MEs incomes between the years 2008 and 2011; the percentage contribution of MEs incomes to total entrepreneurs' incomes; and computation of entrepreneurs' households' incomes. Means, percentages, tables and graphs were then used to analyze how entrepreneurs' households' incomes were spent on consumption and investment items. Further, the expenditure patterns of entrepreneurs' households' incomes were analyzed based on entrepreneurs' number of income sources and age. Abdullah and Duasa (2010) point out that age and number of income sources/occupations are important factors influencing an individual's levels of income and how it is spent. Also, carrying out case studies helped determine and evaluate the relative strengths associated with ME income and other entrepreneurs' sources of income(s), if any, on their livelihoods. A total of 46 entrepreneurs were identified for case studies, with 5 entrepreneurs declining to be interviewed. Out of 41 entrepreneurs covered in case studies, 33 had registered good performance in their businesses, while 8 had performed poorly. Thus, case studies conducted with 33 entrepreneurs helped shed more light on the impact of incomes earned from MEs on entrepreneurs' households' livelihoods. Further, context based analysis of cases where the entrepreneur had secured credit and relied entirely on ME business as a source of income, helped shed light on the effect of credit on ME income and entrepreneurs' households' livelihoods.

4.1 Entrepreneurs' Number of Income Sources and the Percentage Contribution of MEs' Incomes to Total Households' Incomes

Table1 shows the frequencies of entrepreneurs for the target population based on age interval in relation to number of income sources. It is evident in the base year 2008, that 35.3% of the entrepreneurs relied entirely on ME business, contributing 100% of their total monthly incomes. However, 60.2% of the entrepreneurs had 1 additional source of income, with ME businesses contributing an average of 36.6% of their total monthly incomes. While 4.6 per cent of the entrepreneurs had two additional sources of income, with the ME businesses accounting for 29.4% of their total monthly incomes. Thus, MEs contributed significantly to entrepreneurs' total monthly incomes, even for those who were engaged in other income generating activities.

Table1: Entrepreneurs' Age Interval, Number of Income Sources and Percentage ME Income to Entrepreneurs' and Total Household Incomes.

Age Interval (in years)	Frequency Entrepreneurs Based on Number of Income Sources			Total	Total Entrepreneurs' Average ME Incomes Generated Per Month in 2008 (in Ksh)			Per cent Entrepreneurs' Incomes Contributed by ME Businesses Per Month in 2008			Per cent Entrepreneurs' Average Change in ME Incomes Per Month (2008-2011)		
	ME	ME+1	ME+2		ME	ME+1	ME+2	ME	ME+1	ME+2	ME	ME+1	ME+2
18-24	1(0.4%)	0(0.0%)	0(0.0%)	1(0.4%)	13,720	-	-	-	-	-	34.16	-	-
25-32	26(10.8%)	18(7.5%)	0(0.0%)	44(18.3%)	356,720	246,891	-	100%	40%	-	25.62	24.68	-
33-40	33(13.7%)	77(32.0%)	5(2.1%)	115(47.7%)	452,760	1,056147	69,078	100%	35%	30%	21.35	26.93	32.11
41-50	18(7.5%)	47(19.5%)	3(1.2%)	68(28.2%)	246,760	644,661	41,447	100%	30%	27%	18.79	30.29	35.82
51-60	7(2.9%)	2(0.8%)	2(0.8%)	11(4.6%)	96,040	27,432	27,631	100%	28%	25%	17.08	35.90	43.23
>60	0(0.0%)	1(0.4%)	1(0.4%)	2(0.8%)	-	13,716	13,816	100%-	50%	30%	-	47.12	56.81
Total Average	85 (35.3%)	145 (60.2%)	11 (4.6%)	241 (100%)	1,166,220.0	1,988,852.7	151,972.1	100%	36.6%	29.4%	23.4	33	42

Table 1 Cont'd

Per cent Entrepreneurs' Average Incomes Contributed by ME Businesses Per Month in 2011			Total Entrepreneurs' Average ME Incomes Generated Per Month in 2011 (in Ksh) – X1			Computed Total Entrepreneurs' Average Incomes Per Month in 2011 (in Ksh) – X2			Total Entrepreneurs' Average Incomes as a Percentage of Total Household income Per Month in 2011		
ME	ME+1	ME+2	ME	ME+1	ME+2	ME	ME+1	ME+2	ME	ME+1	ME+2
100%	0%	0%	18,407	-	-	18,407	-	-	95%	-	-
100%	47%	0%	448,112	307,824	-	448,112	654,945	-	80%	70%	-
100%	40%	33%	549,424	1,340,567	91,259	549,424	3,351,418	276,542	90%	80%	70%
100%	36%	35%	293,126	839,929	56,293	293,126	2,333,136	160,837	85%	75%	80%
100%	34%	30%	112,444	37,280	39,576	112,444	109,647	131,920	95%	90%	85%
0%	60%	35%	-	20,179	21,665	-	33,632	61,900	-	95%	90%
			1,421,513	2,545,779	208,793	1,421,513	6,482,778	631,199			
100%	43.4%	34.2%							89%	82%	81.25%

Table 1 Cont'd

Computed Total Entrepreneurs' Average Household Incomes Per Month in 2011 (in Ksh) – X3		
ME	ME+1	ME+2
19,376	-	-
560,140	935,635	-
610,471	4,189,273	395,060
344,854	3,110,847	201,046
118,362	121,830	155,200
-	35,402	68,778
1,653,203	8,392,987	820,084

Source: Computed from Survey data, 2011.

Note: ME = Microenterprise only.

   ME+1 = Microenterprise and one additional occupation.

   ME+2 = Microenterprise and two additional occupations.

   Other occupations/income sources included: - Government employee/civil servant.

           - Teacher.

           - Private sector employee.

           - Farming.

           -'Retired officer/pensioner'.

  $X2$ - $X1$ = Entrepreneurs average total incomes generated from other occupation(s).

  $X3$ - $X2$ = Household incomes generated by other household members other than the entrepreneurs.

The average percentage growth in MEs monthly incomes between the years 2008 and 2011 and their percentage contribution to total entrepreneurs' average monthly incomes were used to compute total entrepreneurs' average MEs monthly incomes in 2011 based on entrepreneurs' age categories and number of occupations. Also, entrepreneurs' proportions of their total incomes contributed by the MEs per month in the year 2011 were used to compute total entrepreneurs' average monthly incomes earned from all their occupations/sources of income. Moreover, information given by entrepreneurs concerning the percentage contribution levels of their total average monthly incomes to their total average households' monthly incomes was used to compute their total average households' monthly incomes. Deriving entrepreneurs' total average households' monthly incomes was based on the assumption that there could be other members of the households, such as the entrepreneurs' spouses and children, contributing to total entrepreneurs' households' incomes on a monthly basis. This could be in the form of income earned from their spouses' or children's occupations or remittances. Table 1 shows data on all these categories of entrepreneurs' monthly incomes. For instance, it is evident from Table 1 that in the year 2008 MEs generated a total of Ksh. 3,307,044.80 per month. This included Ksh. 1,166,220.00, Ksh. 1,988,852.70 and Ksh. 151,972.10 for entrepreneurs who relied entirely on ME business as their source of income, entrepreneurs with one and two additional sources of income, respectively, besides the ME business. In the same order, these incomes increased by 23.4%, 33% and 42%, raising the total MEs

incomes generated in the year 2011 to Ksh. 1,421,513, Ksh. 2,545,779 and Ksh. 208,793, respectively, per month. This gave an average increase of 32.8% of the total incomes generated by MEs per month for the experimental sample, raising it to a total of Ksh. 4,176,085 per month**.** These levels of total incomes generated by MEs for the three categories of entrepreneurs raised the percentage incomes generated by MEs, out of the total entrepreneurs' incomes, to 100%, 43.4% and 34.2% for entrepreneurs who relied entirely on ME business as their source of income, ME business with one and two additional sources of incomes, respectively. A comparative analysis of the increases in MEs incomes between the target and control group samples between the years 2008 and 2011 using chi-square shows that entrepreneurs operating microfinance credit-assisted MEs registered significant differences ($P<0.05$) in the growth of their MEs monthly incomes. This implies microfinance credit significantly impacted MEs incomes.

Further, total entrepreneurs' average incomes per month for the target population were computed based on the percentage contributions of MEs incomes to total entrepreneurs' incomes per month. Based on this computation, total entrepreneurs' average monthly incomes in 2011 were determined. It was established that entrepreneurs who relied entirely on ME business as their source of income earned a total of Ksh. 1,421,513 per month. While entrepreneurs who had one and two additional sources of income besides the ME business earned a total of Ksh. 6,482,778 and Ksh. 631,199, respectively, per month. The monthly incomes for the three categories of entrepreneurs amounted to a total of Ksh. 8,535,490. Total entrepreneurs' average household monthly incomes in the year 2011 were also computed based on percentage contribution of total entrepreneurs' average monthly incomes to total average households' incomes. Table 1 shows that entrepreneurs who relied entirely on MEs as the only source of income contributed 89% of their total average household monthly incomes. Those who had one and two additional sources of income besides the ME business contributed 82% and 81.25%, respectively, of their total average household incomes per month. This implies that on average, entrepreneurs did contribute a large proportion of income to their total average households' monthly incomes. However, other sources, i.e. from their spouses and or remittances from other family members and friends, though meager, did contribute some income to entrepreneurs' household monthly incomes. Taking entrepreneurs' total average monthly incomes per month as a percentage of total average household incomes, total entrepreneurs' average household incomes in the year 2011 were computed as shown in Table 1. Households where entrepreneurs depended entirely on ME business as their source of income generated a total household monthly income of Ksh. 1,653,203.Whereas, households in which entrepreneurs had one and two additional sources of incomes besides the ME generated total household monthly incomes of Ksh. 8,392,987 and Ksh. 820,084, respectively. Overall, entrepreneurs surveyed had a total household monthly income of Ksh. 10,866,274.

4.2: Expenditure Patterns of Entrepreneurs Total Households' Incomes.
A household can have two or more sources of income. It then becomes difficult to separately determine how income from each source is spent (Reardon *et al*, 1997; and Christopher *et al*, 2009). However, Dunn and Valdivia (1996) point out that one way to overcome this problem is to employ the Household Economic Portfolio Model. Kekar and Cho (1982) and Abdullah and Duasa (2010) have noted that individuals' age and number of income sources have a direct bearing on income levels and the way it is spent. For instance, as the number of income sources increase, it is likely that an individual's total income will also increase. Advancement in age is accompanied by changing individual's expectations, tastes and preferences, family or community roles and responsibilities. Thus, age and number of occupations affect the way individuals spent their incomes (Kekar and Cho, 1982; and Abdullah and Duasa, 2010). Hence, entrepreneurs' expenditure patterns of total household incomes for the target population were analyzed based on their age and number of occupations.
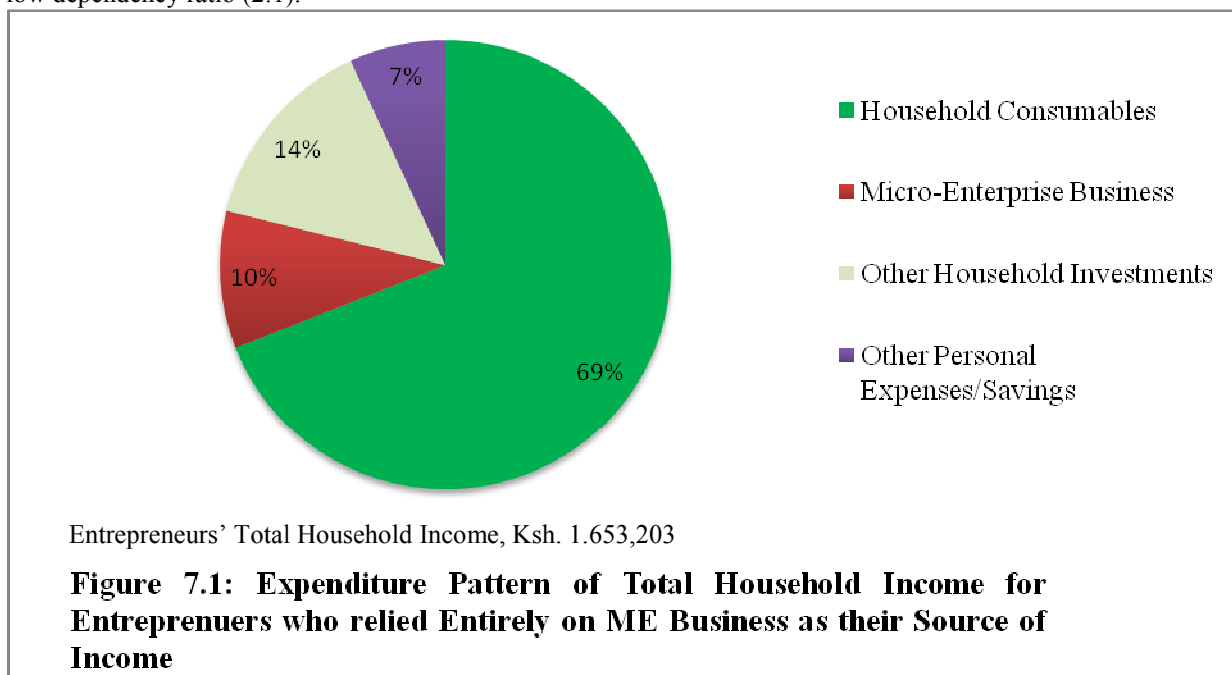
Table 2 and Figure 1 show expenditure patterns of households' income (Ksh. 1,653,203) in 2011 for entrepreneurs who relied entirely on ME business as their source of income. It is observed that entrepreneurs spent

Table 2: Expenditure Pattern of Total Households' Monthly Income for Entrepreneurs who relied entirely on ME Business as their Source of Income.

Age Intervals of Entrepreneurs Operating only ME Business (in Years)	Average Total Household Incomes Per Month (in Ksh)	Per cent Expenditure Patterns of Entrepreneurs' Total Household Incomes				
		Household Consumables	Micro-Enterprise Business	Other Household Investments	Other Personal Expenses/ Savings	Per cent Total
18-24	19,376	40%	20%	30%	10%	100%
25-32	560,140	70%	7%	18%	5%	100%
33-40	610,471	80%	8%	9%	3%	100%
41-50	344,854	85%	5%	10%	0%	100%
51-60	118,362	75%	10%	5%	10%	100%
>60	-	-	-	-	-	-
Total Average	1,653,203	70.0%	10.0%	14.4%	5.6%	100%
Per cent ME Income of Entrepreneurs' Total	100%					

Source: Computed from Survey Data, 2011

70% of their monthly household incomes on consumables. This included expenses on food, medical, school fees needs, among others. Of the total households' incomes spent on consumables, food accounted for 65%, while 20% was spent on school fees. Other household needs accounted for 15%. Overall, household consumables accounted for a larger share of the total households' incomes, particularly for entrepreneurs in age categories 25-32 years, 33-40 years, 41-50 years and 51-60 years who had higher dependency ratios of 3:1, 5:1, 6:1 and 5:1, respectively. Entrepreneurs in the age category 18-24 years spent a lower percentage of their incomes on household consumables because of lower dependency ratio of 2:1.Table 2 shows that entrepreneurs in age category 18-24 years invested a higher percentage of their income in MEs and other household investments than those in the subsequent age categories. This is attributed to the high levels of their savings and low dependency ratio (2:1).

Entrepreneurs' Total Household Income, Ksh. 1.653,203

Figure 7.1: Expenditure Pattern of Total Household Income for Entreprenuers who relied Entirely on ME Business as their Source of Income

Source: Computed from Survey Data, 2011.

Further, it is evident from Table 2 and Figure 1 that the category of entrepreneurs under discussion spent 10% of their total household incomes on ME business, 14.4% on other household investments (other than ME business) and 7% per cent on other personal expenses. The low percentage of total households' incomes ploughed back to MEs confirms the importance of credit in boosting business income levels. Other household investments included: purchase of livestock and ox-plough equipment; purchase of small pieces of land; and investing in transport business, especially 'boda boda' motorbikes. While other personal expenses included leisure, burial expenses, bride price and savings, among other undisclosed expenses.

Despite this category of entrepreneurs spending their incomes on a number of other household

investment items, farming alone accounted for 60% of the 14.4% of the total household income expended on other household investments. Wegulo and Obulinji (2001) in their study of 'the nexus between sugar cane farming and MEs in Mumias area' observed that there were substantial financial resource flows/exchanges between the two sectors.

Table 3: Expenditure Pattern of Total Households' Monthly Income for Entrepreneurs who had One Additional Source of Income besides the ME Business
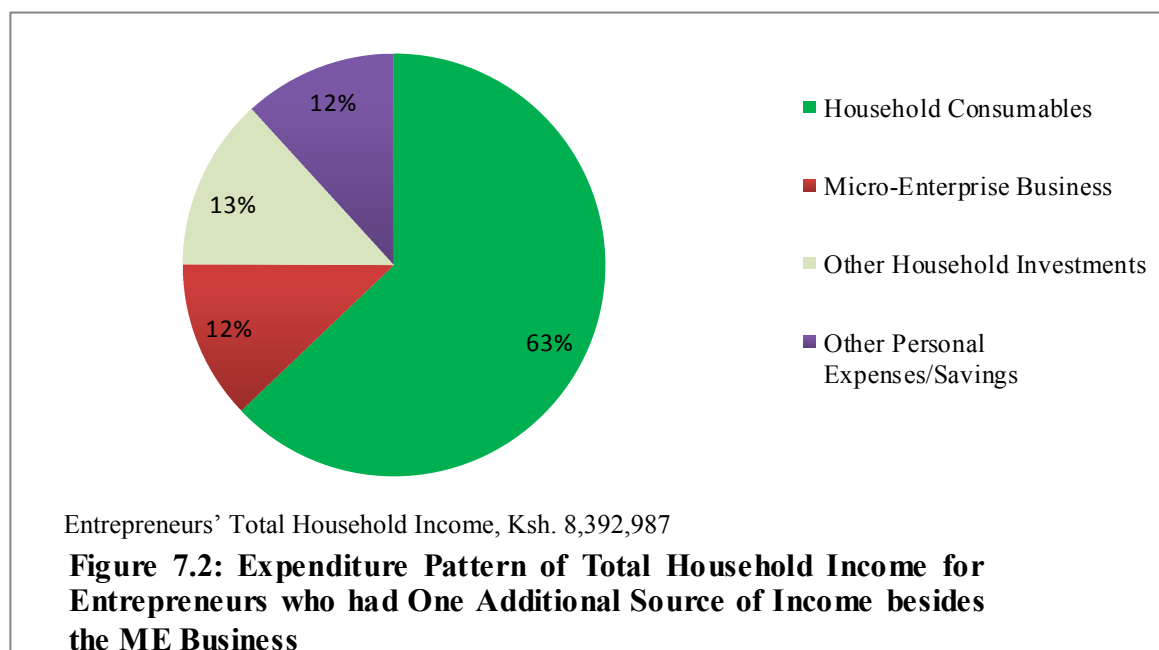
Age Intervals of Entrepreneurs Operating a ME Business and with one Additional Source of income (in Years)	Average Total Household Incomes Per Month (in Ksh)	Per cent Household Expenditure Patterns of Total Household Incomes				
		Household Consumables	Micro-Enterprise Business	Other Household Investments	Other Personal Expenses/ Savings	Per cent Total
18-24	-	-	-	-	-	-
25-32	935,635	60%	10%	20%	10%	100%
33-40	4,189,273	75%	10%	10%	5%	100%
41-50	3,110,847	75%	8%	15%	3%	100%
51-60	121,830	60%	15%	13%	12%	100%
>60	35,402	45%	18%	8%	29%	100%
Total Average	8,392,987	63.0%	12.2%	13.2%	11.8%	100%
Per cent ME Income of Entrepreneurs' Total	36.6%					

Source: Computed from Survey Data, 2011.

Further, this category of entrepreneurs spent 63% of their total household monthly incomes on consumables. This included expenses on food, medical, school fees needs, among others. Comparatively, this percentage of the total household income is lower than that of entrepreneurs who relied entirely on ME business as their source of income. However, given that households in both categories of entrepreneurs had similar dependency ratios, then the lower percentage of income spent on consumables for this category of entrepreneurs is attributed to higher total household income levels derived from one additional source of income. The additional source of income reduces the percentage contribution of MEs incomes to total households' monthly incomes. Adedeji (2013) notes that most of the households' consumables are characterized by inelastic demand. Hence, an increase in households' incomes does not necessarily increase the consumption levels of such goods. This is true particularly for food, which comprised the largest component of the household consumables, accounting for 50% of the total households' income expenditures. School fees and other household needs accounted for 25% each of total household incomes. Overall, consumables accounted for a larger share of the total household incomes. This is true particularly for entrepreneurs in age categories of 33-40 years and 41-50 years who had many dependants and spent 75% each of their total household incomes on consumables.

Table 3 and Figure 2 further show that on average entrepreneurs who had one additional source of income besides the ME business spent 12.2%, 13.2% and 11.8% of their total household incomes on ME business, other household investments and personal expenses, respectively. It can also be observed that 12.2% of the total households' monthly income was ploughed back to the ME businesses. However, entrepreneurs in the age categories 51-60 years and above 60 years invested more in ME businesses than those in the middle age categories. This is attributable to the relatively higher average incomes among the two age categories of entrepreneurs.

Out of the 12.2% of the income spent on ME business per month, business capitalization accounted for 62% of this proportion, while 38% of the income was spent on other ME variables. It is also observed that entrepreneurs, particularly those who were aged 60% years and above, had invested the least in other household investments compared to those in the preceding age categories. The low investment in other household activities for entrepreneurs aged over 60 years is attributed to the high levels of savings of their total household incomes, which stood at 29%. Out of the 13.2% of the total household monthly income directed towards other household investments, farming alone accounted for 40% of this income, while 60% was spent on other household investment items.

Entrepreneurs' Total Household Income, Ksh. 8,392,987

Figure 7.2: Expenditure Pattern of Total Household Income for Entrepreneurs who had One Additional Source of Income besides the ME Business

Source: Computed from Survey Data, 2011.

Table 4 and Figure 3 show the pattern of expenditure of total household incomes of Ksh. 820,084 for entrepreneurs who had two additional sources of income besides the ME business. This category of entrepreneurs spent 61.25% of their total household monthly incomes on consumables, including expenses on food, medicines/health and school fees. In actual figures, the income spent on consumables for this category of entrepreneurs was higher compared to entrepreneurs who had one additional source of income besides the ME business. Given that entrepreneurs who had two additional source of incomes besides the ME business were fewer in number, but had similar dependency level like those who had one additional source of income, then it can be concluded that the former category of entrepreneurs enjoyed relatively better livelihoods. Out of the total household consumables, food alone accounted for 48% of the total expenditure, while school fees and other household needs accounted for 30% and 22%, respectively. The comparatively high dependency levels, particularly for entrepreneurs in the age categories 33-40 years, 41-50 years and 51-60 years explain the high expenditures on household consumables.
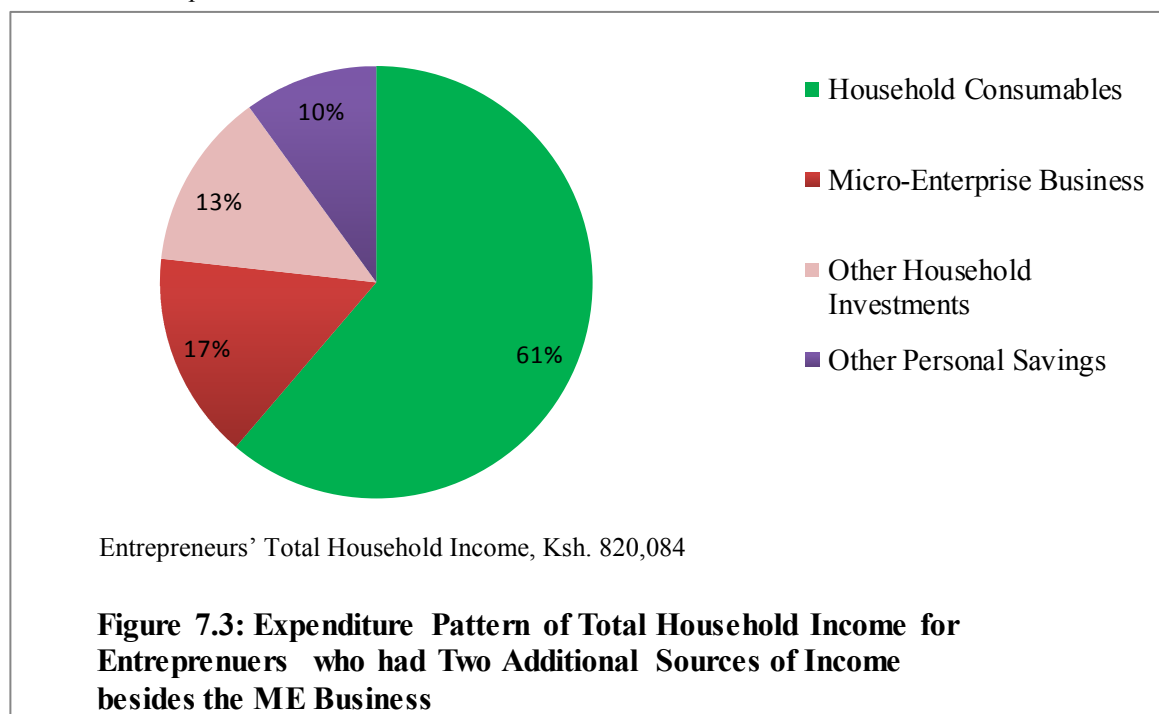
Table 4: Expenditure Patterns of Total Households' Monthly Income for Entrepreneurs who had Two Additional Income Sources besides the ME Business.

Age Intervals of Entrepreneurs Operating a ME Business and with Two Additional Sources of Income (in Years)	Average Total Household Incomes Per Month (in Ksh)	Per cent Household Expenditure Patterns of Total Household Incomes				
		Household Consumables	Micro-Enterprise Business	Other Household Investments	Other Personal Expenses/ Savings	Per cent Total
18-24	-	-	-	-	-	-
25-32	-	-	-	-	-	-
33-40	395,060	70%	12%	12%	6%	100%
41-50	201,046	60%	10%	22%	8%	100%
51-60	155,200	65%	18%	6%	11%	100%
>60	68,778	50%	22%	13%	15%	100%
Total Average	820,084	61.25%	15.5%	13.25%	10.00%	100.00%
Per cent ME Income of Entrepreneurs' Total	29.4%					

Source: Computed from Survey Data, 2011.

Despite the proportion of income spent on other household investments being more or less the same across the three categories of entrepreneurs, those in category one (ME as the only source of income) and three

(ME and two additional sources of income) in the age-cohorts 18-24 and 41-50, respectively, spent the highest incomes on other household investments. Those in the age-cohort 18-24years had low dependency ratio and the need to grow their assets and diversify their income sources. However, those in the age-cohort 41-50 had the highest dependency ratios, hence the need to diversify their assets so as to be able to generate additional incomes to sustain their dependants.

Entrepreneurs' Total Household Income, Ksh. 820,084

Figure 7.3: Expenditure Pattern of Total Household Income for Entreprenuers who had Two Additional Sources of Income besides the ME Business

Source: Computed from Survey Data, 2011.

Also, Tables 2 and 3 show that entreprenuers in the age category 60 years and above spent 29% and 15%, respectively, of their household monthly incomes on personal needs and savings. That proportion of savings is relatively high in comparison to entrepreneurs in other age categories. Further, entrepreneurs aged 60 years and above had higher incomes, making it a possible explanation for the high levels of saving. Further, Table 3 and Figure 3 show that on average entrepreneurs who had two additional sources of income besides the ME business spent 15.5%, 13.25% and 10% of their total household income on ME business, other household investments and personal expenses/savings, respectively. From the above percentages, it can be noted that this category of entrepreneurs ploughed back the highest proportion of their monthly incomes on ME businesses than entrepreneurs who depended entirely on ME business for their income and those who had one additional source of income besides the ME business. However, those who had two additional sources of income besides the ME and in the age categories 51-60 years and 60 years and above invested more due to their comparatively higher incomes than those in the middle age categories. Microenterprise businesses benefitted 15.5% of the total household monthly income, with ME capitalization accounting for 60% of this proportion, while 40% was shared among a number of ME variables. Furthermore, other household investment items accounted for 13.25% of the total household monthly income, where farming alone accounted for 30% of this proportion. The proportion spent on farming was the lowest among the three categories of entrepreneurs. This is because this category of entrepreneurs cast their investment net wider, thus, spreading or apportioning their limited resources to a range of other household investments. From the discussions above, it can be concluded that there were no major differences in the way the three categories of entrepreneurs spent their average total households' incomes on the four items listed in Tables 1, 2 and 3, based on entrepreneurs' age intervals and number of occupations. Moreover, the actual average amounts of incomes spent on household consumables, ME businesses, other household investments and other personal expenses/savings increased with increasing entrepreneurs' number of income sources.

4.3 Impact of Expenditure Pattern of Households' Incomes on Entrepreneurs' livelihoods
Three leads were used to determine the impact of incomes from MEs on entrepreneurs' household incomes and their livelihoods for the target population. First, was determining the entrepreneurs' total household incomes and how it was spent. As explained earlier, entrepreneurs' total household incomes were computed from entrepreneurs' ME incomes and incomes from other sources (if any), spouse's incomes and incomes from other

household members, including remittances from children (Table 1). Second, context based analysis of cases where the entrepreneur relied entirely on ME business as their source of income was done. This helped shed more light on the impact of MEs on livelihoods at the household level. Last, carrying out beneficiary assessments using specific or priority sample surveys of target groups through case studies was also done.

Tables 1, 2 and 3 show the total entrepreneurs' households incomes and how they were spent. It is observed that higher proportions of income for the three categories of entrepreneurs (based on number of income sources) were spent on household consumables. Entrepreneurs who depended entirely on ME as their source of income, entrepreneurs with one and two additional sources of income besides the ME spent 70%, 63% and 61.25%, respectively, of their total household incomes on household consumables. In same order, out of the total household incomes spent on consumables, the entrepreneurs spent 65%, 50% and 48% on food; 20%, 25% and 30% on school fees; and 15%, 25% and 22% on other household consumables such as health/medicines, transport and energy, among other needs, per month. Abdullah and Duasa (2010) points out that household income spent on consumption of food, education, medical expenses, energy and transport, among other items, has a direct bearing on household livelihoods. Moreover, Table 1 shows that entrepreneurs who depended entirely on ME business as their source of income, registered a 23.4% rise in their ME income between July 2008 and June 2011. In the same period, entrepreneurs who had one and two additional sources of income besides the ME business registered 33% and 42% growth, respectively, in their ME income. Thus, any increase in entrepreneurs' total household incomes, arising from improved ME incomes, will directly have a positive impact on livelihoods through increased consumption of goods and services. Further, as indicated earlier, entrepreneurs who depended entirely on ME business as their source of income registered a 23.4% growth in their business income between July 2008 and June 2011. The growth in their ME income accounted for 89% of the entrepreneurs' total household incomes per month (Table 1). This proportion is quite significant. Hence, any increase in ME incomes will have a greater impact on household incomes and livelihoods.

More so, case studies of 41 entrepreneurs were done. Entrepreneurs surveyed acknowledged the role ME businesses played in improving their livelihoods. Table 5 shows entrepreneurs' responses regarding the impact of growth in MEs incomes on their livelihoods. From the table, it is evident that 41 entrepreneurs covered in the case studies acknowledged the important role ME businesses played in improving their livelihoods. Fourteen of them, who relied entirely on ME business as their source of income, depended literary on their business incomes for all their household needs, including: purchase of food, improving their shelter/housing and paying school fees for their children. Entrepreneurs who had one or two additional sources of income besides the ME business, acknowledged the important role their businesses played in improving their total household incomes. This enabled them to improve their household food situation, invest more in farming, improve their shelter, meet their school fees needs and invest in transport business in order to generate additional income for their households. Also, eight entrepreneurs, covered in the case studies, whose MEs did not perform well, acknowledged enjoying better livelihoods because of the incomes generated from their businesses, whilst they could have been worse off if they were not operating the MEs.

5.0 Conclusion and Recommendations

Between 2008 and 2011, entrepreneurs operating microfinance credit-assisted MEs registered substantial growth in their business incomes. The growth in MEs incomes contributed substantially to both total entrepreneurs' and households' monthly incomes for: entrepreneurs who relied entirely on MEs as their source of income; and entrepreneurs who had other sources of income. This implies that on average, entrepreneurs contributed a large proportion of income to their total average households' monthly incomes. Further, a large proportion of entrepreneurs' households' monthly incomes were spent on consumables, mainly food, health and school fees. Some of the income was reinvested in ME businesses and other households' investment items such as farming. However, no major differences were established in the way entrepreneurs spent their total monthly households' incomes based on entrepreneurs' age intervals and number of income sources. Also, the actual amount of income spent on household consumables, ME businesses, other household investments and other personal expenses/savings increased with increasing entrepreneurs' number of income sources. Investment in MEs and other items contribute directly or indirectly to future entrepreneurs' and households' incomes. Therefore, microfinance credit-assisted MEs' incomes contributed substantially in improving entrepreneurs' households livelihoods. It is, therefore, recommended that grassroots initiatives that aim to enhance the development of the ME-sector and improvement of entrepreneurs' livelihoods through credit provision should be pursued by the Kenya Government and other stakeholders in ME development policy.

Table 5: Entrepreneurs' Responses Regarding the Impact of Growth of MEs Incomes on their Livelihoods.

Type of Question Asked	Category of Entrepreneur/Nature of Response/Frequency of Entrepreneurs															Total Frequency of Entrepreneurs		
	Strongly Agree			Agree			No Impact (Unsure/ Neutral)			Strongly Disagree			Disagree					
	1	2	3	1	2	3	1	2	3	1	2	3	1 3	2		1	2	3
Is the ME business your main source of income?				14												14		
Does the ME business contribute significantly to your total income?	14				25	2										14	25	2
Has the growth of your business improved and stabilized your income?	14	25	2													14	25	2
Has the growth in ME business income improved your financial ability to ensure food security at the household?	14	25	2													14	25	2
Has the growth in ME business income enabled you to invest and improve your farming?		14	2														14	2
Has income generated from the ME business enabled you to construct or improve your house/shelter?	4	6														4	6	
Has Income generated from the ME business enabled you to meet part of school fees requirements for your children?	14	10			15	2										14	25	2
Has income generated from the ME business enabled you invest in other non-farm income generating activities?		5			2	1											7	1

Note: 1- Represents entrepreneurs who depend entirely on ME as the main source of income (A total of 14 entrepreneurs were covered in the case studies).

2- Represents entrepreneurs with one additional source of income besides the ME business (A total of 25 entrepreneurs were covered in the case studies).

3- Represents entrepreneurs with two additional sources of income besides the ME business (A total of 2 entrepreneurs were covered in the case studies).

NB. Cells that are void indicate lack of responses from entrepreneurs covered in the case-studies.

Source: Computed from Survey Data, 2011.

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