THE EFFECT OF SAVING MOBILIZATION TO THE LEVEL OF INVESTMENTS TO THE TEA FARMERS IN GATANGA DISTRICT, MURANG'A COUNTY, KENYA.

By

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A research project submitted in partial fulfillment of the requirement for the award of degree of Master of Business Administration (Finance) School of Business, Kenyatta University.

2013
DECLARATION

This research is my original work and has not been presented for any other degree or award in any university.

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D53/CE/22154/2010

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Signature........................................... DATE.................................

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Kenyatta University
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This work is dedicated to my beloved wife Teresia for her great encouragement and support, and our children Juliet, Joseph and Patrick who are my great inspiration. To my parents Joseph and Juliah and my brothers Obadiah, Isaiah, Daniel, Paul, David, Michael and Charles and my sister Mary for their teaching on the value of hard work and all the tea farmers in Gatanga District Murang’a County.
ACKNOWLEDGEMENT

I thank the almighty God for his special and abundant grace over the entire period of my work. I also acknowledge the support and guidance given by my Supervisor Mr. John Mungai, the financial and moral support given by the members of my immediate and my extended family without which my study may not have come this far. Sincere thanks also go to the farmers for taking their time to respond to the questionnaire to the best of their knowledge. May all receive blessings from the almighty God.
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OPERATIONAL DEFINITION OF TERMS

**Small holder tea farmer** : Tea grower with acreage of less than 1 acre (KTDA, 2008)

**Unaitas SACCO** : A cooperative society registered under the cooperative Act as a financial institution and mostly serves the tea farmers

**Financial institutions** : Institutions used by the tea farmers for their financial services i.e. Unaitas and Equity Bank Ltd.

**Saving** : Money remaining after consumption over a period of time

**Investment** : Properties acquired with an aim of generating income

**Stock** : Shares in public companies

**Bonus** : Lump sum amount paid to the tea farmers over an accumulated period of 12 months.
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>ACCOSSA</td>
<td>African Confederation of Cooperatives and Credit Association</td>
</tr>
<tr>
<td>ASDP</td>
<td>Agricultural Sector Development Plan</td>
</tr>
<tr>
<td>CMA</td>
<td>Capital Markets Authority</td>
</tr>
<tr>
<td>CBS</td>
<td>Central Bureau of Statistics</td>
</tr>
<tr>
<td>GOK</td>
<td>Government of Kenya</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>ICEG</td>
<td>International Center for Economic Growth</td>
</tr>
<tr>
<td>KTDA</td>
<td>Kenya Tea Development Agency</td>
</tr>
<tr>
<td>MPC</td>
<td>Marginal Propensity to Consume</td>
</tr>
<tr>
<td>MPI</td>
<td>Marginal Propensity to Invest</td>
</tr>
<tr>
<td>MPS</td>
<td>Marginal Propensity to Save</td>
</tr>
<tr>
<td>MSEs</td>
<td>Micro and Small Enterprises</td>
</tr>
<tr>
<td>SMEs</td>
<td>Small and Medium Enterprises</td>
</tr>
<tr>
<td>SACCO</td>
<td>Savings and Credit Cooperative Society</td>
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The need to have adequate savings and investment necessitated this study. A high saving economy accumulates assets faster and thus grows faster than a low saving economy. Kenya’s vision 2030 for financial services is to create a successful and globally competitive financial sector that promotes high levels of saving and financing for Kenya’s investment needs. This vision can be fully achieved if financial institutions in Kenya can improve the savings hence investment level of their members. This study therefore, sought to determine the effect of saving mobilization and the level of investment to the tea farmers in Gatanga District. The specific objectives of the study were to determine the relationship between consumption, savings and level of investment; establish how the level of income affects savings and investment by the tea farmers; find out the role of financial literacy in mobilizing savings and the level of investment; analyze the extent to which government initiatives support savings and investment among the tea farmers. The study adopted a descriptive statistics and Pearson correlation analysis as the analytical tools. A population of 15000 tea farmers from Njuru and Ngere tea factories in the district was targeted. Simple random sampling was used to select a random sample of 20 tea collection centers and then multi-stage and purposive sampling to select 234 farmers as the respondents. Questionnaire was used to collect the data and was administered in person to the tea farmers at their convenient places. The data presentation techniques employed are Pie charts, Bar graphs and line graphs. The study showed that 90% of the farmers have no financial literacy, 91.5% see no need to save with 65.4% of the farmers having a saving of below KES 100,000 for the last 2 years. 90% of the farmers have no other source of income which indicates low investment. The results of the correlation analysis shows a negative correlation between consumption, and the level of saving and investment ie (-0.631, p<0.05). The conclusion drawn was that saving potential exists among the tea farmers in the district. The result revealed that income and financial literacy was the most important determinant of savings as well as investment. Some of the factors found to exert significant influences on the level of savings and investment include income, level of consumption, access to loan facilities and the rate of interest on loans. The study also showed that there was inadequate savings and investment by the farmers in the area. Therefore, efforts to mobilizing savings and investment among the tea farmers in the district and in Kenya as a whole need be directed at improving existing practices within the government and the financial institutions. It can also be concluded that credit access has a net negative effect on saving such that; an improvement in credit access will cause a reduction in saving, and vice versa hence any small improvement would significantly have an impact on saving. The study recommended that efforts designed to accelerate the level of savings and investment should be geared toward raising income, increasing financial literacy, reducing consumption and controlling the rate of interest on loans. Second, mass education and promotional programme are desirable to mobilize savings and investment across socio-economic strata in the society and also intimate farmers on the advantages of diversifying their investments and educating them on the various investment opportunities for them to invest wisely.
CHAPTER ONE

1.0. Background to the Study

Savings play an important role in the economic development of both developed and developing nations due to its significance influence on the circular flow of income in the economy (Iyoha, 2003). Investment plays an important role in sustaining growth and development of any country. High rates of investments depend on high rates of savings (Pelrine and Kabataya, 2005). Savings are important means of improving the well being, insuring against times of shocks, and providing a buffer to help people cope in times of crisis (Zeller and Sharma, 2004). According to the scriptures, 'the wise man saves for the future but the foolish man spends whatever he gets, of income. Several development and donor agencies have recognized the importance of savings mobilization by revising their financial markets development strategies in order to promote this financial service (IFAD, 2008).

Economic theory postulates that household savings is the difference between households income and consumption. Household income is the aggregate income a household earns from all sources in a particular period. Consumption on the other hand is the total amount of goods and services that is consumed by households during a particular period. The saving rate in Africa has perpetually been the lowest compared to other regions despite liberalization. Africa also faces serious credit constraints and this coupled with low income could greatly reduce any incentive to save. (Njuru, 2004)
Kenya's' Vision 2030 which is an economic development plan by the Kenya government is envisioned to develop the country to a middle income country by 2030. The plan identifies the Agriculture sector and the financial sector as the driving forces for the economic development of the country. The vision for financial services is to create a successful and globally competitive financial sector that is capable of promoting high levels of savings and financing Kenya's' investment needs. As part of its macro-economic goals, savings and investment rates are intended to rise from 17% to 30% of the GDP. (First Medium Term plan 2008-2012, ASDS, 2008). Another development plan in the agriculture sector has one of its key points as to reduce the number of people living below poverty line to less than 25 percent so as to achieve the first millennium development goal (ASDS, 2008). The vision can be achieved if financial institutions in Kenya can improve the savings hence investment culture of their members. (Onchangwa, 2012).

Mobilizing savings instead of credit should be the key focus since the vast majority of the poor still lack access to formal banking services of any kind. (Barnejee and Dufillo, 2007). According to the former president His Excellency Mwai Kibaki, the culture of saving in Kenya needs to be improved since savings done to finance investment cushions the citizens from future economic distresses. He called upon Kenyans particularly in the micro and small scale enterprises to embrace a culture of thrift keeping aside of part of the earnings to build a saving culture in Kenya.

In Sub-Saharan Africa, a significant proportion of the poor are small-scale farmers with productivity levels among the lowest in the world. (Dufillo, 2008). Lack of formal financial
services may inhibit farmers and other entrepreneurs particularly in rural areas from increasing savings and investments and smoothing household consumption. (Njuru, 2004). Kenya's agriculture is predominantly small-scale farming mainly in the high-potential areas. Production is carried out on farms averaging 0.2–3 ha, mostly on a commercial basis. This small-scale production accounts for 75 per cent of the total agricultural output and 70 per cent of marketed agricultural produce. Small-scale farmers produce over 70 percent of maize, 65 per cent of coffee, 50 per cent of tea, 80 per cent of milk, 85 per cent of fish, and 70 per cent of beef and related products (GOK, 2010). Tea is still one of the leading foreign exchange earners in the country. Tea production increased from 287,100 tons in 2002 to 370,200 tons in 2007, while the value of exports increased from KES 34.3 billion to KES 47.3 billion in 2006, decreasing slightly to KES 46.8 billion in 2007 (ASDS, 2008). According to The Daily Nation, Tuesday 18 September, 2012, The KTDA recorded the highest revenue in the world from tea earning of KES 61.8 billion to small scale tea farmers in 2011/2012 tea export.

The success story of Kenyan tea is a product of various developments one of them being the government policy after independence to integrate small scale growers into the mainstream of tea growing. Currently the small scale growers under the umbrella of Kenya Tea Development Agency (KTDA) account for 60% of the total tea production while the multinational sector and large scale retailers account for the remaining 40%. The sector supports more than 3million people both directly and indirectly (Gesimba, 2005). Tea is the major foreign exchange earner in the agriculture sector and the major country’s export commodity as indicated in the table below:
### Table 1.1 Domestic Export of Principal Commodity in KES 'million

<table>
<thead>
<tr>
<th>Domestic commodity</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tea</td>
<td>63812</td>
<td>68766</td>
<td>91617</td>
<td>102235</td>
</tr>
<tr>
<td>Horticulture</td>
<td>71182</td>
<td>65220</td>
<td>72092</td>
<td>83331</td>
</tr>
<tr>
<td>Coffee</td>
<td>10126</td>
<td>15309</td>
<td>16244</td>
<td>19296</td>
</tr>
<tr>
<td>Tobacco</td>
<td>9063</td>
<td>10411</td>
<td>10562</td>
<td>18633</td>
</tr>
<tr>
<td>Soda ash</td>
<td>13185</td>
<td>8305</td>
<td>7265</td>
<td>12371</td>
</tr>
<tr>
<td><strong>Grand total</strong></td>
<td><strong>305646</strong></td>
<td><strong>305646</strong></td>
<td><strong>385441</strong></td>
<td><strong>482944</strong></td>
</tr>
</tbody>
</table>

Source: Kenya facts and figures (2012)

In the financial sector the cooperative movement through Savings and Credit Cooperatives (SACCOs) has helped mobilize savings and provide credit to producers. Agricultural cooperatives form 46 per cent of all cooperative societies in the country. They have 3 million members out of a total membership of 7 million in the entire cooperative movement (ASDS, 2008)

1.1 Savings mobilization and level of investment in Gatanga District

According to Murang’a County Edition (2012), Gatanga district is one of the districts in Murang’a county others being Kandara, Kigumo, Kiharu, Maragua, Mathioya and Kangema. It has a population of 163,597 and approximate area of 587.20 square km. The main economic activity in the district is agriculture whereby tea, coffee, dairy farming, maize growing, poultry farming and pig rearing is practiced. Tea is the main income earner in the county and is done on small-holding whereby the number of registered farmers is 15200 occupying almost 5000 hectares. The earning from tea in the year 2012 was around Kshs2.9 billion which was the highest in all the districts in the county.
Majority of the tea farmers in the county are account holders with Unaitas SACCO Ltd which is the largest SACCO in Kenya in terms of Membership, other financial institutions are Equity Bank Ltd, Murata SACCO Ltd mostly serving coffee farmers. Despite the remarkable financial institutions in the district and the high level of income from tea, reports from the financial institutions indicates low savings behavior among the farmers and also low levels of investments and therefore using the financial institutions only as channels of receiving payments. Poverty level in the district is still rampant and the highest of all the tea growing districts forming Murang’a County, Murang’a County Edition (2012). According to the Daily Nation, Wednesday 6 February, 2013, Kenyans save only 4.2 per cent of the wealth created against proposed national savings of at least 30% to bring stability to the economy.

The areas that form the foundation, from which this study originated, first include the fact that there have been reasonable earnings from tea farming, yet the economic performance in terms of investments or development is still modest. The propensity to save or invest is too low at high income. The farmers immediately consume all that they earn from tea farming without making meaningful savings or investments. Secondly, there has been a fast growth in tea SACCOS operating in the areas with most of them converting into full fledged commercial banks as well as rebranding a concern that the study seeks to find out. The distinction between the rich and the poor economies in the world is evidenced in the level of savings that could be generated and made available for investment (Sanusi, 2002). Savings and investment are clearly related to financial institutions playing the intermediation role in mobilizing and allocating financial resources from savers to investors. Based on the determinants of private investment, policy
makers could better control private investment in the desired direction to foster economic growth and development (ASDS, 2008).

Vision 2030 requires the rate of growth of the economy to rise from 7.1 per cent achieved in 2007 to 10 per cent by 2012/13 and then an annual growth of 10 per cent till 2030. Achieving these growth targets will require continued implementation of prudent fiscal, monetary and exchange rate policies; enhanced efforts to raise the level of investment and savings (ASDS, 2010)

1.2 Statement of the problem

According to Lawrence, Benjamin, Desterio and George (2009), in their study on determinants of domestic saving to the small holder farmers, entrepreneurs and teachers in rural areas of Kenya, the levels of savings and investment in Kenya have been very low; on the other hand, Kenya’s vision 2030 can be fully achieved if financial institutions in Kenya can improve the savings hence investment culture of their members. This seems not to be the case with most financial institutions operating in the tea growing area.

Wahome (2013), in his report on SACCOS, there has always been complains from various stakeholders in the tea sector, when the second payment commonly known as ‘bonus’ is paid. The farmers themselves complain that the money leaves them with more problems, the public administration has also been complaining of increase in crime rates during the period of payment with farmers engaging in unnecessary drinking and other unnecessary expenses. There has also been complaints by SACCOS that they have been having a challenge of sustaining the SACCOC model of save a shilling and borrow three which is volume based and therefore the only way to sustain themselves has been by increasing the membership through rebranding.
Most of these SACCOs are in the tea growing areas like Muramati SACCO LTD to Unaitas SACCO LTD, Kitale Tea to Transcounties, and Kericho Tea to Kenya Highlands SACCO. This also confirms the researchers concern for the contribution of the financial institutions towards mobilizing savings and the level of investments among the tea farmers and even to the account holders. The study was therefore, meant to establish the reasons for low savings and investment among the tea farmers despite the high income from the tea earnings.

1.3 Objectives of the study

1.3.1 The General Objective:-
To establish the effect of saving mobilization to the level of investments to the tea farmers in Gatanga District.

1.3.2 Specific Objectives.

(i) To determine the relationship between the level of consumption and savings and investment to the tea farmers in the district.

(ii) To establish how the level of income affects savings and investment in the tea sector.

(iii) To find out the role of financial literacy in mobilizing savings and investment among the tea farmers.

(iv) To analyze the extent to which the existing government initiatives, support savings mobilization and investment among the tea farmers.

1.4 Research questions.

(i) What is the relationship between the level of consumption, savings and investment among the tea farmers?
How does the level of income determine the savings and the level of investment?

Does financial literacy assist in mobilizing saving and level of investment among the tea farmers in the area?

Does the existing government initiatives, contribute towards mobilizing saving and investment among the tea farmers?

1.5 Significance of the Research

The findings and recommendations of the study will help to identify the various factors that influence savings and investment among tea farmers in the area under study. This can be extended to farmers in other areas and other sectors of the economy in the country. It will also be of much use to the government and the financial institutions in achieving economic stability and poverty eradication in line with vision 2030. The findings will also be of use to scholars interested in the field of finance and economics as a background for their future academic research work.

1.6 Scope of the study.

The research has been limited to a case of tea farmers from Gatanga district in Murang’ a County. The district is the major producer of tea of all the districts forming Murang’a County (KTDA, 2010). Central Province, in which the study was conducted, although not the largest among the 8 provinces in Kenya, is one of the largest contributor to the country’s economy. Gatanga district is an economic hub and most developed in terms of infrastructure among the 5 districts forming Murang’a County. It was also ranked among the best constituencies which in this case is a district in use of the CDF fund.
The choice of rural was based on the fact that majority of the households live in the rural areas. The selection of farmers was first based on the fact that many households depend on farming. Secondly, investments by rural households are visible within the environment they live in, creating employment and contributing towards the well being of the community.

The scope of this research is both monetary and non-monetary savings among households of farmers. The choice of such a sample was to have a better representation and comparison of households in the rural areas.

1.7 Limitations of the study

The study was limited by the fact that it was not possible to control some intervening variables. The accuracy of the data may also not have been perfect due to its non-experimental and possible observation error, problems of approximations and aggregation and rounding off may further have diluted the accuracy of the data which may have led to drawing of unfair conclusions in some areas.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction.
The section reviews literature related to savings and investment. It also reviews literature on micro, small and medium scale enterprises as the researcher identified that majority of tea farmers in the district and in the entire country fall within the definition of small and medium scale enterprises since tea farming in Kenya is purely a commercial activity.
The review therefore covers both the theoretical and empirical facts such as the reason and importance of saving, factors determining savings volume or amount to be saved, the various investment opportunities available, contribution of financial institutions towards investments and the conceptual framework is the last section in the chapter.

2.2 Theoretical Literature.
Savings form the financial assets of both banking and non-banking financial institutions. These financial assets include savings and time deposits in the banking institutions, provident funds, insurance premium, stocks and bonds (Odoko, Nnanna and Englama, 2004). In the micro econometric literature on households’ saving, saving is usually given as the non-consumed part of households’ income, Pyle (2005)

According to the IMF report (2009), Global saving and investment are near historic lows, having fallen markedly since the late 1990s. These trends largely reflect developments in industrial countries; in emerging markets, saving has continued to rise, although investment has not recovered since its fall in the aftermath of the Asian financial crisis. The decline in global saving and investment has been due both to factors that have commonly affected a large number of
countries such as increases in credit and asset prices and to country/region-specific developments. Most important among these are the decline in public saving in the United States, demographic changes in Japan and Europe, and the slump in investment in Asian economies (excluding China) in the aftermath of the regional financial crisis.

Ochieng’ (2008), citing Keynesian theory in his study on the saving mobilization and investment among the fish trader in Mbita constituency, notes that at high income, consumers tend to save and invest more of their income thereby reducing their fraction to consume, in this case the MPC becomes smaller and smaller as consumers income increases. Akpan, Udoh and Ayah (2011), citing Keynes stated that savings depend upon disposable income and proposed that consumption/ saving was a function of ratio of current income to previous level of income. According to Keynes, excessive savings i.e. saving beyond planned investment was a serious problem encouraging recession or even depression. Excessive savings result if investments fall perhaps due to falling consumer demand over investment in earlier years or pessimistic business expectations and if saving does not immediately fall a step, the economy would decline.

Nwachukwu and Peter (2009), on the drivers of private saving in Nigeria, citing The Life-Cycle Hypothesis postulates that the consumption decisions of individuals are subject to inter temporal decision-making process, the aim of which is to maximize utility. In its simplest form, the model divides the lifetime of individuals into a working period and a retirement period. In the working period individuals accumulate wealth, which is used in the retirement period (when a decline in income can be expected) to maintain their accustomed level of consumption income growth and the age structure of the population a special role in explaining the national saving rate.
Nwachukwu and Peter (2009), growth in income influences personal saving due to the productivity of the younger generation in the population, which is higher than that of the older generation. If the propensity to save is equal, net saving is positive, as the relative income shares of the young are higher than the elderly populations. Second, demographic trends, or the age structure of the population, are a key determinant of the saving rate. The higher the share of the nonworking population, the stronger the impact a decline in wealth causes at this stage of life. Aging populations therefore mean a lower saving rate, as saving by the active population is squeezed by the negative or low saving of those no longer in works. In the study on the principles of banking, Nasio (2004), explains that the Life-Cycle model described above provides a general framework that cannot include every aspect affecting both consumption decisions and saving decisions. Instead, other factors need to be included in this framework in order to better represent reality.

Oriaro (2003), analyzing the determinants of rural households saving in Bondo district using the Permanent Income hypothesis, postulated that household savings was based on permanent income and that households were net dis-savers in their early and old age but they saved more in their middle age. Apart from income, other variables might be responsible for inability of agro-based firm workers to sufficiently save part of their remuneration. According to Uczarn and Uzturk (2011), studying financial determinants of investment for Turkey, Neoclassical investment theory suggests that the growth rate of real output is positively related to investment because it indicates changes in aggregate demand for output that investors seek to meet.
Empirical evidence is consistent with this accelerator effect and shows that high output growth are associated with high investment.

The study is based on Keynesian theory, since it cuts across all the major aspects of savings and investment.

2.3 Empirical Literature

Ndikumana (2006), studying the financial determinants of domestic investment in Sub-Saharan Africa, investigated the effects of financial development on domestic investment in a sample of 30 sub-Saharan African countries. It was based on a dynamic serial-correlation investment model including various indicators of financial development, controlling for country-specific fixed effects and nonfinancial factors of investment. The results indicated a positive relationship between domestic investment (total investment and private investment) and various indicators of financial development. Higher financial development led to higher future levels of investment, implying a potent long-run effect of financial development on domestic investment. The findings implied that financial development could stimulate economic growth through capital accumulation.

A study by Ang (2009) on private investment and financial sector policies in India and Malaysia, suggested that significant directed credit programs favoring certain priority sectors tended to discourage private capital formation in both countries. Interest rate controls appeared to have a positive impact on private investment, with the effect being more pronounced in Malaysia. While high reserve and liquidity requirements exerted a negative influence on private investment in India, the effect was found to be positive in Malaysia. The empirical evidence
showed a significant steady-state relationship between private investment and its determinants. The results suggested that financial repressions policies, in the form of significant directed credit controls, appear to have retarded private investment in both India and Malaysia. However, contrary to the financial liberalization thesis, interest rate restraints appeared to be an effective device in stimulating private investment in both countries. Empirical studies done in most places in Kenya have shown that there are more factors to influence saving and investing among the MSEs.

A study by Onchang'wa and Memba (2009), on the role of SACCOs and the investment culture in Kenya did not indicate the extent to which SACCOs have gone towards promoting the financial literacy to their members in order to raise the level of investment in the agriculture sector more so in the tea sector.

2.3.1 Level of Consumption to Saving and Level of Investment.

Ameriks, Caplin and Lealy (2003), carried out several studies on wealth accumulation and propensity to plan from various countries like Leicester 2006, Weick 2005, and Germany 2007 they indicated that households’ total consumption may and actually do at least for certain periods exceed their net household incomes. The phenomenon of overspending is particularly prevalent among low income households. This means low savings due to high level of consumption.

Enete (2008), on the study on political and genuine cooperatives in Enugu Nigeria, records that propensity is the tendency to a particular kind of behavior. Marginal Propensity to Consume (MPC) is the percentage of consumption amount on ones income similarly Marginal Propensity to Save (MPS) is the percentage of savings value on the total earned income. The levels of
workers savings and consumption as factors of income always have direct bearing on ones general investment.

In table 2.1 below, Enete shows the income, saving, consumption and investments and their Marginal Propensities.

**Table 2.1 The savings consumption and investments and their marginal propensity.**

<table>
<thead>
<tr>
<th>Income per year in $</th>
<th>Consumption per year in $</th>
<th>Savings per year in $</th>
<th>Investment per year in $</th>
<th>MPC in %</th>
<th>MPS in %</th>
<th>MPI in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>1200</td>
<td>-200</td>
<td>-</td>
<td>120</td>
<td>-20</td>
<td>-</td>
</tr>
<tr>
<td>2000</td>
<td>2100</td>
<td>-100</td>
<td>-</td>
<td>105</td>
<td>-5</td>
<td>-</td>
</tr>
<tr>
<td>3000</td>
<td>3000</td>
<td>0</td>
<td>-</td>
<td>100</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>4000</td>
<td>3500</td>
<td>500</td>
<td>-</td>
<td>87.50</td>
<td>12.5</td>
<td>-</td>
</tr>
<tr>
<td>5000</td>
<td>4250</td>
<td>700</td>
<td>50</td>
<td>85.0</td>
<td>14.0</td>
<td>1.00</td>
</tr>
<tr>
<td>6000</td>
<td>5000</td>
<td>800</td>
<td>200</td>
<td>83.33</td>
<td>13.33</td>
<td>3.33</td>
</tr>
<tr>
<td>7000</td>
<td>5600</td>
<td>900</td>
<td>500</td>
<td>80</td>
<td>12.86</td>
<td>7.14</td>
</tr>
<tr>
<td>8000</td>
<td>6300</td>
<td>1000</td>
<td>700</td>
<td>78.75</td>
<td>12.5</td>
<td>8.75</td>
</tr>
<tr>
<td>9000</td>
<td>6500</td>
<td>1500</td>
<td>1000</td>
<td>72.22</td>
<td>16.67</td>
<td>11.11</td>
</tr>
<tr>
<td>10,000</td>
<td>6700</td>
<td>1800</td>
<td>1500</td>
<td>67.00</td>
<td>18.00</td>
<td>15.00</td>
</tr>
<tr>
<td>11,000</td>
<td>6900</td>
<td>2100</td>
<td>2000</td>
<td>62.73</td>
<td>19.09</td>
<td>18.18</td>
</tr>
<tr>
<td>12,000</td>
<td>7000</td>
<td>2500</td>
<td>2500</td>
<td>58.33</td>
<td>20.83</td>
<td>20.81</td>
</tr>
<tr>
<td>13,000</td>
<td>7100</td>
<td>2800</td>
<td>3100</td>
<td>54.62</td>
<td>21.54</td>
<td>23.85</td>
</tr>
<tr>
<td>14,000</td>
<td>7150</td>
<td>3000</td>
<td>3850</td>
<td>51.07</td>
<td>21.44</td>
<td>27.52</td>
</tr>
<tr>
<td>15,000</td>
<td>7230</td>
<td>3350</td>
<td>4420</td>
<td>48.2</td>
<td>22.33</td>
<td>29.47</td>
</tr>
</tbody>
</table>

Source: Enete (2008)
The propensities aim at measuring the degree of change of consumption or savings and investment as consumer income continue to increase. The table demonstrates a shrinking MPC as income increases and swelling MPS and MPI as income moves up. The entire argument can be summarized in short as \( Y = C + I + S \) to mean that Consumption(C), Investment(I) and Saving(S) all sum up to household total Income(Y).

Rijkegheim and Ucer (2009), conducted an empirical study to find out the determinants of private savings in Turkey. They defined private savings to include households’ and business savings. They used time series for the period between 2000 and 2008 and the estimated savings function. This showed clearly that an increase in consumption depresses savings. However their study did not include the level of academic and financial literacy, income earning stream, family values, consumer’s social responsibilities and rate of interest on borrowings all believed to influence the level of household consumption, savings and investments. The missing connection between the farmers habit and what Enete theorized is on the fact that even at increased rate of farmers income there is still very insignificant rise in savings or investment, it is the MPC that continues to inflate contrary to a characteristic of an economically developing community a fact that the study seeks to find out. These are the missing gaps that this study aims at filling.

2.3.2 Level of income to saving and investment

Ikechukwu (2006), citing Keynes Theory in his study on the analysis of savings and investment behavior of farmers in Giwa and Sabon Gari in Nigeria, postulated a hypothesis that indicated a stable linear link between savings and the current level of income. The model showed that both
the marginal propensity and average propensity to save increases with the level of income. The study concluded that a household with a high income earning has the potential of making substantial savings. He explains that the propensity of a consumer to save increases with increase in income, this in practice may not the way among most tea farmers in the district who save little or no amount even at high income from tea earnings. This indicates that it is the prosperity to consume that increases with increase in income. Socio-economic variables like household income, level of education, interest payment, farm size, household size were the major factors determining informal savings amongst vegetable farmers in developing countries (Orbeta, 2006).

A study carried out in Ethiopia to determine the savings behavior among the farmers found out that, the amount that individual farmers could save also depends on income and family size (Adeyemo and Banire, 2005). However, there are very few studies examining saving behavior at the micro level in Kenya, since various studies have mainly focused on aggregate savings data. In another study, it was found that household size has a negative effect on household savings suggesting that larger household are more resource constrained than small ones with disposable income and consequently a lower level of savings (Newman, Tarp, Broeck, Quang and Khani 2008; Orebiy and Fakayode, 2005). Furthermore, it was also found out that landholding strongly influence the rate of total saving, since the size of land holding influences income and income influences savings positively (Sebhatu, 2012).

Paabut and Staehr (2007), carried out a study to identify how household characteristics affect saving behavior, in Pakistan and Estonia respectively. They focused on the role of institutions which collect saving and stress the role of formal (banks) and informal institutions (savings
committees). They found that increased income leads to a greater desire to participate in some form of savings institutions but that as income increases more individuals shift to the formal sector. Kulikov and Alii (2007), analyzed the saving determinants on the demand side based on data from household budget surveys. As in many empirical studies, they reported that the saving rates depend more on the transitory income than regular income.

Kibet, Mutai, Ouma and Owuor (2009), in their study on house-hold saving in Kenya, reported that saving among small holder farmers, entrepreneurs and teachers in the rural Kenya is determined by the type of occupation, household income, age, gender of the household head, education, dependency ratio, service charge, transport cost, and access to credit. Horioka and Junmin (2007), on the determinants of domestic savings in China confirm positive relationship between household saving and income growth. Yilmazer (2010), on the study on profile and determinants of household savings, reported that the propensity of a consumer to save increases with increase in income, Adeyemo and Banire (2005), examined the pattern of saving and investment among the cooperator farmers in South Western Nigeria and reported that income, loan repayment and amount of money borrowed are significant variables that influence saving pattern.

A study by Broebeck (2008), on the savings behavior by pensioners in America, indicated that the amount saved depends on the income and the saving habit. The information in the table 2.2 and 2.3 contains this evidence.
Table 2.2 savings habits of low income respondents

<table>
<thead>
<tr>
<th>Savings habit</th>
<th>&lt;£500</th>
<th>&gt;£500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know their net worth</td>
<td>35%</td>
<td>50%</td>
</tr>
<tr>
<td>Have a spending plan with goals</td>
<td>34%</td>
<td>88%</td>
</tr>
<tr>
<td>Have a saving plan with goals</td>
<td>11%</td>
<td>63%</td>
</tr>
<tr>
<td>Have a spending plan that allows meeting savings goals</td>
<td>4%</td>
<td>56%</td>
</tr>
<tr>
<td>Outside of work, save automatically through pre-authorized transfer from Checking</td>
<td>12%</td>
<td>54%</td>
</tr>
</tbody>
</table>

Table 2.3 savings habits of moderate-income respondents

<table>
<thead>
<tr>
<th>Savings habit</th>
<th>&lt;£500</th>
<th>&gt;£500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know their net worth</td>
<td>35%</td>
<td>54%</td>
</tr>
<tr>
<td>Have a spending plan with goals</td>
<td>50%</td>
<td>78%</td>
</tr>
<tr>
<td>Have a saving plan with goals</td>
<td>21%</td>
<td>61%</td>
</tr>
<tr>
<td>Have a spending plan that allows meeting savings goals</td>
<td>10%</td>
<td>48%</td>
</tr>
<tr>
<td>Outside of work, save automatically through pre-authorized transfer from Checking</td>
<td>16%</td>
<td>46%</td>
</tr>
</tbody>
</table>

This shows that for low and moderate income respondents, differences in savings habits are strongly associated with having at least £500 in emergency savings.

2.3.3 Level of financial literacy to saving and investment

Recent literature has shown that financial literacy is associated with a wide range of financial decisions such as stock market participation, portfolio diversification, and tendency to avoid
extreme debts (Rooij, Lusardi and Alesie 2011). A study on financial literacy by Lusard (2010), in America found that family background has a strong impact on financial literacy. A college educated male whose parents had stocks and retirement savings when he was a teen ager was about 45 per cent points more likely to know about risk diversification than a female with less than a high school education whose parents did not own retirement or risky assets. A study in Italy by Banca d’ Italia (2009) on pension funds looked into the households’ preparedness, the level of their financial knowledge, their ability to deal with financial decisions and the impact of ignorance on savings. The supervising authority on pension funds expressed their concern about the ability of citizens to face the current challenges. Initiatives were put in place to address the issue of financial illiteracy in terms of both regulation and financial education.

Rooij and Alesie (2008) studying financial literacy, retirement planning and household wealth, examined whether financial literacy matters in the decision to join a pension plan. The results were that most individuals lack knowledge of basic financial concepts. The distribution of financial literacy among the population presented features similar to other countries records. Low levels of financial literacy are strongly linked to employee’s decision to quit their employer’s savings plan in a study carried out by Ang (2009) in US. The findings confirm and reinforce previous results about the positive impact of financial literacy on financial behavior on planning, saving, wealth diversification and investment. This provides a further rationale for public intervention to improve the level of financial literacy in the Italian population. At the same time results indicate that some population sub-groups face higher risks of not possessing sufficient financial knowledge and skills to adequately face the challenges posed by savings and investment decision.
In Kenya, cooperatives and other financial institutions are supposed to promote the education of their members. No report or empirical literature exists showing how the financial institutions in the tea growing areas have dealt with the issue of financial literacy to their members despite that being a problem even in the developed countries. This is the other gap the study seeks to fill.

2.3.4 Extent of government initiative to mobilizing saving and level of investment

A study by Muthike (2012) on the effects of economic environment on financial performance of commercial banks in Kenya, investigated the impact of the rate of inflation on consumption and investment. He was of the opinion that if inflation is not compensated by nominal increase in income, people become poorer. High and variable inflation makes economic price forecasting more difficult and decision making process may be negatively affected. Jongwanich and Kohpaiboon (2008), carried out a study on private investment in Thailand based on Turkish data from 1970 to 2009, the results indicated that inflation and real interest rate negatively affect total domestic investment.

According to Harayama (2008) on living standard improvement on GNH philosophy, if inflation is mainly demand pulled, it reduces the increase in nominal effective demand and it frustrates consumption expectations. By contrast, if inflation is mainly due to efforts of increasing margins and profits, it is possible a rise in consumption in high income groups should be discouraged and uncertainty about the future engendered by inflation and its wide fluctuations to the extent that benefits of inflation are mainly reaped by domestic firms, the real interest rate fall inversely with mounting inflation. Thus a low or moderate rate of inflation may help investments at least to the extent they are actually influenced by real interest rates and until the Central Bank intervenes.
The study indicates that financial institutions should refocus their financing to agricultural sector as it will help drive down food inflation which has been one of the main drivers of inflation.

2.4 Summary of literature review and the gap to be filled

Lusardi (2006), Van Rooij and Alesie (2008), examined financial literacy matters in the decision to join a pension plan. Muthike (2012), investigated the impact of the rate of inflation on consumption and investment. Ndikumana (2006), investigated the effects of financial development on domestic investment in Sub-Saharan African countries. Paabut and Staehr (2007), carried out a study to identify how household characteristics affect saving behavior in Pakistan and Estonia. Orebiyi (2005), studied the determinants of saving mobilization by farmers' cooperators in Nigeria and looked only at the household size, farmers' expenditure and membership to a cooperative as major determinants of saving.

The above are the various studies done in the area of saving and investment. None has been done to establish the relationship between the level of consumption, saving and investment in the tea sector, how the level of income determines the savings and the level of investment in the agriculture sector, how financial literacy mobilizes saving and the level of investment to the tea farmers or how the existing government initiatives contribute towards mobilizing saving and investment among the tea farmers. These are the gaps the study intends to fill.
2.5 Conceptual Framework

The variables for the study include the Level of investment which is the dependent variable, the level of income, financial literacy, level of consumption and government initiative which are the independent variables and the central bank which is the intervening variable. The variables are conceptualized as below:

**Independent variables**

- **Level of income**
  - Size of land under tea

- **Financial literacy**
  - Level of education
  - Attendance of workshops and seminars
  - Ignorance

- **Level of consumption**
  - Size of the family

- **Government initiative**
  - Free farm input
  - Free subsidies

**Dependent variables**

- **Level of investments**
  - Stock holding
  - Asset holding

**Central bank**

- Inflation
- Rate of interest

**Intervening variables**

Source: Researcher, 2013

Figure 1.1 The Conceptual Framework
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The chapter contains the methodology to be used in this study. The chapter discusses the overall
research design, the key areas and the population that was targeted for the study, the sampling
procedures which were used to arrive at the appropriate sample size, the mechanisms used in
determining the sample items the procedures and the instruments for data collection and finally
data analysis.

3.2 Research design

The main design of this study was descriptive methodology. However some elements of
exploratory design were also used. Aluko and Orodho (2005), notes that descriptive study design
helps in giving information about a situation, occurrences or feelings from respondents. In this
study, the respondents were the tea farmers from the District

3.3 Piloting

Piloting was done to 5 farmers who were randomly selected to find out the shortcomings,
relevance, ambiguity and errors in the questions which enabled the researcher to rectify the
affected questions.

3.4 Target population

The study targeted all the 15000 small holder tea farmers in the 198 tea collection centers in the
two tea factories in the district which are Ngere and Njunu tea factories. The farmers are
homogeneous in several aspects like farming experience, land ownership, access to financial institutions, and their level of education.

3.5 Sampling strategy

The study targeted small-scale tea farmers in the district. Fortunately all small-scale tea farmers are registered with the KTDA. The tea collection centers are conspicuously located along the roads and highly accessible thus making it easy to sample them at random. The small-scale tea growers are homogeneous in structure with low levels of variability of socio-economic characteristics such as age, level of education, level of consumption, family size and financial literacy, thus ensuring a high degree of precision. Because of the homogeneous nature of the population and the high population limiting human and financial resources, a smaller sample of 234 farmers representing 10 per cent was chosen.

The study applied both the multi-stage and purposive sampling procedure to determine the sample size. A simple random sampling was used to select 20 tea collection centers. After selecting the tea collection centers, the farmers were clustered in order of their tea grower's numbers into 10 groups and the 10th farmer in every cluster selected for the study. This formed 10 per cent of the target population for the study which implied 234 farmers. The sampled tea collection centers are as in the table below:

<table>
<thead>
<tr>
<th>Tea Collection Center</th>
<th>Target Population</th>
<th>10% of the target population</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.Kiarutara</td>
<td>155</td>
<td>16.5</td>
<td>17</td>
</tr>
<tr>
<td>2.Mwagu</td>
<td>127</td>
<td>12.5</td>
<td>13</td>
</tr>
</tbody>
</table>

Table 3.1 The sampling framework
<table>
<thead>
<tr>
<th>Location</th>
<th>Value</th>
<th>Percentage</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Gatura</td>
<td>180</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>4. Mbugiti</td>
<td>134</td>
<td>13.4</td>
<td>13</td>
</tr>
<tr>
<td>5. Ndaka-ini</td>
<td>126</td>
<td>12.6</td>
<td>13</td>
</tr>
<tr>
<td>6. Karangi</td>
<td>103</td>
<td>10.3</td>
<td>10</td>
</tr>
<tr>
<td>7. Kimandi</td>
<td>98</td>
<td>9.8</td>
<td>10</td>
</tr>
<tr>
<td>8. Kanunga</td>
<td>123</td>
<td>12.3</td>
<td>12</td>
</tr>
<tr>
<td>9. Njunu</td>
<td>134</td>
<td>13.4</td>
<td>13</td>
</tr>
<tr>
<td>10. Ngere</td>
<td>98</td>
<td>9.9</td>
<td>10</td>
</tr>
<tr>
<td>11. Kigoro</td>
<td>121</td>
<td>12.1</td>
<td>12</td>
</tr>
<tr>
<td>12. Chomo</td>
<td>87</td>
<td>8.7</td>
<td>9</td>
</tr>
<tr>
<td>13. Kiria-ini</td>
<td>102</td>
<td>10.2</td>
<td>10</td>
</tr>
<tr>
<td>14. Thare</td>
<td>86</td>
<td>8.7</td>
<td>9</td>
</tr>
<tr>
<td>15. Giachuki</td>
<td>130</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>16. Gataka-ini</td>
<td>129</td>
<td>12.9</td>
<td>13</td>
</tr>
<tr>
<td>17. Ndunyu-Chege</td>
<td>112</td>
<td>11.2</td>
<td>11</td>
</tr>
<tr>
<td>18. Kamukombi-ini</td>
<td>103</td>
<td>10.3</td>
<td>10</td>
</tr>
<tr>
<td>19. Kagarii</td>
<td>110</td>
<td>11.0</td>
<td>11</td>
</tr>
<tr>
<td>20. Wanduhi</td>
<td>82</td>
<td>13.2</td>
<td>13</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2340</strong></td>
<td><strong>234.0</strong></td>
<td><strong>234</strong></td>
</tr>
</tbody>
</table>

Source: Researcher 2013
3.6 Data collection procedure

The study used questionnaire in collection of data. A set of self-administered questions were given to the respondents for answering. The questionnaire was administered to the farmers at their homes, in their farms or at the tea collection centers. The researcher got assistance from 2 research assistants who are well qualified in data collection and were briefed on the questionnaire. They distributed the questionnaire and guided the respondents who required assistance to understand the questions. A cover letter signed by the researcher explaining the purpose of the research to the respondents, how the research information will be used, how to complete the questionnaire and assurance of confidentiality and anonymity was also given to the assistants.

3.7 Data presentation

After data analysis, descriptive statistics was used where frequencies and percentages was used in interpreting the respondents perception of issues raised in the questionnaire. The techniques used in data presentation are the pie charts, histograms, bar graphs, and line graphs. Tables were also used to present the data. This gives a quick way of getting how the variables used relate to one another at a glance.

3.8 Validity

The researcher used SPSS to test the validity of the questionnaire by computing Cronbach’s Alpha which is a single number that tells how well a set of items measure a single characteristic and values above 0.7 are often considered acceptable. The alpha came to 0.8750 and therefore a
trust that the questionnaire reliably assessed the same construct that is effect of saving mobilization to the tea farmers in Gatanga district.

3.9 Reliability

The researcher established the reliability of the instrument by ensuring a single administration of the instrument therefore yielding a greater internal consistency. This was after piloting the instruments and modifying some of the items. This was in line with Mugenda and Mugenda (2003) who gave the reliability of a research instrument as a measure of the degree to which the instrument yields consistent data after repeated trials.

3.9 Data analysis

A combination of analytical tools was used to achieve the various objectives of the study. This include statistical methods like measure of central tendency (mean, mode and median), percentages and the Pearson Correlation Coefficient which examines the significance or otherwise of the association between two variables. In this, only quantifiable factors believed to affect savings and investments will be included in the models. Two variables may have a positive correlation, a negative correlation or may be uncorrelated. The basic tool of correlation analysis is the correlation coefficient, which measures the degree of linear association between two jointly distributed random variables.

The correlation coefficients were calculated using the model.

\[ r_{xy} = \frac{\sum_{i=1}^{n}(x_i-x)(y_i-y)}{\sum_{i=2}^{n} \sqrt{(x_i-x)^2(y_i-y)^2}} \]
Where $x_i$ and $y_i$ are the observations on $x$ and $y$ respectively; $n$ is the sample means of the variables; $x$ and $y$ represent savings and investment respectively; $X_i$ represent

$X_1 =$ Income from tea payment (KES)

$X_2 =$ Level of Consumption

$X_3 =$ Financial Literacy

$X_4 =$ Government initiatives
CHAPTER FOUR
DATA PRESENTATION AND ANALYSIS

4.1 Introduction
In this chapter, the findings of the research are analyzed using Statistical Package for Social Sciences (SPSS) version 11.5 and presented in form of figures, graphs, charts and tables as appropriate. Based on the study objectives the following findings were established.

4.2 Characteristics of the respondents

4.2.1 Gender
Overall, males and females formed 84.6% and 15.4% of the respondents respectively (Table 4.1). It was necessary to determine this variable since people (farmers) have got different perceptions and attitude on savings and investment issues based on their gender. More men invested their income than women. A study by Kibet, Mutai, Ouma and Owuor (2009) on household savings among the small holder farmers, entrepreneurs and teachers in the rural Kenya identified gender of the house hold head as one of the determinants of saving.

Table 4.1: Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>198</td>
<td>84.6</td>
</tr>
<tr>
<td>Female</td>
<td>36</td>
<td>15.4</td>
</tr>
<tr>
<td>Total</td>
<td>234</td>
<td>100.0</td>
</tr>
</tbody>
</table>
4.2.2 Tea factory
The study established that 118 (50.4%) of the farmers’ respondents were from Ngere tea factory and 116 (49.6%) were from Njunu tea factory. This distribution across all the two tea factories was necessary since the perception may differ according to farmers’ experience in the tea factories. This information was summarized in figure 4.2 below.

Table 4.2: Tea Factory

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ngere</td>
<td>118</td>
<td>50.4</td>
</tr>
<tr>
<td>Njunu</td>
<td>116</td>
<td>49.6</td>
</tr>
<tr>
<td>Total</td>
<td>234</td>
<td>100.0</td>
</tr>
</tbody>
</table>
4.2.3 Size of the farm
Out of the total respondents, 6% (14) had below 1 acre of land, 45.3% (106) had between 1 and 2 and 44% (103) had 2-4 acres of land. In addition, 3.8% (9) had 4-6 acres while 0.9% (2) had above 6 acres of land. This shows that majority of farmers have small land sizes which can be associated to the low level of saving among the farmers. Farm size was an important factor in this study since it could influence the farmer’s outcome on the data related to income. According to Sebhatu (2012), landholding strongly influences the rate of total saving since the size of landholding influences income and income influences savings positively. Figure 4.3 gives the farm representation of the farmers’ respondents in acres.
All the respondents (100% =234) had tea as the main crop in their farm. This is in line with the topic of study which focuses on the tea farmers in Gatanga district.
4.3 Source of income

85% (198) of the respondents reported that their income is derived from farm activities and 15% (36) respondents having businesses as their other sources of income. The information is important to the study in showing the level of investment or diversification by the farmers in order to increase their income with farming as the main source of income shows that the level of investment is low. Kibet, Mutai, Ouma and Owuor (2009) in their study on household saving in Kenya, gave the type of occupation as a determinant of saving. This is represented in form of a table as-

Table 3.3: Source of income

<table>
<thead>
<tr>
<th>Source of Income</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm activities</td>
<td>198</td>
<td>85</td>
</tr>
<tr>
<td>Business</td>
<td>36</td>
<td>15</td>
</tr>
</tbody>
</table>

4.3.1 Income realized in the last two years from tea

From the findings, most farmers 100 (42.7%) had realized an income of between 50,000-150,000 followed by an income of 150,000-300,000 at 71 (30.3%) and below 50,000 at 48 (20.5%) and 15 (6.4%) an income above 300,000. This shows that majority of the farmers earn an average income from tea although it does not reflect average saving and investment. This does not conform with Yilmazer (2010) on their study on profile and determinants of household savings that the propensity of a consumer to save increases with increase in income.
4.3.2 Income realized from other sources

19 respondents received income below KES50,000 and 11 respondents between KES50,000 - 150,000. 204 respondents indicated no income from other sources. This is important to the study in determining the level of investment and shows that even with the regular income from tea, the level of investment is low hence low income from other sources. According to Kulikov and Alii (2007) on their study on the savings determinants on the demand side, reported that the saving rates depend more on the transitory income than regular income. This is presented as below-

Table 4.4: Income from other sources

<table>
<thead>
<tr>
<th>Income</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 50,000</td>
<td>19</td>
<td>8.1</td>
</tr>
<tr>
<td>50,000-150,000</td>
<td>11</td>
<td>4.7</td>
</tr>
<tr>
<td>No other source of income</td>
<td>204</td>
<td>87.2</td>
</tr>
<tr>
<td>Total</td>
<td>234</td>
<td>100</td>
</tr>
</tbody>
</table>
4.4 Do you see the need to save?

Only 8.5% of the respondents saw the need to save while 89.5% did not value saving with 2.0% being undecided on saving. This indicates low level of saving even if farmers have access to formal financial services hence low investment. This is also important to the study in knowing the perception of the farmers towards saving hence investment and how the financial institutions can overcome that. Onchang’wa (2012) reports that the vision 2030 can be achieved if financial institutions in Kenya can improve the savings hence the investment culture of their members. This is graphically represented as below

Figure 4.6: Amount of income from other sources

Figure 4.7: Do you see the need to save?
4.4.1 Need for saving
The respondents who saw the need to save were further asked to give their need for saving. Out of this, 88.5% said it is for investment, 4.3% for future consumption and 3.4% for children’s education. This shows that 88.5% of savers do it with the intention to invest. This conforms to a study by Broebeck (2008) on the savings behavior by pensioners in America that savings depend on the income and the saving habit. It also showed that 63% of low income respondents and 61% of moderate income respondents have a saving plan with goals. This is graphically represented as below-

![Bar Chart]

Figure 4.8: Need for saving.

4.4.2 If you find no reason to save, why?
The respondents who did not find any reason for saving proceeded to give reasons for the same. Out of this, 28.6% had no idea of a saving plan, a similar percentage ever thought about saving
and an equal percentage cited low or no returns on savings. 14.3% on the other hand did not find it secure to save and 8.5% gave no response. This shows low level of saving due to almost similar reasons. This conforms with Ikechukwu (2006), on his study on the analysis and investment behavior of farmers in Giwa and Sabon- Gari Nigeria, Low income among the problems (about 31%), low interest rate on deposits (about 11%) and fear of insecurity sixth (9%) among the reasons for not saving.

This appears graphically as-

![Bar Chart](image)

**Figure 4.9: Why don’t you see the need to save?**

4.4.3 Number of dependants/family size

35.3% of the respondents had a total family of 4-6, 51% had a family size of 6-8 and 10% a family size of below 4. The size of the family and the level of consumption had a significant correlation ($r = 0.531$ and $0.452$, $P<0.05$ respectively) to the amount of savings. A negative correlation ($r = -0.631$, $P>0.05$) was noted in the amount spent on school fees, food, clothing and medical by the respondents. Respondents who spent more on the children fees saved more. This is important to the study objective (i) on the relationship between the level of consumption and
the savings and investment. This conforms to Ameriks, Caplin and Lealy (2003) that low savings result from high consumption.

Table 4.5: Correlation analysis between family size and savings.

<table>
<thead>
<tr>
<th>Range of savings</th>
<th>Pearson correlation</th>
<th>Total number of family members</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>sig. (2 tailed)</td>
<td>0.531</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>119</td>
</tr>
<tr>
<td></td>
<td>Total number of family members</td>
<td>116</td>
</tr>
<tr>
<td></td>
<td>Pearson correlation</td>
<td>0.531</td>
</tr>
<tr>
<td></td>
<td>Sig(2tailed)</td>
<td>000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>116</td>
</tr>
</tbody>
</table>

Correlation is significant at 0.01 level (2 tailed)

Table 4.6: Correlation analysis between consumption and level of savings

<table>
<thead>
<tr>
<th>Range of savings</th>
<th>Pearson correlation</th>
<th>consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>sig. (2 tailed)</td>
<td>(.631)</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>119</td>
</tr>
<tr>
<td></td>
<td>Pearson correlation</td>
<td>(.631)</td>
</tr>
<tr>
<td></td>
<td>Sig(2tailed)</td>
<td>000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>116</td>
</tr>
</tbody>
</table>

Correlation is significant at 0.01 level (2 tailed)
4.4.4 How do you save?

Only 5.6% of those who saved did so with financial institutions, 34.2% saved at home while 6.4% saved using other means and 53.85% did not have any mean of saving. The information is important to the study in that access to a reliable means of saving leads to high level of investment. This shows that the level of those who use formal banking as their way of saving is below 10%. According to Barnejee and Dufflo (2007), a vast majority of the people still lack access to formal banking services of any kind. This is represented as-

![Figure 4.10: Method of saving](image)

4.5. Amount saved in the last two years

The respondents gave the amount saved as below-

<table>
<thead>
<tr>
<th>Amount saved</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 100,000</td>
<td>153</td>
<td>65.4</td>
</tr>
<tr>
<td>100,000-200,000</td>
<td>63</td>
<td>26.9</td>
</tr>
<tr>
<td>200,000-350,000</td>
<td>10</td>
<td>4.3</td>
</tr>
<tr>
<td>Above 350,000</td>
<td>8</td>
<td>3.4</td>
</tr>
<tr>
<td>Total</td>
<td>234</td>
<td>100.0</td>
</tr>
</tbody>
</table>
This is represented as-

![Frequency vs Percent Bar Chart]

Figure 4.11: Amount saved in the last 2 years.

The response shows that 65.4% of the farmers have saved below KES 100000 and 26.9% having saved between KES 100000-150000 for the last two years which is very low for any meaningful investment. According to Lawrence, Benjamin, Desterio and George (2009), the level of saving and investment in Kenya have been very low.

4.6 level of education

The respondents were requested to indicate their highest level of education. From the findings, majority 115 (50%) had primary education, 105 (45.7%) had secondary education, and 9 (3.9%) from adult education. Only 1 (0.4%) had the university education. The level of education is important to the study in that it determines ones access to information on saving and investment as well as decision making on investment and saving. Lusard (2010), a college educated male whose parents had stocks and retirement savings when he was a teen ager was about 45% points more likely to know about risk diversification than a female with less than a high school education whose parents did not own retirement or risky assets.
4.7 Training/course on financial matters
Most of the farmers' respondents (91.0%) had not received any training/course on financial matters while only 6.4% had received such training or course. 2.6% did not indicate whether they have received any such training. The information is important to the study in getting information to objective (iii). The high percentage of respondents without financial training may be responsible for the low level of saving and investment. Low levels of financial literacy were strongly linked to employee's decision to quit their employers savings plan (Ang, 2009).
4.8 Where do you seek financial advice?

The study revealed that only 1.7% of the respondents seek financial advice from financial institutions, 4.3% from the media 41% from friends and 53.9% do not seek financial advice at all. The findings are important in that any information on financial matters is important in enhancing ones decision to save and invest. Most of the farmers do not seek information and the few who seek the information do not do it from reliable sources. Rooij, Lusardi and Alesie,(2011),the source of financial literacy is associated with a wide range of financial decisions such as stock market participation, portfolio diversification and tendency to avoid extreme debts.
Figure 4.14: Where do you seek financial advice?

4.8.1 Nature of financial advice
From the findings, those who seek financial advice 63.6% did so for the purpose of borrowing, 9.1% for investment and 27.3% for the purpose of saving. This shows that most tea farmers do not seek information on investment and savings and therefore using financial institutions for the purpose of borrowing at the expense of saving and investment. According to Barnejee and Dufflo (2007), mobilizing savings instead of credit should be the key focus since vast majority of the poor still lack access to formal banking services of any kind.
4.9 Do you take loans?

88.9% (208) of the respondents take loans while only 7.7% (18) do not with 3.4% (8) not indicating whether they take loans or not. This shows that majority of the farmers. (88.9%) are heavily indebted which is the reason behind the low level of saving and hence investment. Njuru (2004), reported that Africa faces serious credit constraints and this coupled with low income greatly reduces any incentive to save.. This is graphically represented as follows-
4.9.1 Where do you take loans from?

94.9% of the respondents who take loans do so from financial institutions, 2.1% from relatives, 1.3% from friends with 1.7% getting the loans from other sources. This shows that most farmers have access to credit from financial institutions (94.9%) although it does not reflect a similar trend in terms of investment implying that most farmers use financial institutions as a channel of obtaining loans with little information on how the loan will be invested. This conforms to Wahome (2013), on the study of SACCOs that they have been having a challenge of sustaining the SACCO model of save a shilling and borrow three thus seeing the SACCOS rebranding to attract more members. This is graphically represented as below-
4.9.2 How much loan per year?
Most of the respondents 141 take a loan of below KES 100,000 per year 79 takes between KES 100,000 and 200,000 and 11 takes between KES 200,000 and 350,000 per year with 3 not being sure of the amount of loan they take. This shows that the amount of disposable income is the one that is increased by the amount of loan since the level of investment still remains low. This again conforms to Wahome (2013), on the study of SACCOs that they have been having a challenge of sustaining the SACCO model of save a shilling and borrow three thus seeing the SACCOS rebranding to attract more members. This is graphically represented as-

![Graph showing loan amounts per year](image)

Figure 4.18: Amount of loan per year

4.9.3 Rate of interest on loan
The respondents were asked to give the rate of interest they are charged on loans. 76.6% cited a rate of 12-18%, 8.4% reported a rate of below 12%, 6% a rate above 18% and 9% did not indicate the rate of interest charged. This is important to the study in objective (iii) in assessing whether the existing government initiatives contribute towards mobilizing savings and investment among the tea farmers. This shows that the government has been able to control the
rate of interest charged by various financial institutions to between 12-18% and thus encouraging more borrowers. This is in line with Adeyemo and Banire (2005) that the interest rate on money borrowed are significant variables that influence saving pattern.

![Figure 4.19: Rate of interest charged on loan](image)

**4.9.4 How is the rate of interest on loan?**

Too high was the main rate of interest reported by the respondents at 66.2% followed by fair rate at 26.4%. Only 7.4% of the farmers said that the rate of interest was low. This shows how the government initiative to control the rate of interest may promote high borrowing hence high investment. Adeyemo and Banire (2005) examined the pattern of saving and investment among the cooperator farmers in South Western Nigeria and reported that income, loan repayment and amount of money borrowed are significant variables that influence saving pattern. This also conforms to Ang (2009) that interest rate control appeared to have a positive impact on private investment. This is graphically represented as-
4.10 Problems encountered in investing savings.

Lack of information was recorded as the biggest problem farmers encounter when investing their savings. This was at 84.6% followed by too low savings at 12.8% no need to invest at 1.3% and 1.3% did not respond to the question. Thus lack of information is the major hindrance to investing (84.6%), followed by low savings at 12.8% this concurs with Ndikumana (2006) that access to financial information has a positive correlation with saving and investment. This is tabulated as-

Table 4.8: Problems encountered in investing savings

<table>
<thead>
<tr>
<th>Problem</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of information</td>
<td>198</td>
<td>84.6</td>
<td>84.6</td>
</tr>
<tr>
<td>Saving is too low</td>
<td>30</td>
<td>12.8</td>
<td>97.4</td>
</tr>
<tr>
<td>No need to invest</td>
<td>3</td>
<td>1.3</td>
<td>98.7</td>
</tr>
<tr>
<td>Did not respond</td>
<td>3</td>
<td>1.3</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>234</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Source: Researcher 2013
CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary
This study was designed to establish the effect of saving mobilization to the level of investment to the tea farmers in Gatanga District, Murang’a County. Two hundred and Thirty four farmers were randomly selected from the two tea factories in the District in the study area. Primary data was used for the study which was collected with the aid of structured questionnaires. Descriptive statistics and correlation analysis were the tools employed for the analysis. Based on the data analysis presented in the previous chapter, the researcher summarized the findings under the following headings:

5.1.1 Respondents Bio Data.
The study revealed that most of the respondents were male (84.6%). Most respondents had attained only up to primary education (50.4%), 45% secondary, 4.5% adult and 0.4% university. Most farmers have no financial literacy training (90%). Majority of the farmers (51%) get financial advice from financial institutions although 68.8% relates to borrowing. Majority of farmers (65.4%) reported to have saved a very little amount of below KES100, 000 in the last 2 years. This implies that financial literacy is a prerequisite for high savings and investment

5.1.2 Level of income, saving and investment
All the farmers (100%) cited tea farming as their major source of income with majority of them (42.7%) having an income ranging between 50,000-100,000, 36% have an income of between
150000-300000. 90% of those with income from other sources have less than 50000 as income from those sources. Only 8.5% of the farmers saw the need to save, 91.5% saw no need to save. Those who save said they do so for investment (92%) with majority of them being those with high income ranging from 150000-300000. Those who did not see the need to save gave various reasons as 14.3% did not find it secure to save, 28.6% cited low income, low returns on savings, have no idea on a saving plan or have never thought about it. Majority of those who save (59%) do it at home and only 36.3% do it with financial institutions. This implies that the level of income influences the level of savings and investment negatively among the farmers.

5.1.3 Consumption and the level of savings.

51% of the respondents gave the highest number of dependants in terms of family size of 4-6 and high consumption in terms of education, food, clothing and medical with a negative correlation (-0.631, p<0.05) to saving. This is in relation to the respondent’s savings and level of income from tea earning. This implies that the level of consumption have a negative impact on saving and investment.

5.1.4 Interest rates and activities on savings mobilization

The 12-18% interest charged to majority farmers by financial institutions on loans were cited as too high (90.5%). This implies that majority were discouraged to borrow and therefore low levels of investment. The government should therefore put proper measures to control the rate of interest so that it enhances the level of saving and investment.
5.2 Conclusion
From the evidences gathered, savings potential exists among the tea farmers in the district. The result revealed that income and financial literacy was the most important determinant of savings as well as investment. Some of the factors found to exert significant influences on the level of savings and investment include income, level of consumption, access to loan facilities and the rate of interest on loans. The study also showed that there was inadequate savings and investment by the farmers in the area. Therefore, efforts to mobilizing savings and investment among the tea farmers in the district and in Kenya as a whole need be directed at improving existing practices within the government and the financial institutions. It can also be concluded that credit access has a net negative effect on saving such that; an improvement in credit access will cause a reduction in saving, and vice versa hence any small improvement would significantly have an impact on saving.

5.3 Recommendations
Based on the findings of this study, the following recommendations are made:
First, effort designed to accelerate the level of savings and investment should be geared toward raising income, increasing financial literacy, reducing consumption and controlling the rate of interest on loans. This will go a long way in encouraging farmers to make capital investments. This will increase their income and hence savings. Second, mass education and promotional society and also intimate farmers on the advantages of diversifying their investments and educating them on the various investment opportunities for them to invest wisely.
5.4 Suggestions for Further Study

This study limits itself to the tea farmers in Gatanga district Murang’a County; therefore, effort should be made to cover other farmers in other sectors and in more areas, not only in Murang’a but also other geographical regions in the country for a comparative analysis. It is important to undertake a research on the effects of fluctuations on returns from tea harvest. Research should also be done on the impact of the lump sum payment commonly known as “bonus” to the level of savings and investment to the tea farmers.
REFERENCES


Proceedings Of Third International Conference on Gross National Happiness.


KUSCO (2004) *SACCO challenges in their service provision*.


Lusard, A. (2010) *Financial Literacy and Ignorance - America*


County Edition (2012) - *Murang’ a County*


Http://www..org/wiki/commercial agriculture. *Wikipedia*


QUESTIONNAIRE TO THE TEA FARMERS.

The questionnaire will assist me get the data on saving and the level of investment of the tea farmers in Gatanga District. Please tick or fill where appropriate.

A. GENERAL INFORMATION

1. Tea Factory................................................... 2. Tea collection center.........................

3. Sex of the farmer: Male [ ]  Female [ ]

4. Age: ..............

5. What is the size of your household?

   No of wife/wives .........................

   No of children .........................

INFORMATION ON INCOME

8. What is the size of your farm land?
   a) Below 1 Acre [ ]  b) 1-2 Acres [ ]  c) 2-4 Acres [ ]  d) 4-6 Acres  e) Above 6 Acres [ ]

9. What are the main crops in your farm?

   (a)............................... (b)............................... (c)............................... (d)............................... (e)............................... (f)...............................

10. What is the size of the farm allocated to each crop grown above and the yield?

<table>
<thead>
<tr>
<th>Crop produced</th>
<th>Farm size(Ha/Acres)</th>
<th>Yield(Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) others(specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
11. What other activity (ies) do you engage in apart from farming?
   a) Business [ ]  b) Manufacturing [ ]  c) Mining [ ]  d) Others (Specify) .................

12. What is your source(s) of income?
   (a) Farm activities

   b) As in 11 above (Specify) ..............................................

13. What is the amount of income realized for the last 2 years?
   a) Farm activities KES
      Below 50000 [ ]  50000-150000 [ ]  150000-300000[ ]

   b) Other sources KES
      Below 50000 [ ]  50000-150000 [ ]  150000-300000[ ] Above 300000

INFORMATION ON CONSUMPTION

14. How much of your income was spent on the following consumptions? Write a, b, c or d in the respective box
   a) Below 50000  b) 50000-120000  c) 120000-180000  d) Above 180000

<table>
<thead>
<tr>
<th>Food</th>
<th>Clothing</th>
<th>Education</th>
<th>Medication</th>
<th>Others (specify)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

INFORMATION ON SAVING.

15. Do you see the need to save?  Yes [ ]  No [ ]

16. If yes, what is your need for saving?
   a) To invest [ ]  b) For future consumption [ ]  c) For children’s education [ ]

   d) No reason [ ]  e) Others Specify ..........................................................

17. If no in 15 above, why?
   a) Do not find it secure to save [ ]  b) Low/No returns on savings [ ]  c) No idea
      of a saving plan  d) No money is left to save [ ]  e) Never thought about it) [ ]

18. If you are saving, how do you save?
   a) With financial institutions [ ]  b) At home [ ]
19. What amount have you been able to save from your tea incomes during the last 2 years (KES)
   a) Below 100000 [ ]  b) 100000-200000 [ ]  c) 200000-350000 [ ]  d) Above 350000 [ ]

INFORMATION ON FINANCIAL LITERACY

20. What is your highest level of education?
   a) Primary Education [ ]  b) Secondary Education [ ]  c) Adult Education [ ]
   d) Post Secondary/University [ ]

21. Do you have any training/course in financial matters? eg Accounting, Finance, Banking, Entrepreneurship, Book-keeping etc  Yes [ ]  No [ ]
   If yes above, what is the course? ..................................................

22. Where do you seek financial advice?
   a) Financial institutions [ ]  b) media [ ]  c) friends [ ]  e) other sources
     (Specify) ..............................

23. What is the nature of the financial advice?
   a) Investment [ ]  b) Savings [ ]  c) Borrowing [ ]  d) Others (Specify) ..............................

24. How would you rate the advice?
   a) Excellent [ ]  b) Satisfactory [ ]  c) Below satisfaction [ ]

25. How much of your savings do you invest in following activities?
   a) Building of house(s) KES ........................................
   b) Business expansion KES ........................................
   c) Buying shares KES ........................................
   d) Others (specify)........................................

INFORMATION ON GOVERNMENT INITIATIVE

26. Do you take loans?  Yes [ ]  No [ ]
   a) Financial institutions [ ]  b) Relatives [ ]  c) Friends [ ]
d) Others (specify) .................................................................

27. If yes in 24 above, how much per year? (KES)
   a) Below 100000 [ ]
   b) 100000-200000 [ ]
   c) 200000-350000 [ ]
   d) Above 350000 [ ]

28. What is the rate of interest on the loan?
   a) Below 12% [ ]
   b) 12-18% [ ]
   c) Above 18%

29. How do you find the rate of interest?
   a) Too high [ ]
   b) Fair [ ]
   c) Low [ ]

INFORMATION ON INVESTMENT

30. What problem(s) do you normally encounter in investing your savings?
   a) Lack of information [ ]
   b) Saving is too low [ ]
   c) Do not see the need to Invest [ ]
   d) Others (Specify) .................................................................

31. What in your view can be done to improve your savings?
    .........................................................................................
    .........................................................................................
    .........................................................................................

32. What in your view can be done to improve your level of investments?
    .........................................................................................
    .........................................................................................
    .........................................................................................

65
Dear respondent,

RE: Collection of Research Data

I am a postgraduate student at Kenyatta University School of Business. In order to fulfill the degree requirement, I am undertaking a Finance Research Project on The effect of Saving Mobilization to the Level of Investments to the tea farmers in Gatanga District, Murang’a County Kenya.

This is to kindly request you to assist me collect the data by filling out the accompanying questionnaire with a lot of sincerity and to the best of your ability.

The information you provide will be used exclusively for academic purposes. My supervisor and I assure you that the information you give will be treated with strict confidentiality. A copy of the final paper will be availed to you upon request.

Your cooperation will be highly appreciated.

Thank you in advance.

Yours faithfully,

JAMES NJUGUNA NGUGI
# APPENDIX III

## TIME PLAN

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>WEEK</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Data Collection</td>
<td></td>
</tr>
<tr>
<td>Data Analysis</td>
<td></td>
</tr>
<tr>
<td>Report writing</td>
<td></td>
</tr>
</tbody>
</table>

### BUDGET

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Units</th>
<th>Cost per unit</th>
<th>Amount (KES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Research Assistants</td>
<td>2</td>
<td>KES 30000@3 days</td>
<td>18,000</td>
</tr>
<tr>
<td>2. Stationary</td>
<td>4 reams</td>
<td>KES 500@</td>
<td>2,000</td>
</tr>
<tr>
<td>3. Data Analysis</td>
<td></td>
<td></td>
<td>12,000</td>
</tr>
<tr>
<td>4. Printing and Binding</td>
<td>15 copies</td>
<td>KES 900@</td>
<td>13500</td>
</tr>
<tr>
<td>6. Transport and lunch</td>
<td></td>
<td></td>
<td>6,000</td>
</tr>
<tr>
<td>7. Miscellaneous</td>
<td></td>
<td></td>
<td>15,000</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td></td>
<td></td>
<td><strong>66,500</strong></td>
</tr>
</tbody>
</table>