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Women's Education in Four Villages in Kenya: The Perceived Outcomes on Livelihoods and Household Welfare

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The MFS Scholarship Programme gives Swedish university students the opportunity to carry out fieldwork in low- and middle income countries, or more specifically in the countries included on the *DAC List of ODA Recipients*, in relation to their Bachelor's or Master's thesis.

Sida's main purpose with the Scholarships is to stimulate the students' interest in, as well as increasing their knowledge and understanding of development issues. The Minor Field Studies provide the students with practical experience of fieldwork in developing settings. A further aim of Sida is to strengthen the cooperation between Swedish university departments and institutes and organisations in these countries.

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Abstract

This thesis is concerned with women's education and the perceived effects it might have on households' livelihood diversification into the rural non-farm economy. In addition, it looks at household welfare and how women's education and potentially livelihood diversification adds to better welfare. Increasing human capital through education is thought to have positive outcomes for women in their roles as caretakers, but it can also have an effect on women's economic role. Women are thought to be important actors in development but they do not always have the same access to resources and opportunities as men, which limits the power they could have in development. This study is based on fieldwork carried out in four rural villages in Kenya where a NGO provides women's education. Mixed methods have been applied in the form of a questionnaire, semi-structured interviews, and focus groups. These methods were chosen for a number of reasons, one being to get a fuller understanding of different people's perception on the questions. The study shows that there is no clear linkage in the collected data between women's education and livelihood diversification, but it shows that there can be improvements in existing livelihoods. There are many perceived welfare outcomes voiced by participants which confirm theories claiming that focusing on women have general positive welfare outcomes. When assessing these issues, considerations have been taken to the local context within the different villages and how it might affect these different outcomes.

Keywords: Women's education, livelihood diversification, household welfare, development studies.

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1. Introduction

Women's role in development has changed from being more or less recipients of welfare to being active and important agents in development. This change came about partly due to the Women's Decade of development between 1975-1985 (Buvinić 1998). Women's role in development has continued its importance as seen in the United Nations Millennium Development Goals (MDGs) (United Nations 2014a). Promoting women in development has been associated with improvements in not only the woman's life, but her whole family and especially children's welfare (Sen 1999). In many low-income countries, women have the main responsibilities within the private sphere of the household (Storey 2001). Now women are increasingly promoted to take part in the public sphere of economic activities outside of the household. In rural areas of low-income countries, women also play an important role in agricultural production, making up as much as 50 percent of the agricultural labour in Sub-Saharan Africa (Potter, Conway, Evans and Lloyd-Evans 2012:121). However, their unequal access to some of the productive assets make them more vulnerable in agriculture compared to men (Doss and Morris 2001). An implication of this could be that diversification out of agriculture could be important for women especially.

The ambition of this study is to investigate the perceived outcomes of women's education, and skills development on livelihood diversification into the rural non-farm economy. Looking at the perceived outcomes will provide knowledge in what incentives people themselves see as important factors received from education and guide their choices of livelihoods. Looking at actual outcomes from just education would be close to impossible, as one cannot separate it from the larger institutional power relations, other assets and capitals. This is why I will study perceived outcomes by women and men themselves and not actual outcomes per se. Furthermore, the aim has been to contribute to understanding what effects women's education and livelihood diversification might have on household welfare. Lastly, to assess the outcomes of both education and livelihood diversification, one has to understand how space and locality conditions livelihood strategies as well as welfare outcomes.

The study is based on field research carried out between January and March 2014 in four rural villages in Kwale district, Kenya, where a local non-governmental organisation (NGO) called Nikumbuke Project is active in providing education and skills development for women.

1.1 Objectives of the Study and Motivation

The objective of this field study has been to investigate the possible outcomes of women's adult education and skills development on livelihood diversification, as perceived by the women and their husbands themselves. The focus on livelihood diversification into the rural non-farm economy is chosen due to a belief that this can have positive effects on women, as well as households in an area where agriculture is prone to risks and productive resources are scarce. Livelihood diversification is a rural livelihood strategy that could have potential poverty reducing effects (Scoones 2009). Assessing perceived linkages between the two, one can begin to understand why some women choose to take part in education, and what opportunities women themselves see in securing other sources of income. The choice of looking at a household's welfare is motivated because women are often targeted to increase overall household welfare (Chant 2008). Hence, understanding this in relation to women's and households' choice of livelihood strategy could help in appreciating the role women can play in development. Furthermore, being in the field of human geography I put value into the context in which these processes occur, and aim to get a greater understanding of if there are

any socio-economic differences between villages that may or may not affect people in relation to these questions.

1.2 Research Questions

Three questions have been guiding this fieldwork and are as follows:

1. How do women and men perceive the possible effects of women's increased education on livelihood diversification into the rural non-farm economy?
2. How do women and men perceive that education and livelihood diversification improve the welfare of the household as a whole?
3. Are there any differences between the four villages that could influence the outcomes of women's education and its effect on livelihoods?

1.3 Scope and Limitations of the Study

There are many factors to consider as prerequisites for livelihood diversification to occur, however, the scope of this thesis is mainly to look at human capital through women's education and what people see as the perceived outcome of the education on livelihood diversification and households' welfare. Hence, claims on causal relationships between women's education, livelihood diversification and welfare are not the aim here and cannot be made either. This is one of the limitations of the study as it might be hard for participants to separate what they have received in their education that they perceive to have influenced their livelihoods and welfare. Generalisations of the findings can only be made from the survey data to the chosen population of active members in the NGO in the four villages. Interview material cannot be generalised as such, but will provide a more contextualised picture of these questions.

1.3.1 Definitions

Here, key terms will be defined to provide a clearer understanding of their meaning in this thesis.

Human capital is discussed in relation to education and is defined as "productive wealth embodied in labour, skills and knowledge" (United Nations 2014b). Participating in education would in this regard be seen as investing in human capital as the aim is to increase skills and knowledge for individual persons. Education will be discussed in relation to women and will refer to adult education and skills development.

Livelihood strategies refer to the strategies all members of the household implement to create and sustain a living (Scoones 2009). Since this thesis is concerned with the strategy of livelihood diversification, in particular diversification into the rural non-farm economy, this is defined as a way of branching out of current agricultural livelihoods and adding different sources of income to the household portfolio.

This paper investigate the effects of women's education, hence, women will in these cases indicate adult women. Women are often treated as a homogenous group of mothers and caregivers (Tsheola 2012) when in fact the reality is much more nuanced. Women are as heterogeneous as households are and this has to be understood when dealing with the objectives of this study.

2. Theoretical and Conceptual Framework

This thesis is concerned with women's education as a human capital improvement, and to what extent it is perceived or not perceived to influence the rural livelihood strategy of diversification into non-farm activities. Women's education and livelihood strategies are linked to welfare outcomes, hence when assessing these concepts, there are many connections between them to analyse. Entwined in these processes are household decisions and household member's bargaining power, that condition how people relate to education, livelihood diversification and welfare. Another important component in these processes is to understand how socio-economic conditions in different places might affect both livelihood strategies as well as educational levels. This section will present concepts that are used when trying to understand these and similar issues.

2.1 Livelihoods and Income Diversification

Livelihood diversification as a rural livelihood strategy is one of the strategies identified in the Sustainable Livelihoods Framework (see Figure 1) together with agricultural intensification and extension as well as migration. These outputs or livelihood strategies are affected by varying inputs or capitals and assets that can be summarised under natural, economic/financial, human, and social capital. The output from these different livelihood strategies in this framework concerns the creation of sustainable livelihoods (Scoones 2009).

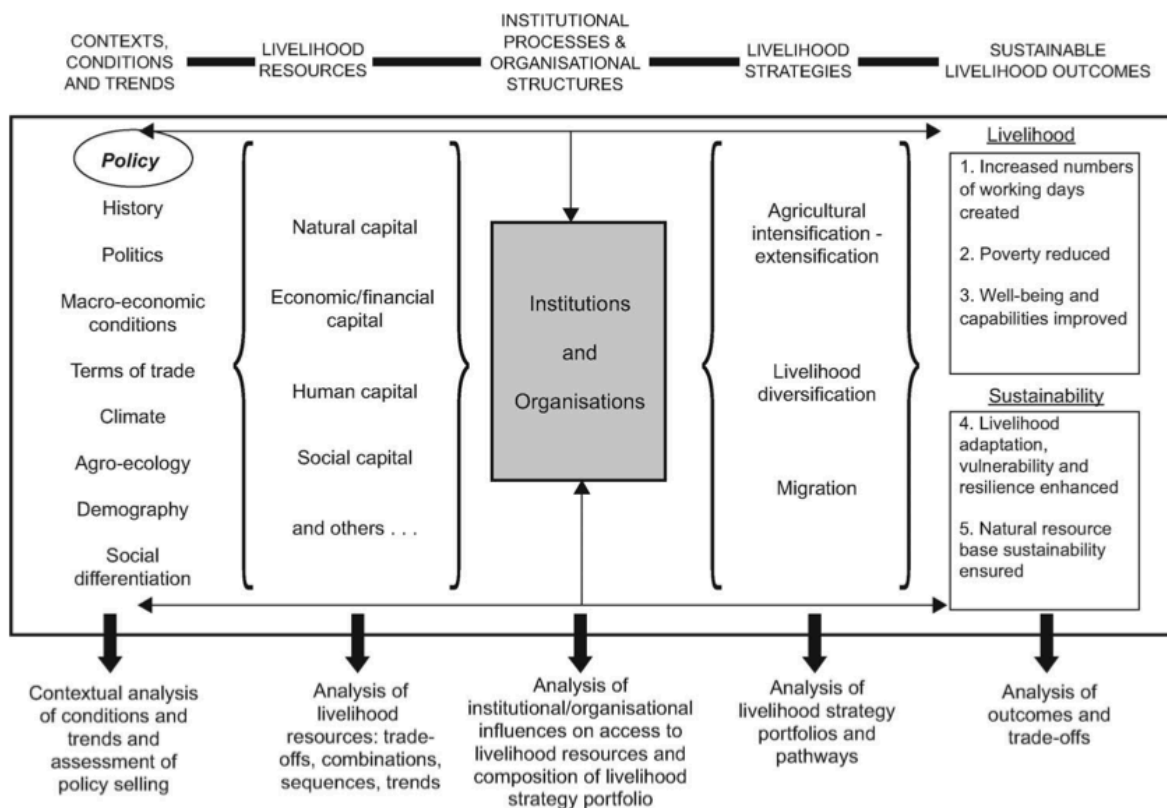


Figure 1. Sustainable livelihoods framework (from Scoones 1998 in Scoones 2009).

In the literature on livelihood diversification, particularly that related to the rural non-farm economy, there is a strong focus on push and pull factors in determining why households

decide to diversify their livelihoods. The push factors are related to coping behaviour and are adopted in areas where agriculture is more prone to risks such as drought, flooding or environmental degradation (Haggblade 2007). Since insurance are often lacking in many of these areas, households self-insure themselves through different coping behaviours. Coping behaviours could be through organising socially to create networks and spread risks or agricultural households can diversify their livelihoods into non-farm activities to insure the family against failures in agricultural production (Haggblade 2007).

The pull factors on the other hand are linked to agricultural prosperity that creates opportunities for households to engage in other non-farm activities to be able to maximise profits (Haggblade 2007:44). Creating a diverse portfolio of livelihoods is often made by households to reduce risk and poverty (Barrett, Reardon & Webb 2001), but having a diverse set of livelihoods does not, however, always mean that the households' have a higher income (de Haan and Zoomers 2005). When farm activities are combined with other non-farm activities, assets such as land, labour, capital and skills need to be distributed between each household member and these decisions are made within the household (Haggblade 2007:42). Hence, intra-household bargaining and decision-making condition this, but also the local context, as will be discussed below. There are also larger institutional and organisational structures that condition access to resources and livelihood opportunities (Scoones 2009).

Many analyses of rural livelihoods focuses on one sector, such as agriculture, employment, informal work, small-scale enterprises and so forth, however, in reality most people in rural areas are engaged in a variety of these and other activities which together create their livelihoods (Scoones 2007, Barrett et al. 2001). Hence, diversity in livelihoods is common and single-sector approaches to solve rural development issues have been criticised (Scoones 2009). De Haan and Zoomers (2005) criticise livelihoods approaches for being too focused on capitals and assets and argue that the larger structural and institutional aspects of livelihood opportunities are often not fully understood. Another criticism put forward is that livelihoods approaches sometimes fail to assess the role of power that exists on all levels in society, between individuals in households and up to macro perspectives and within organisations and institutions. Therefore they argue that studies on livelihood approaches should focus more on the power relations that condition access to opportunities (de Haan and Zoomers 2005).

2.2 Human Capital, Education and Women

Human capital is one of the discussed capitals that according to different livelihoods frameworks can have an effect on livelihood strategies. Accumulation of human capital is part of human development along with individuals' opportunities of making their own choices and to live longer and healthier lives. There is a two-way relationship between human development and economic growth on a macro-level. Economic growth allows for more investment in improved human development and human development levels can enhance economic growth opportunities (Suri, Boozer, Ranis and Stewart 2011). When looking at diversification into rural non-farm activities it is suggested that basic education can increase "the productivity and wages of the rural non-farm workers" (Ahmed, Haggblade, Hazell, Meyer and Reardon 2007:243). Investment in education in rural areas can hence have positive returns and focus should also be given to developing different skills as this can lead to higher returns in rural jobs (Ahmed et al. 2007:247). Reardon et al. (2007:140) argue that for rural households and their individuals to engage in more lucrative non-farm jobs they need more human as well as physical capital. However, to look at education in these terms is to put a focus on economic growth as the main indicator of development (Tikly and Barrett 2011). It is suggested that education has effects on poverty reduction, however it is difficult to quantify

education's contribution to economic growth on a macro-level. Nonetheless, education, especially good quality education, can on an individual level have an effect on economic growth (Tikly and Barrett 2011).

Atchoarena and Gasperini (2003) argue that some outcomes of adult's basic education in rural areas are increased general knowledge and gains in specific skills, which include literacy skills among others. Gaining literacy and numeracy skills can increase a person's self-confidence in their interactions at the market place, which could lead to an increased income and improved livelihoods. This effect could be particularly significant for women who live in a male-dominated society (Atchoarena and Gasperini 2003:104).

Reasons for women's lower participation in economic activities, both within and outside agriculture, are linked to their limited access to productive and economic resources. Access and ownership of capitals tend to be an advantage of male members of households (Quisumbing and Pandolfelli 2010). Hence women face more difficulties in starting up businesses due to lack of resources that can work as a security when applying for loans (Sen 1999). A great deal of literature discusses the constraints faced by female farmers in low-income countries and explains how these constraints are to varying extents gender-specific. A lot of these studies consider "women's lack of access to productive resources and low levels of human capital" (Quisumbing and Pandolfelli 2010:581). A study looking at adoption of maize technologies and fertilizer in Ghana finds that the adoption decisions does not depend on gender but rather on access to resources such as labour, land, and extension services. Hence it suggests that women and men do not have equal access to these resources, putting women in a more vulnerable position (Doss and Morris 2001).

By acknowledging that gender matters, development interventions have been aimed at reducing the gender disparities in human and physical resources. Many interventions have been aimed to improve women's health and education, as poor rural women are constrained by low levels of human capital which is limiting them as agricultural producers, workers, and caregivers (Quisumbing and Pandolfelli 2010). Women often have the responsibility of their households' survival but they have limited access to the most remunerative livelihoods due to the external forces that enforce the ideology that females are homemakers and caretakers, and males are breadwinners (Tsheola 2012). Due to the responsibility of being the homemaker with most of the domestic responsibilities, women are constrained from allocating time to more remunerative activities (Quisumbing and Pandolfelli 2010). Women tend to have less access to productive resources and assets, some of which are found in agriculture, and include secure tenure of land, agricultural inputs, technologies and capital (ibid.). If women do not have access to these resources they become more vulnerable to risks that are affecting agriculture. Furthermore the varying capitals available to the household condition what livelihood strategies are possible for different members of the household. Questions of if and how people can access capitals and how they use them have been important questions in previous studies on livelihood frameworks (Potter et al. 2012:117). Depending on the capitals and the socio-cultural context, different livelihood strategies will have differing outcomes (Scoones 2009).

Some commentators argue that interventions that have been applied to empower women have been ineffective because neoliberal policies have influenced development discourses (Tsheola 2012). This means that when development policies encourage draw back of the state, women's traditional roles as caretakers could be enhanced. Simultaneously, women's economic and social empowerment are encouraged by trying to make access to certain

resources easier. This is partly done because of the predicted effects on the families and households, as women tend to have the responsibility for the survival of them all (Tsheola 2012).

2.3 Women and Households' Welfare

When Sen (1999) wrote his book 'Development as Freedom', the broader developmental role of women's agency and empowerment were becoming more widely acknowledged, moving from the previous focus on women's well-being. In this regard women were no longer seen as just recipients of welfare but as agents of promoting social change that could affect both men and women. Women's agency and well-being are interrelated, seeing as improvements in one area will have effects on the other as well (ibid.). Sen (1999) argues that women's opportunities to earn an income, getting an employment outside the home, being literate, having the right to own property and being part of decision-making have positive effects on women's well-being.

What these factors have in common is that they help increase women's voice and agency by helping women to become more independent and empowered. For example having an income and working outside the home have positive effects on females' status both in the household and in the society. Hence these variables can help improve women's position. Furthermore these mechanisms can have general gains on households and the family as a whole due to the link between women's well-being and others welfare (Sen 1999). However, looking at women's participation in work outside the home there are varying results when analysed both in social and economic contexts, that should be considered. Women's participation in the labour force has many positive effects on women's roles as actors, among others the stronger focus given to children's increased welfare. However, where men are reluctant to take on household tasks, women are at risk of having the double-burden of both household tasks and work outside the household (Sen 1999; Meagher 2010). There is also a risk of women being caught up in lower return jobs in comparison to men (Meagher 2010).

There are positive welfare effects, especially on children, when women are educated and literate. This effect is especially visible when looking at child mortality, but also on their general welfare. This is thought to be a consequence of having their agency respected which leads to that women's voices are more likely to be heard and accepted in the household (Sen 1999).

In addition to this, there are other poverty reducing effects of education that have been shown in nutrition, health, family planning and children's schooling. Newly literate mothers often see the importance of sending and keeping their daughters in school (Atchoarena and Gasperini 2003:104). Hence education is seen to influence social welfare and this includes women's welfare, which in return is thought to also promote growth (Tikly and Barrett 2011).

2.4 Household Decisions and Bargaining Power

Moving between discussions of education, livelihood diversification and households' welfare there is a rationale for understanding household dynamics and how bargaining power is created, sustained and used in households. Hence to understand these concepts one needs to know how bargaining power can be understood.

When looking at intra-household relations one needs to assess bargaining power which is affected by different resources, attitudinal attributes, interpersonal networks and other factors

including “legal rights, skills and knowledge, the capacity to acquire information, education, and bargaining skills” (Quisumbing 2010:163). Many of these factors are connected to human capital and education, but there are also the external factors such as legal rights. When looking at resources or assets, one finds that individuals in a household have different assets and moreover, different access to assets. Quisumbing (2010) argue that “The threat of withdrawing both oneself and one’s assets from the household grants the owner of those assets some power over households resources” (ibid.:163). However these ‘threats’ are more powerful and credible if they are the norm in a community or supported by divorce laws. The attitudinal attributes are a person’s self-esteem, self-confidence and emotional satisfaction that can influence bargaining power. Finally, networks can be built through participation in an organisation or other social networks and this can build on a person’s social capital which could have positive effects on a person’s bargaining power (ibid.).

Consequently, intra-household dynamics and bargaining power become significant components for analysing livelihood diversification and especially when trying to understand the woman’s role in the process. The chosen strategies are linked to the well-being of the household members and decisions affecting the well-being of individuals are often decided within the household (Scoones 2009). To get an idea of how this could be related to gender, studies suggest that women and men spend incomes differently (Quisumbing 2010). In decision-making there is often a weighing between what each household member provide in terms of remunerative income and assets and how these are evaluated to benefit the household. In many societies women are seen as homemakers and caretakers while men are seen as breadwinners, hence the man is thought to provide for the family and so has the most bargaining power. However if women are able to make an income and also provide in this sense to the family (caretaking is a way of providing, but it is seldom equally recognised as remunerative work) her bargaining power could increase. Furthermore, having an independent income makes the individual less dependent on others (Sen 1999).

Quisumbing (2010) argues that “Social norms set the context of intrahousehold negotiation over labour and other resources, including the sharing of resources within the household” (ibid.:164). Hence, social norms need to be remembered when analysing these issues as the context in which these processes take place conditions the outcomes. Access to assets are important in bargaining power and it is argued that women’s access to them have been associated with better development outcomes (ibid.). It is important to understand the gendered aspect of assets and that women and men do not have equal access to certain assets. Quisumbing (2010) summarises it well in the statement; “Overall there is a need to understand the conditions under which secure access to assets can enhance men’s and women’s livelihoods and well-being” (ibid.:165). Hence, securing access to assets could have positive outcomes on both livelihoods and household’s well-being.

2.5 Space and Socio-Economic Factors

Decisions regarding choices of livelihoods strategies might at first glance seem to be mainly dependent on households’ decisions and the bargaining power of different members of a household, but it is important to understand the processes behind these decisions and how spatial contexts affect them. A range of factors, varying from cultural and social contexts to larger institutional and organisational structures, affect households in different ways and guide what livelihood strategies are available for households (Scoones 2009). The Sustainable Livelihoods Framework includes these spatial dimensions that are actively affecting choices of livelihoods. Scoones (ibid.:172) argues that “livelihood perspectives start with how different people in different places live”. In other words it is important to understand that

livelihoods carries with it different dimensions of localism and it becomes clear when considering what types of non-farm livelihoods it is actually feasible for people in rural areas to diversify into (Scoones 2009).

Looking at space from a gender perspective, there are private and public spaces and within them there are power relations that can create social inequalities between individuals (Storey 2012). In the public/private divide women are associated with the private sphere of the household and men with the public sphere. This divide is therefore not only separating spaces but also the activities done within the specific spaces and how people access different activities (Storey 2012). This is why space matters when looking at livelihoods choices. Additionally, the geographical setting matters in livelihood opportunities and outcomes, such as distance to markets, the agricultural conditions and seasonality (Zoomers 1999 in de Haan and Zoomers 2005).

It is in these concepts and ideas that the analysis of this study's empirical data will be situated. The thesis will try to analyse the link between perceived effects of human capital, through women's education and households' livelihood diversification into rural non-farm activities. Furthermore, the impact of education and livelihood diversification on households' welfare will be analysed and lastly, an attempt will be made to understand what role local differences between villages might have.

3. Background

In this background section, literature looking at women's role in development in relation to education will be reviewed. The first part will look at projects targeting women and how they have been focused on welfare outcomes for the woman but often more so her whole household's welfare. Examining the literature on women and education, there are two types of education that are found. The first one is technical and vocational education and the other one is literacy and numeracy education. These two types will be reviewed, as both are offered by the organisation Nikumbuke Project. Following these parts there will be a site description of the site where fieldwork was carried out - presenting the area, the villages and the organisation that works with improving women's education and skills development.

3.1 Projects Targeting Women

Women's roles in development are high on the agenda. The third Millennium Development Goal is to promote gender equality and empower women and the fifth goal concerns improvement in maternal health (United Nations 2014a), which indicates that women are seen as important actors in development. But women's role in development came on the agenda already between 1975-1985 when the United Nations' Decade for Women took place (Buvinić 1998). This decade did not achieve all the goals then and so in the 1990s another concept highlighting women's role in development came with the 'feminisation of poverty' thesis. This concept has increased focus on gendered aspects of poverty, but not without complications. The term 'feminisation of poverty' entail a belief that women are in general more at risk of poverty compared to men and also face more hardship in breaking the cycle of poverty, especially households' headed by females. Not everyone fully agrees to these claims and it is argued that within the concept there has been a too strong focus on income, hence overlooking other complex aspects of poverty (Chant 2008). Due to the concept, goals of

poverty reduction and gender equality were combined. Therefore, resources have been channelled to targeting women to increase their education and skills, as well as create access to financial assets (ibid.).

Women are often associated with welfare goals, which means that when interventions are implemented to promote equality, there is also a belief that it will reduce poverty and increase whole families' welfare (Chant 2008, Buvinić 1998, Sen 1999). Welfare projects are the ones, which deliver “information, education, and sometimes free handouts (money, food, technology) to poor women in their roles as homemakers, reproducers and child rearers” (Buvinić1998:339).

Income-generating projects are more concerned with developing new skills or improving income-generating activities that women are already engaged in, but also keeping a focus on possible welfare outcomes (Buvinić 1998). An obstacle highlighted with projects targeting women's economic roles is the issue of power imbalance within households that can occur, since this might alter the traditional division of labour within the household where men are often benefitted over women (ibid.:350). Chant (2008) argues that women have the responsibility of the survival of the household and when this responsibility increase to also mean providing most, or a lot of the income in the family, women come under double-pressure. Chant (ibid.) continues, arguing that co-responsibility is needed for poverty reduction to work and that both women and men are important agents.

3.1.1 Technical and Vocational Education for Women

Hartl (2009) discusses Technical and Vocational Education and Training (TVET) in rural areas. She argues that there has been a strong focus on basic and primary education and that this has diminished the role of post-basic education and training. However there has been a return of interest in the field recently. It is suggested that much of the training interventions of TVET are not targeting the specific needs of people and that women are “often directed towards typical female occupations” (Hartl 2009:1). As a result, women are continuing to be underrepresented in formal business education and are more often found to pursue training that meets their short term needs. Hence females are often seen to engage in handicrafts, basic food processing and sales. She furthermore suggests that the better the skills and training are the higher returns of income and better rural livelihoods. On a country level it is thought that more developed technical and vocational skills can help reduce poverty (Murgor 2013).

It is proposed that skills development can improve “output, quality, diversity and occupational safety and improves health, thereby increasing incomes and livelihoods of the poor” (Hartl 2009:5). Furthermore, skills development is suggested to enhance social capital as interaction with other learners can establish social networks (ibid.). Learning in a group also has empowering effects on women and self-confidence is furthermore encouraged (ibid.). Murgor (2013) finds that TVET needs to be developed further and argues for women's increased participation in trainings that focuses on science, information technology and management among others and that access to these need to be made easier for women. However, one needs to consider the spatial dimensions for skills development and education to be successful, as the education provided must consider the local and national labour markets and the chances for learners to engage in new activities after gaining more education (Hartl 2009).

3.1.2 Literacy and Numeracy Education

Looking at literacy levels in both rural and urban areas, the rural areas tend to have lower literacy levels than the urban areas. This difference between areas are the same for both women and men, however looking at the literacy levels by gender women are more disadvantaged in literacy compared to men in both urban and rural areas (Atchoarena and Gasperini 2003:97). Women are the majority of the world's illiterate population. Some of the obstacles for women to receive education are poverty, early marriages, pregnancy, geographical isolation, and beliefs in the woman's traditional role as homemakers (UNESCO 2014a). Many of the non-formal education activities in rural areas involve the development of literacy and numeracy skills. These basic skills are often combined with other activities such as improving health, food security and learning an income generating skill. Commonly, these education activities are run by community organisations or non-governmental organisations on a small-scale (Atchoarena and Gasperini 2003:98).

Education has been widely promoted in development discourses and has been especially promoted in human development discourses (Easterly 2001:73). The last few decades have brought improvements in human development in areas such as education, health and access to services and goods (UNESCO 2014b). However the increased investment in areas such as education has not lead to direct increases in economic growth. When deciding what training, education or skills should be taught in a certain area to promote its development, one need to take into consideration the local context and the livelihoods opportunities that exist and are feasible in a particular place (Easterly 2001:73).

3.2 Site Description – Four Villages in Kwale District

Four rural villages located in Kwale district of the Coast Province have been included in this field study; Lungalunga, Perani, Godo, and Jirani. Within the whole of Kwale district people predominantly live in rural areas. According to data provided by the Kenyan government, Kwale district is among the poorest, ranking as the seventh poorest district out of 69. The data presents the percent of population and number of poor below the Kenyan poverty line of Ksh 1,562 (\approx \$18) per month in rural areas based on estimated expenditures on minimum provisions of food and non-food items. The data from 2005-6 shows that in Kwale district 74.9 percent then lived in poverty (Opendata 2006). The study area has two rainy seasons; the long rains that start in April and the short rains in October/November, but the short rains are sometimes insufficient for growing a second crop (Hoorweg et al. 1996). These conditions, among others, put obstacles on agriculture in this area and raises concerns about food security. The main economic activity in the county is agriculture, and in addition fisheries, tourism, livestock farming and formal employment are important for livelihoods (Commission on Revenue Allocation 2014). Looking at education outcomes for the whole district one finds that 70.5 percent of the population has primary education, while the number for secondary education is only 6.3 percent. Apart from poverty, other challenges in the district include security, poor infrastructure, yearly droughts, high population dependency ratio and difficulties within agriculture such as land tenure, poor agricultural marketing, droughts and floods (Commission on Revenue Allocation 2014).

3.3 Project Description

Nikumbuke Project is a Kenyan NGO in Kwale District. Nikumbuke means 'remember me' in Kiswahili and their overall mission is 'healthy and educated women = healthy communities'. The organisation is active in seven rural villages; Perani, Godo, Jirani, Mpakani, Umojaa, Masailand, and the headquarter of the organisation is located in

Lungalunga. The organisation works with empowerment of women and girls by providing health care, skills and education to create sustainable and developing communities. The idea is to strengthen the members self confidence and personal skills to make them agents for the communities as well as enabling them to take better care of themselves and their children (Fromone2another 2014). The organisation called Nikumbuke Project was started in 2012, however, previous to this there was another NGO called Project Africa active in the same area, but only in three of the seven villages. This organisation was founded in 2008 and had five centres in Kenya. When the head of this organisation got more involved with politics, at the same time as the staff working for the organisation experienced problems with receiving their salaries, the woman responsible for the Lungalunga branch of the organisation decided to break away from Project Africa. She opened up the NGO, Nikumbuke Project and continued working with empowerment of women and girls (Personal communication: Director of Nikumbuke Project 2014-01-14). This study has involved four of the mentioned villages above, namely Lungalunga, Perani, Godo and Jirani. Figure 2 shows the year the NGO became involved in the villages and the activities and education provided in each of them. Looking at the character of the education and services provided, one could argue that it targets women both as caretakers and women’s possible economic roles in public and economic spaces.



Figure 2. Starting year and activities in each village

In Lungalunga the border control with Tanzania is located and provides livelihoods opportunities in the area. There is a seasonal river called Uмба River that flows through Lungalunga. Due to its location along the main road, Lungalunga has grown in recent years and is now one of the four main constituencies within Kwale County. In Lungalunga, the Village Chief has his office and he is responsible for making sure that people live in peace and harmony as well as to enforce law and order (Personal Communication: Village Chief 2014-02-10). He is the village chief of 51 villages within an area that expands 50 kilometres

out from Lungalunga. Hence, he is also the village chief in the other villages included in this study. In the 2009 census there were 22 706 people living in this whole area (51 villages) (Personal communication: Village Chief 2014-02-10). The main economic activities in this area according to the Village Chief are agriculture, livestock keeping, and other non-farm businesses.

Perani is also located along the main road and is 7 kilometres Northeast from Lungalunga towards Mombasa. Godo is 10.4 kilometres from Lungalunga going west on dirt roads. This is also the direction towards Jirani which is 6 kilometres from Lungalunga.

Lungalunga has a dynamic market within the village centre and every Friday there is a larger market day. In Perani, the daily market place is smaller but there is also a market day. However, in Godo and Jirani there are only a limited number of shops and services and they have no market days. The closest market for the people in Godo and Jirani is the one located in Lungalunga, which is reached by motorbike, bicycle or by walking. Looking at the geographical locations of each village (see figure 3: A=Lungalunga, B=Jirani, C=Godo, D=Perani), one will find that Godo and Jirani are the two villages that are furthest away from the sea. This makes the climate in these two areas drier and agriculture less prosperous. This is one of the reasons for why many people in these villages are involved in some type of microbusiness dealing with production or selling of charcoal (Personal communication: Teacher of Godo Group 2014-02-25). In Lungalunga and Perani, the non-farm activities consist mostly of trade, handicrafts and transportation services.

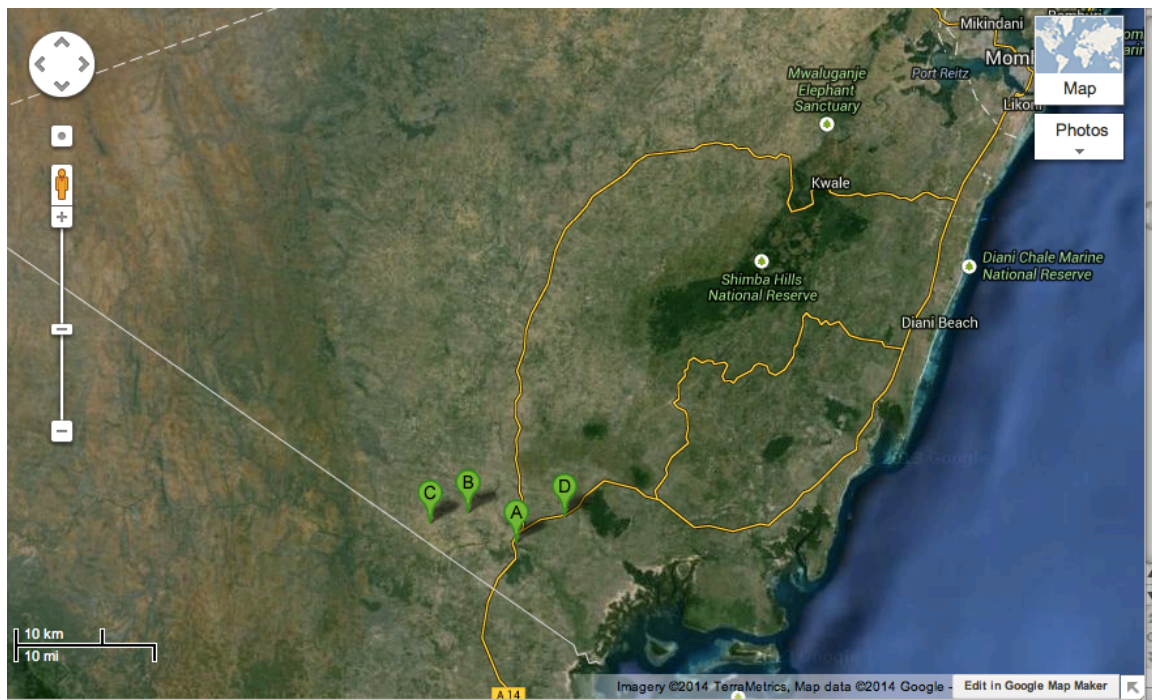


Figure 3. Map pointing out the villages (google maps 2014)

4. Methodology

This section will give an account of the methods used to reach the objectives of this study. First, the research design will be presented as well as the reasoning behind the decisions taken

during the study. Secondly the different strategies of the mixed methods of collecting data and information will be presented, including sections that go into more detail of the administered questionnaire, the semi-structured interviews and the focus groups that have been conducted. Thirdly, some ethical considerations and my role as a researcher will be reflected upon. Lastly, the method of analysing the collected material will be explained.

4.1 Research Design

To examine how women and men perceive women's education and possible effects on livelihood diversification, and the mechanisms between the two that they believe affect households' welfare, a cross-sectional design has been applied with some elements of a case study design. Within this design a mixed methods approach to gathering data has been used and the empirical data have been gathered through a questionnaire, semi-structured interviews, focus groups and observations from being in the area. These methods will be further discussed below. The cross-sectional design was used as I was interested in more than one case and to be able to quantify the data and to look at variations and relationships between different aspects related to women's education, household dynamics and sources of livelihood and income (Bryman 2012:59). The reason why the research design furthermore entails some elements of a case study is due to why the research site was chosen to begin with. The research site was chosen on the grounds that it was a rural area where a NGO is providing women's adult education and skills development. The aim was not to examine the organisation, or the 'case', per se, but the 'case' was part of the reason for choosing the location to carry out the study (ibid.:68-69). The organisation is active in seven villages in Kwale district, however only four have been included in this study. This selection was made due to time and cost constraints, firstly because the excluded villages are further away in comparison to the other villages which would have meant a lot of travel time. Secondly the participants in these villages spoke Masai, hence two translators would have been necessary to translate from Masai to Kiswahili and from Kiswahili to English.

4.2 Mixed Methods

Mixed methods have been applied for a number of reasons in this study. Through using both quantitative and qualitative methods there has been an aim of getting more complete answers to the research questions (Bryman 2012:637). A contextual understanding of the research questions was strived for and therefore some of the questions in the questionnaire were similar to the ones asked during interviews to better understand the statistical data (ibid.:646). It also facilitated the decision of who to interview, as the answers from the questionnaire guided the purposive selection of respondents in the semi-structured interviews (ibid.:644).

4.2.1 Questionnaire

A structured interview in the form of a questionnaire was made with women participating in the NGO Nikumbuke Project. A probability sample was made by doing simple random sampling to be able to draw conclusions and make some generalisations for the chosen population (Bryman 2012:190). As I wanted a broad and representative sample, 80 women out of 192 active women were sampled through this process using the help of a data program on the Internet generating random numbers (ibid.:182). In the end the response rate for the questionnaire was approximately 86 percent. The questionnaire was carried out to find patterns of association and to gain a greater understanding of the chosen population. This type of data needs to be gathered in a standardized way to be able to quantify the findings and to assess the variables in a more systematic way. However this method is difficult to use to

describe the causal relationship between variables if a relationship is found (ibid.:59), hence to get a contextual understanding of the topic, semi-structured interviews and focus groups were also conducted (ibid.:634).

The questionnaire consisted of 107 questions regarding the respondent's household situation, sources of income and livelihood situation, expenditures, and their participation in Nikumbuke Project. The questionnaire was formulated and structured by using some existing questions derived from the AFRINT 1 and 2 questionnaires (The Afrint Project, Lund University 2010). This was done as these questions have already been tested and have worked well before and was furthermore useful when constructing other questions on the questionnaire as an idea of how to structure questions was found when examining the AFRINT questionnaires (Bryman 2012:264).

Developing own questions proved difficult which is partly reflected in some issues encountered during data collection and in the results. The questionnaire was discussed together with the nurse on the organisation, my contact person and my translator to make sure that the alternatives for responses were relevant to the local context, to try and avoid complex language and to identify questions that might be misinterpreted (Overton and van Dierman 2003:39). However a pilot test of the questionnaire was never carried out and this mistake lead me to having to exclude the first respondent of the questionnaire, as I had to make changes to it afterwards. The reasoning behind this was that the questionnaire had taken too long to administer and a few response-alternatives had to be adjusted. Although these steps were taken, in the process of carrying out the questionnaire there have still been times when the response alternatives have not been sufficient and not appropriate. Furthermore, some vague questions have been identified that can be interpreted in different ways. These issues have been considered when analysing the data in SPSS.

4.2.2 Semi-structured Interviews

To get a contextual understanding of the research, semi-structured individual interviews were carried out. By assessing some questions of the survey relating to the research questions, different criteria for the interviewee sample were decided such as differing educational level, main occupation, number of sources of income and male or female headed household. When the findings from a survey or questionnaire guide the selection of a purposive sample, Bryman (2012) refers to it as generic purposive sampling. Another criteria considered were the villages as I wanted to know whether there were any socio-economic differences between them and to consider different spatial dimensions when trying to answer the research questions. By looking at the villages through the above-mentioned criteria, the most common cases were picked but also some cases, which seemed interesting in some other aspect, an example being a household that had many different sources of income compared to the other respondents of that village.

Furthermore, interviews with some key informants were carried out. The key informants, being the director of Nikumbuke Project, the teacher in the Godo women's group of Nikumbuke Project, the village chief of Lungalunga and the adult education officer in Lungalunga, were sampled since I judged that they were in possession of knowledge that is relevant to this study.

4.2.3 Focus Groups

To answer the research questions four focus groups were conducted with the aim that these

would provide more information about how women and men understand the possible link between women’s education, livelihood diversification and households’ welfare. For these focus groups, participants were chosen on the basis that they or anyone in their household do not participate in women’s adult education. This was the only restricting criterion for the selection of the samples of the focus groups. The groups were stratified by gender (Bryman 2012:510) as I thought that each group might be reluctant to express their opinions in a mixed group and were done in two of the villages; Lungalunga and Perani. The original aim was to do focus groups in all four villages but due to time constraints and some unforeseen cancelled appointments, it meant that I was unable to conduct focus groups in Godo and Jirani.

When selecting the participants the women in Nikumbuke Project in the two villages were asked whether they could think of both five men and five women who are not members in Nikumbuke Project and did not take part in adult education, who would be willing to participate in a focus group about women’s education. This method could be seen as a type of snowball sampling (Bryman 2012:510) and between 3-6 interviewees came to each focus group.

Apart from these methods mentioned above and summarised below in Table 1, some of the material has been collected through participant observation. This was enabled due to staying in the field and engaging in the different places where this study has been carried out. The observations have been helpful in contextualising findings and have increased the broader understanding of the topics and the field area.

Table 1. Summary of data collection

Source	No. of respondents	Location	Sampling method
Questionnaire survey	69 women	Lungalunga, Jirani, Godo, Perani	Simple random probability sample
Semi-structured interviews	10 women, 6 men	Lungalunga, Jirani, Godo, Perani	Generic purposive sample
Focus Group 1	4 women	Lungalunga	Snowball sampling
Focus Group 2	3 men	Lungalunga	Snowball sampling
Focus Group 3	6 women	Perani	Snowball sampling
Focus Group 4	5 men	Perani	Snowball sampling
Key Informant Interviews	4 respondents	Lungalunga, Godo	Purposive sampling

4.3 Ethical Considerations

While doing fieldwork one often encounters some ethical issues that need to be considered when analysing and writing up results, as well as being carefully thought through while in the field. The collection of data for this study has been through interaction with people and when interacting with people it is important to be aware of power relations (Scheyvens et al. 2003). When conducting the questionnaire and interviews I have reflected on the existing power relations between the participant and me as the researcher as well as the role my translator/research assistant plays in this relationship. The power imbalance could occur because of our different levels of education and because of differing incomes (ibid.:149). Furthermore, and relating to the power imbalance between the participants, and me as the researcher, is the fact that Nikumbuke Project is dependent on receiving volunteers from

Sweden. Hence this might have affected respondents to answer in a particular way and on top of that some of the respondents might have felt obliged towards the organisation to accept being interviewed, as the organisation seeks to keep good relations to Swedish people. Another consideration related to the power imbalance is the potentially exploitative nature of research as the researcher is in most cases gaining much more from the process than the participants. It is of vital importance to make sure that research does not harm participants or cause negative implications (ibid.:141). However, the research process can also be empowering for the participants and a way to give people who might not always be heard, a chance to explain their opinions (ibid.:139).

During my time in Kenya I was staying at the project site in Lungalunga. This choice was made for the reasons that it was a secure location, it was close to all the villages included in the study and the organisation could work as a gatekeeper. This choice could however have had implications for how people perceived me and my connection to the organisation, which further might have influenced how people responded to my questions in interviews.

Before starting with any of the questionnaires or interviews, I introduced myself in Kiswahili as this functioned as an icebreaker. In the rest of the introduction my translator assisted in explaining the aim of the study, how data would be collected and what it would be used for, and what type of questions that would be asked. She also explained the more important information regarding informed consent to participate, anonymity in the write up of the results and that information will be treated confidentially and will only be used for the purpose of the research (Scheyvens et al. 2003). Another important aspect that was pointed out during this introduction is my independence from the organisation and that the aim was to gather data for my bachelor's thesis for my university in Sweden. This was done to make respondents understand that data was not gathered on behalf of the organisation and that I am not sent out by the management of the organisation to monitor them (Bryman 2012:439). Furthermore, opportunities for the respondents to ask questions were given at the start and end of the interviews as well as alerting them that they could interrupt me at any point. In Appendix 2 one will find the list of participants in interviews and focus groups. Everyone has been given a pseudonym to ensure anonymity, except for key informants that are referred to by their titles.

4.3.1 Working with a Translator

Kiswahili is the most commonly spoken language in the studied area; hence a translator/research assistant was needed to receive any valuable data. Before entering the field, enquires to my contact person were made asking if she could recommend a woman with good knowledge of English, who was independent from the organisation and preferably was not from any of the villages included in this study. I was connected to a primary school teacher who finished her undergraduate degree in early childhood education at Kenyatta University in 2012 and is currently doing a master degree in early childhood education. This lady acted as a translator/research assistant throughout the data collection and when working with a translator there are some factors one needs to consider. The first to consider is that the researcher never can have full control of the interview situation when working with a translator (Leslie and Storey 2003). Even though the researcher might have carefully formulated a question, one cannot control how the translator will reformulate the question (ibid.). Another issue could be that the translator might skip translating some pieces of information that they regard as irrelevant for the research, while the researcher could actually have found it to be valuable information (Bryman 2012). These and other issues were considered during fieldwork.

4.4 Source Criticism

One of the major limitations affecting my data is my relation to the organisation Nikumbuke Project. I found that participants in the interviews and questionnaires sometime assumed I was working with the organisation even though I had tried to explain my independence. Not only, is there a risk that it affected their willingness to participate, but it could also have affected the answers given as it sometimes felt like they answered what they thought I wanted them to answer. This fact has been kept in mind throughout the fieldwork and in the analytical process.

The relation to the organisation has nonetheless, given me greater access to people and the topic for this study during the time in the field. Having stayed at the organisation, there has been daily interaction with the staff and the members of the project. So the organisation has been working as a gatekeeper, and has assisted in reaching the participants of the study.

For the focus group interviews I felt that the power imbalances were less obvious and to a larger extent I felt that the discussions that came up here, were less affected by my origin. This could partly be argued to have been because of the character of the questions posed in these groups as they were of a more general nature on the topic compared to the more personal questions posed in individual interviews. Hence, I felt that the participants in the focus group discussed the topic of women's education, livelihood diversification and households' welfare more freely.

4.5 Methods of Analysing Data

The analysis of the mixed data has been done in two ways. The semi-structured interview material was analysed using thematic analysis and the questionnaire by using the IBM SPSS - Statistical Package for Social Scientists.

Thematic analysis is used to find themes and patterns within data and to analyse what one finds to be a theme (Braun and Clarke 2008). Thematic analysis can be used in qualitative research when going through transcribed interview material. It is not a method in itself but can be used as a tool in other methods, however Braun and Clarke (ibid.) argue that it should have the status of a method within qualitative research.

It is important to understand the researchers role in this (and most other) type of analysis. 'Emerging data' is often used to describe patterns or themes but it might be emerging because it is the data that the researcher wants to emerge and links are made within the data according to how we understand them (Braun and Clarke 2008). Hence the researcher's judgement and ability to remain critical to the data is important to be able to determine themes beyond the researcher's own perceptions. Hence, the researcher needs to be able to distinguish that; "a theme captures something important about the data in relation to the research question, and represents some level of *patterned* response or meaning within the data set" (ibid.:82; original emphasis of the authors). Nonetheless the analysis will be influenced by the researcher's understanding of some theoretical assumptions.

The analysis has been done in different steps. First, the transcribed interview materials were read through a couple of times to get familiar with the information and to write down the first ideas that came to mind from the material. The next step was to identify codes and to look for interesting and relevant patterns in the material. From the codes I started to think of potential themes. To find themes that really highlight what has been studied, one needs to read the material repeatedly. When writing up the thesis or other academic reports a last chance is

given for analysing the material. Furthermore, examples from the material should be presented that relates to the research questions and the chosen concepts and theories (ibid.).

Although it is a flexible method, there are some issues to be aware of when applying it to the material. Due to its flexibility it can be overwhelming for the researcher to decide what in the data it is important to focus on, this was a challenge I encountered in this process. Other disadvantages with thematic analysis include that it does not allow for making claims of how language is used like in narrative analysis (ibid.).

5. Empirical Findings and Analysis

In this section the empirical findings will be presented and analysed in relation to the theoretical concepts presented above. The aim is to present what has been found in interviews, survey data, focus group discussions and to study this in relation to existing literature and concepts that deals with similar issues. Looking at the interview material one will find that each case is unique, but there are reoccurring themes in the material. To clearly understand each research question, they will be divided into three different sections according to the research questions outlined in the introduction. In section 5.1, a description of the active members of Nikumbuke Project will be presented, using own survey data. Section 5.2 focuses on research question 1. Here I assess how the participants perceive the relationship between women's education and livelihood diversification, where three different themes are presented about non-farm businesses. In section 5.3 research question 2 will be analysed, looking at perceived outcomes of education on households' welfare and identifying three levels of how participants have recognised welfare gains. Section 5.4 is devoted to research question 3, where previous educational level and sources of cash income will be analysed using SPSS and some material from key informant interviews. The final section 5.5, presents some secondary results that are linked to women's education, livelihoods and households' welfare. Here I found that group belonging and helping one another were important components that can be argued to increase social capital.

5.1 Members of Nikumbuke Project

The data derived from the questionnaire have been processed in the program IBM SPSS. As explained in the methodology section, the reason for doing a questionnaire was partly to get an understanding of the chosen population. Therefore, this section will present some descriptive data of the population of active members in Nikumbuke Project in the four villages.

The active adult members of Nikumbuke Project that were sampled range in age between 16-70 years old. Looking at the mean as a central tendency we find that the average active member is 36.5 years old, has 4 children and has gone to school on average for five years before joining Nikumbuke Project. However this value is misleading due to the effect of outliers increasing the mean. Outliers are the younger participants taking part in the Computer and ICT class. Figure 4 shows that no years of schooling have the highest frequency which is very different to the mean.

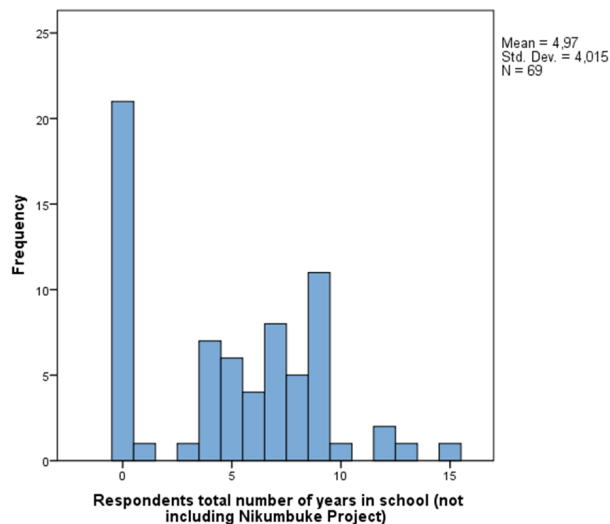


Figure 4. Active members total years in school

Households were in 69.6 percent of cases headed by a male and the most common type of household was nuclear (46.6 percent) followed by extended and de jure female-headed households (24.6 percent respectively). There were within the sample only two cases (2.9 percent) of polygamous households and one case (1.4 percent) where the husband was absent and living in another village. In the households the average number of adults (16-60 years old) living there on a regular basis was 4.4 persons. The mean number of children (15 and below) living in households was 3.9 and for household member 61 and above it was on average 1.8 persons.

In most cases the respondents of the questionnaire answered that they were mainly involved in farming (63.8 percent), while the most common main work for head of households were non-farming (55.1 percent). Assessing the total number of adult household members (16-60 years old) that are engaged in non-farm activities one finds that on average 0.8 persons are in employment, 1.4 persons are involved in microbusiness, and none of the sampled women or their household members are involved in large scale business. Female household members are more often than men found to be engaged in microbusinesses although the difference is small (women 0.71 persons, men 0.67 persons). This could suggest that the increased education has had an effect on women's participation in the non-farm business activities, although no real claims to this can be made, as the data does not provide information on the state before the women increased their education. Sen (1999) claims in general terms that working outside the household can have positive effects on women. However, Meagher (2010) suggests that reconstruction of the gender balance in work through women's involvement in microbusinesses might not actually reduce women's deprivation.

5.2 Perceived Effects of Women's Education on Non-farm Livelihood Diversification

This section addresses the informants' view of their livelihoods in relation to the improvement in education the women are obtaining. When looking at how informants relate education to livelihoods and livelihoods diversification there are three reoccurring patterns. One is to explain how education has helped them improve their already existing businesses. The second aspect provides cases of when the women and households have been successful in diversifying their income into a new non-farm activity. The third aspect put forward by

informants explain how so far they have not seen any differences in their livelihoods since the participant or wife has increased her education.

5.2.1 Non-farm Businesses

1. Business improvement

The most useful components of education for enhancing informants' livelihoods are argued to be business education, mathematics and literacy. Apart from this, a husband expressed that his wife had become more confident and less shy, which resulted in improvements of their business:

“Yes, the more education she is getting has made her shy-free, not shy, so at least she has the communication, and also ways of attracting customers”. (James, 65, Godo)

This statement suggests that improving women's self-confidence through education can actually have a positive effect on livelihoods (Atchoarena and Gaperini 2003). It indicates that investment in human capital can give higher returns in businesses (Ahmed 2007). The higher returns can then be translated into investments in physical assets, which is argued to be another component able of helping household's to diversify their income (Reardon et al. 2007).

2. Livelihood diversification

Advancements of businesses were more prevalent than the cases where informants' had started a new business due to the education received as part of the Nikumbuke Project. There were nonetheless three clear cases of respondents in the qualitative interviews that perceived that their household had diversified their livelihoods due to the increased education. The following example shows a woman who before joining the organisation was dependent on her husband's income but has now opened up a hotel that she is in charge of:

“Life was very difficult, not good. The Project has really helped us because we have gotten a lot from the Project. Initially it was just the husband, we depended on him and his business. People of this area, especially husbands when you are just at home and depending on them they mistreat you. Sometimes when you ask for money, they don't give you, so every time whenever I needed help for money, I used to talk to him ‘ I want this, I want this’. So after coming to Nikumbuke we were taught how to be self-reliant in form of a business. And now I started my business and at least I thank God because I am looking for money as he is also looking for money”. (Nicole, 36, Perani)

This statement shows how the woman was inspired to start her own business through the education given at the organisation and that it seems to have improved her situation. Engaging in education and so increasing her level of human capital lead the way for this woman to start up a non-farm business (Reardon et al. 2007) and behind the statement there are elements showing that the woman have become more empowered in the process of diversification. It implies that she is no longer dependent on her husband and his business, and that her everyday situation and well-being seems to be improving.

3. No changes in livelihoods

The third aspect of how the informants have related education to their livelihoods is that they have not yet seen any direct linkages between the two. This response was provided by the husband and wife interviewed in Jirani, where the organisations has only been active for a year. Hence, they perceived their livelihoods situation to be largely the same as before. This

might be explained through Scoones (2009) and Barrett et al. (2001) who argue; that many households in rural areas are already engaged in a variety of livelihoods. In this regard, households might not have time or other resources apart from increased human capital to diversify their livelihoods more. By looking at a closely related question in the questionnaire, another picture of how the respondents have perceived education to influence their livelihoods is painted. In the questionnaire 62 of the women claimed that ‘yes’ someone in the household had gained other sources of income while only 7 said ‘no’ (see Table 2). Caution needs to be taken when assessing this question since factors other than joining the project and increased human capital can explain gaining other sources of income such as social capital and financial capital (Scoones 2009).

Table 2. Gaining other sources of income per village

		Have any household member gained other sources of income since starting participation in Nikumbuke Project		
		yes	no	Total
Village	Lunga	22	4	26
	Lunga			
	Perani	11	0	11
	Godo	16	2	18
	Jirani	13	1	14
Total		62	7	69

By looking at these three aspects it becomes clear that it is hard to distinguish any coherent account of the perceived effects of women’s education on livelihoods diversification. Furthermore when looking at the perspective of women playing a part in livelihood diversification through the education they have acquired, there are also other factors that can be fulfilled which in turn could in a later stage have implications for livelihoods. Some of these factors are women being empowered, gaining self-confidence, and building networks (Quisumbing 2010). These factors are also argued to increase women’s bargaining power within the household (ibid.), which could furthermore influence livelihood choices (Scoones 2009).

5.2.2 Reasons Behind Diverse Livelihoods

To understand livelihood choices better, I thought it was necessary to investigate what might drive livelihood diversification as most households were already engaged in a mixture of farm and non-farm activities. The main reason for diversification was because informants felt that one source of cash income was not enough to sustain the household. A common explanation for the need of more cash income was to be able to pay school fees. Survey data shows that school fees were by far the most important expenditure in the households followed by food (see Figure 5).

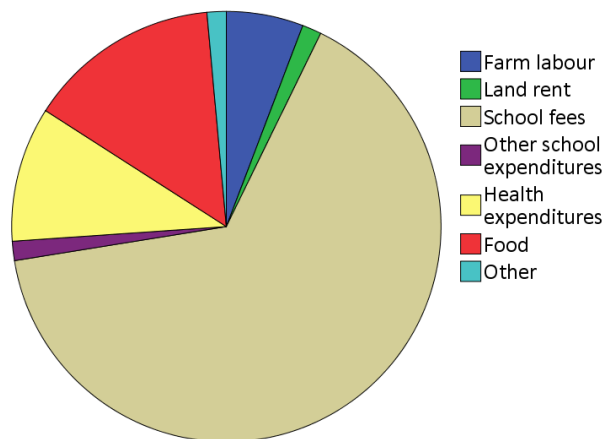


Figure 5. Most important expenditures in households

Another factor identified for choosing a diversified income is weather and climate related risks such as unreliability of rainfall. When looking at livelihood diversification as a concept the literature defines these factors as push factors due to the coping characteristics needed to handle them (Haggblade 2007). This type of coping behaviour is discussed in theory as self-insurance for the household and suggests that spreading the risks could ease problems if one source of livelihood fails (Haggblade 2007). However, spreading risks can also cause problems, as expressed by ‘Kevin’ in Perani:

“Yes, there is problems because once I go to shamba [plot for agriculture] maybe I would like to get fertilizer and once I go to boda-boda [motorcycle taxi], you know sometimes my boda-boda gets problems and the hotels sometimes my things just we cook and it does not get finished, no customers that is”. (Kevin, 46, Perani)

This seems to imply that there might be other kinds of stresses for households’ with many different livelihoods, that is to keep all of them working and being productive. So spreading risks could also be argued to increase risks in different areas of your livelihoods. However in the collected data it was more common to find accounts talking of why there was a need for diversified livelihoods.

“So one source of income cannot satisfy the domestic needs of the family. Because sometimes you may even go to Lungalunga with one sack [of charcoal], looking for somebody to buy it and what you get is very small, it cannot satisfy the family. So I just found myself in the process of opening up some other ways of getting some money for satisfaction of the household needs”. (James, 65, Godo)

This account express to an extent that the push factors might be a reason for livelihoods diversification. However, in a way this might be misleading since the domestic needs of the family is contextual. It is dependent on what the current household situation is and what they are striving to achieve in the future. It might be the fact that they are striving to just improve their situation and to acquire higher returns for general improvement of the whole household, which in the literature is identified as a pull factor (Haggblade 2007).

In the data I found that push and pull factors were sometimes not sufficient for explaining the variety of reasons for why households wanted a diversified income. Sometimes the answers

seemed to move between the two, hence in some cases it might not be enough to describe these complex reasons in just these two terms.

5.3 Welfare Outcomes

Looking into household welfare and what mechanisms the participants themselves describe as an outcome of increased education and in some cases households' livelihood diversification, one finds that there are three overlapping patterns that occur. The first relates to the family's welfare and general improvements of the household. The second and most described positive outcome revolves around children's welfare, especially in terms of improvements in their education. The third pattern is the perception about the woman's welfare and what in this process is good for the woman. The director of Nikumbuke Project explains it like this when asked if participants' have gained other sources of income (and continues to describe the outcome of this):

“Yes that one we have known have increased because we at the time give them business ideas. That one, we have seen that most of them they had no business. They have started their business, ... and [through] those businesses we have seen the women taking their what, girls to school or even boys. We have seen how now they are providing what, education for the whole family and also providing the good care for the family. In terms of what, nutrition, and caring for them, if they are sick they take their children to hospital and also their grandparents and the like”. (Director of Nikumbuke Project, LungaLunga)

Apart from perhaps contradicting some other findings in the previous question when it comes to starting a business, this account shows that there are general benefits for the whole family that are assumed to come from participation in the project and through the education. Not only is education in business skills highlighted but also caretaking of all family members. This is the first perceived improvement in welfare for the household that will be assessed now.

5.3.1 Family welfare

Just as the director of the organisation suggests about education having positive effects on the whole family, there were others that agreed to this in interviews. These perceptions then confirm the theory that there is a dynamic relation between focusing on women and women's participation in income-earning activities and households' improved welfare (Sen 1999). As found in the questionnaire most households of the active members were nuclear families while the extended and de jure female-headed households were the second largest groups. Therefore talking of family welfare one needs to understand the heterogeneousness of households and what this might imply in this context. The majority of the active members in the organisation are depended on by their children but also in some cases by their parents. In a focus group with men the issue of dependency was raised and how it meant that education for women is not solely of benefit for the woman and her well-being. It was recognised that the whole family have something to gain from promoting women's access to education as it was argued that the quality of the care provided by the woman could be better through her increased education. In another focus group, with women, the welfare of the whole family was also discussed:

“So the woman is like a spotlight, that is that whatever little the woman gets it helps the entire family. It is not like men who can get something and it is just beneficial to themselves only”. (Maria, Lungalunga)

This participant indicates that the assumption that women and men spend their incomes differently is correct and that women tend to channel their incomes towards the improvement of the whole family rather than on themselves (Quisumbing 2010). At the same time one has to remember that the man is often thought to be the main breadwinner and that just because this woman holds this view, it does not mean that all the men are not providing to the improvement of the household.

The general knowledge base in a household can increase if the woman improves her education. The participants in the focus group with women thought that women's education could also help improve the business of the husband or other male household member due to the knowledge she might have acquired in her education. Hence one can argue that the participant is also acknowledging that education for women can affect economic activities.

There are also issues to consider when women are being promoted as being both the main responsible of caretaking in the household and to a larger extent being promoted to take part in commercialisation, adding to the existing workload of women. The discussion in the focus group with men in Lungalunga, made it clear that they consider that the household chores are mainly the responsibility of a woman, while the main responsibility of the man is to be the breadwinner.

“So as the man goes out to look for money for the family, the woman is left behind to organise the home. So when I go out, I just leave my bowl and plate outside there and if there is no woman in the house, I will just find it there, but if there is a woman in the house I will find everything organised”. (Andrew, Lungalunga)

The strong belief that women are the main caretakers of the household might limit women's time and energy that they are able to engage in other activities, especially if the household cannot afford employing a maid. Men in focus groups seem to put value into the more traditional roles of women and men, but it is important to understand this in the local context and that they do not necessarily say that the man's or the woman's responsibilities are more important than the other. However, it does mean that the woman is at risk of having the double-burden of home-making and gaining an income if participating actively in work outside the household (Sen 1999; Meagher 2010)

5.3.2 Children's welfare

The most common theme when talking of the improvements in household's welfare is the perceived consequences for children's welfare. The perceived outcomes of women's education and household's diversified livelihoods are to a large extent reflected in a positive impact on children's education. As also discussed in the first research question, one of the main reasons for having diverse livelihoods explained by informants was the generation of cash for different school related expenditures. Hence, if women can also earn an income, this process could be easier as expressed below:

“Depending on the earners of the family, if it is dual earner the children will learn. But if it is single earner you find that there is a pressure in the family because the income is very low”. (Maria, Lungalunga)

This implies that being dual-earners make it easier for households to pay for school fees. This is a strong argument for promoting women's participation in economic activities as it can be

part of giving children a better chance in life if they are able to attend school and it might increase their opportunities in life later on.

Another occurring pattern put forward by the informants is the woman's ability to be an example for children when she is participating in education. Women who increase their education are argued to be role models for their children and they can better their ability to help children with schoolwork. When the mother is not educated, it could also affect the children in that they might be urged to not end up in the same situation as their mothers who did not have the opportunity of engaging in education.

Some of the women have changed their opinions on children's education as they have increased their own education. Carl in Jirani who thought his wife had changed her opinion since she started participating in education explained this:

"Before she joined the project, when I talked to my children, encouraging them to go to school she was not very much keen about it. She didn't see the meaning of it. But since she joined here, at least she understands the importance of learning and education". (Carl, 36, Jirani)

These above accounts and others seem to confirm the positive link that is acknowledged in different accounts that look at the effects of women's education and being literate (Sen 1999; Atchoarena and Gasperini 2003). In this regard one could argue that there are advantages in focusing on women's education as it improves women's roles as actors that has positive effects on children and the family as a whole (Sen 1999). However, one needs also to consider the well-being of women, otherwise there is a risk of reducing them to mere instruments to reach other goals (Jackson 1996).

5.3.3 Women's welfare

It is suggested that being literate, earning an income, being part of decision-making and similar factors can have positive effects on women's well-being (Sen 1999). In addition to trying to give children a better start in life and opportunities, there were also three informants who saw other benefits in children's education. These benefits referred to hopes of being able to rely on their educated children for support in the future. Here follows an example:

"No it is just a matter of doing my business, then I help my children so as my children continues learning, then maybe [in the future] I will maybe have no expenses for the children, then I can use the money to advance in my own way. And maybe my children will be working in a certain area where they can also support me so that I can even diversify my own way of living". (Nigella, 38, Perani)

Children's education can hence be seen as a long-term investment that in the future could bring positive returns. Other improvements in women's welfare can be found when looking at some aspects of their workload. For example when the women have been able to improve their businesses or start a new one, some of them have increased their incomes. This income can be channelled not only towards children's education but also other investments which could make life easier. One example is given within agriculture where this woman from Perani said this about her workload:

“Yes, it is reducing because at the beginning I used to dig or cultivate using my hands. Okay I used to cultivate the land with my own hands but because of the merry-go round [rotating savings and credit association¹] and a loan and even my small business that I am running I have been getting some money, so at least I can even hire somebody to help me and also use animals to plough”. (Nigella, 38, Perani)

Although she mentions that loans and merry-go round¹ have helped, she additionally says that income from her business has allowed her to receive help in her agricultural activities. This seems to provide another nuance of the double-burden of women’s work (Meagher 2010) since her incomes from engaging in non-farm activities could reduce her workload within agriculture. Another important aspect of women’s welfare was provided in a focus group with men:

“So to me I think that education is good, regardless of what kind of woman, because nowadays we don’t have permanent marriages so when a woman is educated she becomes self-reliant – that is she can move her own ways to take care of her own family without depending on the husband”. (Andrew, Lungalunga)

As the man says, marriages are not permanent, so a divorced woman with low education and no skills could end up in a more vulnerable position if going through a divorce. Being self-reliant, or able to become self-reliant, could therefore be of value to women since this man implies that their society is changing. Promoting women to engage in work outside the household, having an income, being literate and educated is argued to have positive effects on women’s voice and agency which in turn is of use for women to be empowered and independent (Sen 1999). Therefore, what Andrew suggests above about education making the woman self-reliant, could have even stronger implications for her welfare.

5.4 Differences between the Four Villages: a closer look on education, sources of income and culture

This section attempts to look at a few socio-economic characteristics of the sampled women and their households and to see to what extent there are some general patterns in the different villages. The analysis here is partly based on the derived survey data but there will also be parts taken from the interview material with key informants. Looking at some characteristics in each village, one will find that there are some statistically significant differences between them in factors such as education, both previous to joining Nikumbuke Project and length of membership in the organisation, and number of cash income sources. No causal links can be drawn from the data; however, there is still reason to discuss the relationships between these few variables and the different villages and how it might influence the other questions of this study. The interviews with key informants will provide a glimpse of how they perceive culture to have influenced the educational level in the area but also in the whole of the Coast Province.

¹ Rotating Savings and Credit Associations are informal financial institutions that are common in developing countries. The members consist of a group who are committed to paying a certain amount of money per month or per week and these monies are distributed to one or more members at the end of each meeting. Each member will receive money at least once within the cycle (Benda 2012).

5.4.1 Education and Sources of Income

The sampled women's educational level prior to starting participating in the organisation differs between the villages. In Table 3 below we find that the Lungalunga mean is the highest at 7.5 years, however as mentioned earlier some outliers, namely the younger participants in the Computer and ICT class, pull up this value as these participants are only found in Lungalunga. When excluding them, Lungalunga's mean remains the highest at 6.7 years of schooling before joining Nikumbuke Project. The village with the second highest previous educational level is Godo with 5.9 years. Followed by Perani at 2.5 years and Jirani at 1.1 years. Table 4 shows the mean when the participants in computer and ICT have been excluded.

Table 3. Respondents total years in school (not including Nikumbuke Project)

Village	Mean	N	Std. Deviation
Lunga Lunga	7,5	26	3,99
Perani	2,5	11	3,11
Godo	5,9	18	2,30
Jirani	1,1	14	2,14
Total	5,0	69	4,01

Table 4. Respondents total years in school (not including Nikumbuke Project), where Computer and ICT participants are separated.

Village	Participating in ICT	Mean	N	Std. Deviation
Lunga Lunga	yes	13,3	3	1,53
	no	6,7	23	3,55
	Total	7,5	26	3,99
Perani	no	2,5	11	3,11
	Total	2,5	11	3,11
Godo	no	5,9	18	2,30
	Total	5,9	18	2,30
Jirani	no	1,1	14	2,14
	Total	1,1	14	2,14
Total	yes	13,3	3	1,53
	no	4,6	66	3,66
	Total	5,0	69	4,01

The participants in Computer and ICT class are younger than the average age of project members, therefore, this could indicate that a generational shift in education has occurred as these younger participants have far more education compared to the older women participating in Nikumbuke Project. But one needs to be careful to make such assumptions as the socio-economic background of all individuals matters for knowing the access each of them have had to education.

When doing a one-way ANOVA test, including the three extreme values, to see whether the differences in previous educational level between villages are statistically significant we find that there are differences. The difference between Lungalunga and Perani is significant at the 1% level (less than 1%), between Lungalunga and Jirani at the 0.1% level, Godo and Jirani at the 1% level (see Appendix 3).

These differences in previous educational level could suggest that there are some socio-economic differences between the villages. But it could also suggest that there are other differences between villages that for example conditions how people can access education. When looking at the different villages and their locations one could have thought that the two villages located along the main road (Lungalunga and Perani) would fare more equally to each other and that the villages located further away from this main road and dynamic markets and services (Godo and Jirani) would fare about the same, but as shown above this is not the case. This also suggests that there are other socio-economic structures that are influencing people’s educational level, which cannot be explained through this study.

The tables above only refer to women, as they were the respondents of the questionnaire. By looking at the mean educational level of the head of household we find if the levels of education pattern is the same between the villages (Table 5). However, keeping in mind that the genders of the head of household are both males and females in the sample, so a divide between genders cannot be done with the survey data.

Table 5. Head of households’ total years in school (not including Nikumbuke Project)

Village	Mean	N	Std. Deviation
Lunga Lunga	6,7	22	4,11
Perani	5,1	11	5,50
Godo	7,1	18	3,10
Jirani	2,0	14	2,54
Total	5,5	65	4,25

Interestingly, looking at the mean educational level for head of households, one could have thought it would follow largely the same patterns as for the participants, if not in years but at least in how the villages rank against each other. However, here we find that Godo has the highest mean years of schooling (7.1) followed by Lungalunga (6.7), Perani (5.1) and lowest education for head of households were like the respondents of the questionnaire found in Jirani (2.0).

Looking at the households’ current livelihood situation or rather their current sources of cash income we find that the households in Perani are the ones with the most diversified sources of income with a mean of approximately 5.2 different sources of cash income. Lungalunga (3.7) and Godo (3.4) households are closer to each other in their means, while Jirani households’ mean is the lowest (2.4) (see Table 6 below). There are different assumptions to make about households with diversified sources of income. As discussed above, there are push and pull factors in livelihood diversification (Haggblade 2007). The data does not show anything about whether there are push or pull factors that has been the incentive for having a diverse livelihood, but it does show that the households have on average a diverse set of income sources in all villages.

Table 6. The mean number of sources of cash income per village

Village	Mean	N	Std. Deviation
Lunga Lunga	3,7	26	1,85
Perani	5,2	11	1,17
Godo	3,4	18	1,72
Jirani	2,4	14	1,08
Total	3,6	69	1,78

There are statistically significant differences between the villages' means of the number of sources of income the One-Way ANOVA test showed (see Appendix 3). The largest difference can be found between Jirani and Perani at a level of significance of 1%. Godo and Lungalunga are more similar to each other (statistically significant at 5%).

Trying to analyse just these two variables; previous educational level and number of cash income sources, it becomes clear that educational level is far from enough to explain livelihood choices in different villages. However both of them correlate to which village the respondents live in, which then at least tells us something about the active members and their households in the different villages and that there are significant differences between the villages.

This thesis is concerned with investment in human capital, hence increasing the educational level. Therefore, there is reason to look at the total years of being a member in Nikumbuke Project, to see what this could tell us about the members and the villages. As written in the background section, the organisation has not been active in all the villages an equal amount of time, which is reflected in the mean years of being a participant in both organisations (the previous Project Africa and now Nikumbuke Project) (see Table 7). The mean in Lungalunga is lower than that of Perani and Godo. This could be explained by the fact that the vocational trainings in tailoring and dressmaking as well as computer and ICT training take place in Lungalunga, where the participants are only members for a shorter period of time. Jirani, where the organisation has only been active for a year had the lowest mean period of participation.

Looking at the mean years in both organisations, we find that Perani has the highest mean and Jirani the lowest mean. When assessing the mean number of cash income sources, we find that Perani has the most diversified livelihoods while Jirani has the lowest. Pondering on this information one could wonder whether there is a correlation here and that numbers of years in the organisations can have had an affect on number of income sources. However doing a correlation analysis of the total number of income sources and total years of participation in both organisations, I found that there are no such correlations.

Table 7. Mean of total years in both organisations per village

Village	Mean	N	Std. Deviation
Lunga Lunga	3,1	22	2,38
Perani	5,0	11	2,00
Godo	4,2	17	1,48
Jirani	1,0	14	0,00
Total	3,3	64	2,24

5.4.2 Culture and other Socio-economic Factors

A socio-economic factor discussed during interviews with key informants was culture. In interviews with the educational officer in Lungalunga and the director of Nikumbuke Project the link between education and culture and religion was mentioned. The director of Nikumbuke Project suggested that the Coast province had different traditions to other provinces in Kenya that could affect education level.

“In most of the cases you find that people here they are not learnt like in other parts of the country. So still, those, they have a traditional way of life. It is very few who are living in what, a modern life or they can decide according to other parts of the country. Here you find it is the men who sits and foresees, this family of theirs, what they are supposed to do, who is supposed to go to school, who is supposed to get what and when. But as we are mixing up, or as we have come to this part and we have mixed with them, they can see it is a must for a change. A woman must also be there when they are deciding what, the family, what it is supposed to be learnt. And we have seen that some they are changing very much”. (Director of Nikumbuke Project, Lungalunga)

This suggests that there are at least perceived differences between the Coast Province and other provinces but that it is becoming less distinguished. A difference between the villages recognised by the director of Nikumbuke Project was that they differed in what and how many tribes that resided in each of them. In Lungalunga and Perani she claimed that all the tribes could be found. This was partly because of these villages’ location close to the main road but also being close to the border attracted people from all over Kenya to come and work. In Godo there are three tribes represented and in Jirani there are only two (Personal communication: Director of Nikumbuke Project, 2014-03-17).

5.5 Secondary Effects of Education

In this section I will present another relevant pattern that has occurred when doing the thematic analysis. What informants perceived as another factor affecting livelihoods and households’ welfare and that they also received through the organisation was more linked to social capital. Hence here I will briefly present and discuss how the informants explained this mechanism.

Both women and men were convinced that through the education the women also got a chance to interact with other women, which they thought could have positive effects on the participant but also the whole household. The interaction with women from the local area, but also women from other countries was thought to teach them new things from one another. There were also positive outcomes coming from the interaction with others on households’ livelihoods as expressed by this man in Godo:

“Yes, because it is from the education that they learnt that when you are in a group you can do bright things, you can do many things together. You can have, what you call, a helping hand, you help one another to diversify. So from there, then we talked over it and I found that it is good that I also join the group for the yard” [charcoal yard in Godo where the group involved can bring their charcoal and sell it together]. (Max, 42, Godo)

This example shows how women in the group started discussing the start up of a yard where they could all come together and sell charcoal to make it easier for everyone involved and to attract customers to come to Godo to buy the charcoal, rather than having to go to Lungalunga to sell it. This connection could be argued to be like a social network that can consequently have an effect on people’s livelihoods (Scoones 2009).

The organisation was also explained to be a place where women could come with their problems or ideas and share these with the other women who could try and help with particular issues. Three women also expressed how they previous to joining the organisation had stayed at home all alone and that they were socially excluded and mistreated by relatives and neighbours, but through interaction with other women and moving outside their private sphere of the home they had become more self-confident.

“I just found myself here, reason being that I didn’t want to remain all-alone, so I decided to join the group, feeling that after joining the group I will learn from the group. And that is how I came to start being here”. (Miranda, 40, Lungalunga)

Interaction with other women, sharing problems and helping one another were themes that repeatedly came up in interviews with the women, hence it is an important part of understanding why women choose to participate in activities that might initially be meant to increase their education. Group belonging might be as important as the actual education received from the organisation. Investment in human capital could hence have implications for social capital as it is also a type of network building which in turn could have effects on livelihood choices (Scoones 2009) and also bargaining power (Quisumbing 2010).

6. Summary and Concluding Remarks

This final section will provide a summary of the analysis made above and through this attempt to give answers to the questions posed in the introduction of this thesis.

The first research question concerned how women and men themselves perceive that women’s increased education can have an effect on households’ livelihood diversification. Three patterns were identified in the empirical material. First, it was found that only three of the interviewees in the semi-structured interviews claimed that their households’ had diversified their sources of income as a result of increased education. These cases are not representative of a broader pattern and no causal relationship of the actual relationship can be drawn since the survey measures perceived, rather than real outcomes, but it shows that there are some of the participants who perceive education to be an important component in livelihood diversification. Looking at the number of different cash income sources the households have, many already had a diverse set of livelihoods, which is often the case in rural areas (Barrett et al. 2001, Scoones 2009).

There were more occurrences where the participants in the organisation and their husbands perceived that the education had helped them improve their already existing livelihoods, especially their non-farm businesses but also in their agricultural activities. There was also a case, of a newer member of the organisation who claimed that there had not yet been any changes in the households' livelihoods.

The expressed reasons for having a diversified livelihood was primarily to generate cash for expenditures such as school fees and food. Other aspects, which confirm other theories of reasons for livelihood diversification was for households to be able to cope with climate related risks (Haggblade 2007, Potter et al. 2012). The push and pull factors that are mentioned within livelihood diversification frameworks (Haggblade 2007) were found to not always correspond perfectly to the collected data. I found that the distinction between the two were sometimes hard to define when analysing people's response to why they had chosen to have a diverse set of livelihoods.

The second research question aimed to assess what the perceived effects of education and livelihood diversification were for households' welfare. A lot of the positive mechanisms explained were the effects women's increased education had on children and their school attendance. Not only were women with more education seen as role models, but it was also expressed how dual earners had less hindrances in sending their children to school as they were able to generate a more stable income. Other mechanisms described were linked to the whole family's welfare that is additionally found in the literature on women and welfare (Sen 1999, Atchoarena and Gasperini 2003). However in the literature on women's increased participation in the public space and of commercialisation, there is also concern expressed over women's double burden of being the main person responsible for the whole households' welfare at the same time as they are promoted to take part in income-earning activities outside the home (Meagher 2010). The women included in this study did however not express a strong concern over this, although one needs to keep in mind that participants might have been reluctant to talk of negative implications of the project with me because of my background. In focus groups with men, however, it was expressed that women were still the ones who were expected to perform the bulk of the household chores, which could mean that women do not have time to fulfil their full potential in their participation in work outside the household. This could perhaps partly explain their lower participation in non-farm employment compared to men.

Other aspects of women's welfare that could be seen was that their increased education and in some instances improved livelihoods showed to give them better self-confidence and made them more independent from their husbands which is important as marriages are no longer permanent in the villages included in the study.

The third research question looked at differences between the villages that could influence the outcomes of women's education on livelihoods. This was done in terms of previous educational level, years of being a member in the organisation and number of cash income sources. In analysing these factors, an attempt was made to understand what the differences between the villages were. Although no causal linkages could be drawn, there were still some significant differences between the villages in terms of education and number of cash income sources which could have an effect on livelihood choices and also households' welfare. The cultural aspect was shortly mentioned and cultural factors that were pointed out by the director of Nikumbuke Project were that of traditions and that in the different villages there were different tribes residing in them. These factors were only briefly mentioned to nuance

the picture and to gain a greater understanding of the mechanisms that are also part in determining livelihood choices.

Another major factor identified which affect both livelihoods and household welfare are the social networks and social capital that was argued by participants to be an outcome of the education in the women's groups. This indicates the importance of understanding all capitals and assets discussed in the Sustainable Livelihoods Framework (Scoones 2009) and that focusing on just a few of them can never provide sufficient knowledge of these processes.

In conclusion, to fully understand rural livelihood strategies that different household's apply to create a living and increase their well being, one needs to understand many different processes that occur in a dynamic relationship and the context in which these take place. The aim of this study was only to look closer on one of the capitals, human capital, but found that it is very difficult to apply such a narrow approach even when only looking at perceived outcomes. Livelihoods approaches are far more complex and need to be understood in a larger framework and this study has tried to at least add some knowledge in these questions by looking at the local people's own perception about the effects.

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Appendix 1 – The questionnaire

Questionnaire with women in Nikumbuke Project

1. Household demographic and socio-economic characteristics

Q001	Village		<i>Lunga Lunga = 0, Perani = 1, Godo = 2, Jirani = 3; missing = 99</i>
Q002	Sex of respondent		<i>Women = 0, Man = 1, missing = 99</i>
Q003	Sex of head of household		<i>Women = 0, Man = 1, missing = 99</i>
Q004	Respondents role in household _____		<i>Head of household = 0, Wife of head of household = 1, Grown up child in household = 2, Aunt = 3, Parent of household head = 4, other relative = 5, other = 6</i>
Q005	Full name of respondent		<i>For interviewers use only</i>
Q006	Household type _____		<i>Nuclear (parents and their children only) = 0, Extended (grandparents, aunts, uncles or other relatives also living in household) = 1, Polygamous (having more than one wife or husband at the same time) = 2, Single mothers (widow, never married, divorced) = 3, Female headed (husband absent) = 4, Single (living alone) = 5; do not know, missing = 99</i>
Q007	Age of respondent __ years		<i>Do not know, missing = 99</i>
Q008	Age of head of household __ years		<i>Do not know, missing = 99</i>
Q009	Reference year: year when household was formed -----		<i>Interviewer is to select reference year, for example year of marriage of household head, when the person moved into the household etc. do not know, missing = 99</i>
Q010	What religion do you belong to?		<i>Islam = 0, Christianity = 1, No religion = 2, Indigenous religion = 3, Other = 4; do not know, missing = 99</i>
Q011	How many children do you have?		<i>Total amount of children</i>
Q012	Are you married?		<i>yes=0, no =1; do not know, missing=99</i>

2. Educational achievements in the household

Q013	Educational level of respondent __ years		<i>Total years in school (not including Project Africa or Nikumbuke Project) do not know, missing = 99</i>
Q014	Educational level of head of household __ years		<i>Total years in school (not including Project Africa or Nikumbuke Project) do not know, missing = 99</i>
Q015	Who in your household has been given most education		<i>Head of household = 0, Wife of head of household = 1, Grown up child in household = 2, Female child = 3, Male</i>

			<i>child = 4, Other relative = 5, Parent of household head = 6, Other = 7, do not know, missing = 99</i>
Q016	Who in this household is most likely to have done the most education in the future		<i>Head of household = 0, Wife of head of household = 1, Grown up child in household = 2, Female child = 3, Male child = 4, Relative = 5, Parent of household head = 6, other = 7, do not know, missing = 99</i>
Q017	For you as an individual, has your income increased since getting more education?		<i>yes=0, no =1; do not know, missing=99</i>
Q018	Have your household's income increased since you have been getting more education?		<i>yes=0, no =1; do not know, missing=99</i>

3. Labour resources and decision making

	Number of household members who regularly sleep here 16-60 years?		<i>do not know, missing =99, regularly residing household members</i>
Q019	In total	--	<i>Consider only regularly residing household members. Make sure that the total 16-60 years equals the sum of no of males and no of females</i>
Q020	No. of males	--	
Q021	No. of females		
Q022	How many of <u>these adults</u> are able workers?		<i>do not know, missing =99</i>
Q023	Number of household members who regularly sleep here: 15 and below?		<i>do not know, missing =99</i>
Q024	Number of household members who regularly sleep here: 61 and above?		<i>do not know, missing =99</i>
Q025	What is the main work of the head of household?		<i>Farming=0, non-farm =1, do not work (retired, in school etc.)=2, do not know, missing =99</i>
Q026	What is the main work of the respondent?		<i>Farming=0, non-farm =1, do not work (retired, etc)=2, do not know, missing =99</i>
	How many adult household members (16-60 years) do regularly take an employment outside the household or own farm?		<i>do not know, missing=99</i>
Q027	In total	--	
Q028	No. of males	--	
Q029	No. of females		
	How many adult household members (16-60 years) are regularly involved in some kind of micro business?		<i>do not know, missing=99</i>
Q030	In total		

Q031	No. of males	--		
Q032	No. of females	--		
	How many adult household members (16-60 years) are regularly involved in large-scale business?			<i>do not know, missing=99</i>
Q033	In total	--		
Q034	No. of males	--		
Q035	No. of females	--		

Who are mainly involved in important decision-making that affects the whole household?

Q036	01. Husband			<i>yes=0, no =1; do not know, missing=99</i>
Q037	02. Wife			
Q038	03. Father in law			
Q039	04. Mother in law			
Q040	05. Brother			
Q041	06. Sister			
Q042	07. Uncle			
Q043	08. Aunt			
Q044	09. Grandfather			
Q045	10. Grandmother			
Q046	Who makes the final decisions of how much education individual children in the household should have?			<i>Use codes listed in previous question. 01 = Husband, 02 = Wife, etc. do not know, missing = 99</i>

4. Incomes and expenditures

What have been the sources of cash income of this household in the course of the past year?

Q047	01. Sale of staple food (maize, cassava etc.)			<i>yes=0, no =1; do not know, missing=99</i>
Q048	02. Sale of other food crops			
Q049	03. Sale of non-food cash crops (tobacco, oilseed rape, etc.)			
Q050	04. Sale of animals/animal produce			
Q051	05. Non-farm salaried employment			
Q052	06. Micro business			
Q053	07. Large-scale business			
Q054	08. Rent, interest			
Q055	09. Pensions			

Q055	10.Remittances from absent household members, children etc. —		
Q056	For this household, which of the mentioned income sources generated most cash during last year?		<i>Use codes listed in previous question. 01=Sale of food staples, 02=sale of other food crops, and so on. 99=do not know, missing</i>
Q057	What is this household's main livelihood? _____		<i>Crop production for own consumption = 0, Crop production for local market = 1, Crop production for larger market = 2, Crop production for export = 3, Sale of animals/animals produce =4, Non-farm salaried employment = 5, Microbusiness = 6, Large-scale business = 7, Rent, interest = 8, Pensions = 9, Remittances from absent household members, children etc. = 10.</i>
Q058	When this household was first formed, what was then the main livelihood? _____		<i>Crop production for own consumption = 0, Crop production for local market = 1, Crop production for larger market = 2, Crop production for export = 3, Sale of animals/animals produce =4, Non-farm salaried employment = 5, Microbusiness = 6, Large-scale business = 7, Rent, interest = 8, Pensions = 9, Remittances from absent household members, children etc. = 10.</i>
Q059	If you as an individual earn money, do you decide to what those monies should go?		<i>yes=0, no =1, partly = 2; do not know, missing=99</i>
Q060 Q061 Q062	Expenditure: looking at the costs for your household please list the three most important expenditures for last year Most important expenditure _____ Second most important expenditure _____ Third most important expenditure _____		<i>Farm inputs=0, Farm labour=1, Land rent=2, Machinery/ implements for land preparation =3, Transport=4, School fees=5, Other school expenditures =6, Health expenditures=7, Food=8, Communication (safaricom etc.) =9, Other=10</i>

5. Participation in Nikumbuke Project

Q063	How many years have you been a		Total years in both organisations
------	--------------------------------	--	-----------------------------------

	member of Nikumbuke Project and former Project Africa? __ years		
Q064	How many people in your household are members of Nikumbuke Project?		<i>Total amount of people</i>

Which of these potential household members participate?

Q065	Mother		<i>yes=0, no =1; do not know, missing=99</i>
Q066	Daughter (18 and below)		
Q067	Grown up daughter (19 and up)		
Q068	Mother in law		
Q069	Aunt		
Q070	Father		
Q071	Son		
Q072	Uncle		
Q073	Orphans		
Q074	Grandparent		
Q075	Other		
Q076	Have you had any break/time-out from being a member?		<i>yes =0, no =1; do not know, missing=99</i>

Which of the following activities /services/educations provided by Nikumbuke Project do you (or your daughter(s)) regularly take part in?

Q077	01. Tailoring and dressmaking class		<i>yes =0, no =1; do not know, missing=99</i>
Q078	02. Literacy class		
Q079	03. Business class		
Q080	04. ICT (Computer training)		
Q081	05. Health clinic		
Q082	06. Micro-loans		
Q083	07. Health education		
Q084	08. Health by Motorbike		
Q085	09. Mentoring to the children of the active women		
	—		

When did you start to participate in the different activities /services/educations?

Q086	01. Tailoring and dressmaking class		<i>Write year when they first started participating in the activities/services.</i>
Q087	02. Literacy class		
Q088	03. Business class		

Q089	04. ICT (Computer training)		
Q090	05. Health clinic		
Q091	06. Micro-loans		
Q092	07. Health education		
Q093	08. Health by Motorbike		
Q094	09. Mentoring to the children of the active women		
Q095	— — —		Use codes listed in previous question. 01=Tailoring class, 02=Literacy class, and so on. do not know, missing=99
Q096	—		
Q097			
Q098	Have you or another household member stopped taking part in any of these three activities?		yes=0, no =1, never took part in=2; do not know, missing=99
Q099	Would you recommend other women and girls to take part in Nikumbuke Project?		yes=0, no =1; do not know, missing=99
Q100	Do you pay to be a member?		yes=0, no =1; do not know, missing=99
Q101	Has someone in the household gained other sources of income since starting participation in Nikumbuke Project?		yes=0, no =1; do not know, missing=99
Q102	If yes, what type of income?		Agricultural = 0, Non-agricultural = 1
Q103	How has the household's income changed?		Increased = 0, decreased=1, unchanged=2; do not know, missing=99
Q104	How does participation in Nikumbuke Project affect the agricultural activities of the household if you have any?		Less time for agriculture=0, Less money for agriculture=1, More money for agriculture=2, the household has no agricultural activities = 3, No changes = 4; do not know, missing=99
Q105	Do you find that Nikumbuke Project is good for women?		yes=0, no =1; do not know, missing=99
Q106	Do you think Nikumbuke Project is best for married or unmarried women?		Married=0, unmarried=1; do not know, missing=99
Q107	Do you think Nikumbuke Project is good for men?		yes=0, no =1; do not know, missing=99

Appendix 2 – Lists of Interview Respondents

Semi-structured Interview Respondents

Name	Female/ Male	Village and time of interview	Age	Main work	Total years in Nikumbuke	Previous education
Pauline	Female	LungaLunga 2014-02-06	44	Farming	6	7
Miranda	Female	LungaLunga 2014-02-06	40	Farming	4 (Started 4 years ago, but have had a time-out)	0
Michael	Male	LungaLunga 2014-02-07	52	Farming	-	7
Nick	Male	LungaLunga 2014-02-07	57	Farming and casual work	-	0
Nicole	Female	Perani 2014-02-12	36	Non-farm	7	9
Nicky	Female	Perani 2014-02-12	29	Farming	5	0
Amanda	Female	LungaLunga 2014-02-13	56	Farming	7	0
Ruth	Female	LungaLunga 2014-02-14	58	Non-farm	2	6
Jenny	Female	Godo 2014-02-17	36	Farming	6	6
Catherine	Female	Jirani 18/2/2014	45	Non-farm	1	0
Kevin	Male	Perani 2014-02-19	46	Non-farm	-	8
Nigella	Female	Perani 2014- 02-19	38	Non-farm	5	0
Diana	Female	Godo 2014-02-24	51	Farming	2	4
Carl	Male	Jirani 2014-02-25	36	Non-farm	-	7
James	Male	Godo 2014-03-03	65	Non-farm	-	0
Max	Male	Godo 2014-03-03	42	Non-farm	-	7

Focus Group Respondents

Focus Group 1 Respondents

Respondent	Male/Female	Village and time of interview	Age	Main work
Maria R1	Female	Lungalunga 2014-02-10	37	Farming
Olivia R2	Female	Lungalunga 2014-02-10	27	Farming
Kate R3	Female	Lungalunga 2014-02-10	29	Non-farm
Sofie R4	Female	Lungalunga 2014-02-10	46	Farming

Focus Group 2 Respondents

Respondent	Male/Female	Village and time of interview	Age	Main work
Andrew R1	Male	Lungalunga 2014-02-14	34	Farming
Axel R2	Male	Lungalunga 2014-02-14	35	Farming
Erik R3	Male	Lungalunga 2014-02-14	23	Non-farm (student)

Focus Group 3 Respondents

Respondent	Male/Female	Village and time of interview	Age	Main work
Anna R1	Female	Perani 2014-02-26	24	Non-farm
Rachel R2	Female	Perani 2014-02-26	24	Farming
Michele R3	Female	Perani 2014-02-26	Missing	Missing
Alice R4	Female	Perani 2014-02-26	31	Non-farm
Elisabeth R5	Female	Perani 2014-02-26	Missing	Farming
Bridget R6	Female	Perani 2014-02-26	Around 40	Missing

Focus Group 4 Respondents

Respondent	Male/Female	Village and time of interview	Age	Main work
Miguel R1	Male	Perani 2014-03-05	37	Farming
David R2	Male	Perani 2014-03-05	45	Non-farm
Henry R3	Male	Perani 2014-03-05	30	Farming
John R4	Male	Perani	Missing due	Missing due to

		2014-03-05	to late arrival	late arrival
Matt R5	Male	Perani 2014-03-05	Missing due to late arrival	Missing due to late arrival

Key Informant Interviews

Position	Village	Date	Age	Rec. No.
Director of Nikumbuke Project	LungaLunga	2014-01-14 and 2014-03-17	41	1 and 29
Village Chief	LungaLunga	2014-02-10	54	-
Educational Officer	LungaLunga	2014-03-03	54	25
Teacher in Nikumbuke Project	Godo	2014-02-25	47	19

Appendix 3 – One-Way ANOVA tests

One-Way ANOVA test of statistical significant difference in level of education and village

Multiple Comparisons

Dependent Variable: Total years in school (not NP) res
Scheffe

(I) Village	(J) Village	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Lunga Lunga	Perani	5,007*	1,133	,001	1,76	8,26
	Godo	1,573	,966	,454	-1,20	4,34
	Jirani	6,319*	1,044	,000	3,32	9,32
Perani	Lunga Lunga	-5,007*	1,133	,001	-8,26	-1,76
	Godo	-3,434	1,205	,052	-6,89	,02
	Jirani	1,312	1,269	,785	-2,33	4,95
Godo	Lunga Lunga	-1,573	,966	,454	-4,34	1,20
	Perani	3,434	1,205	,052	-,02	6,89
	Jirani	4,746*	1,122	,001	1,53	7,97
Jirani	Lunga Lunga	-6,319*	1,044	,000	-9,32	-3,32
	Perani	-1,312	1,269	,785	-4,95	2,33
	Godo	-4,746*	1,122	,001	-7,97	-1,53

*. The mean difference is significant at the 0.05 level.

One-Way ANOVA test of villages and total number of cash income sources

Multiple Comparisons

Dependent Variable: Total_livelihood
Scheffe

(I) Village	(J) Village	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Lunga Lunga	Perani	-1,48951	,56196	,081	-3,1024	,1234
	Godo	,30342	,47906	,940	-1,0716	1,6784
	Jirani	1,33516	,51792	,095	-,1514	2,8217
Perani	Lunga Lunga	1,48951	,56196	,081	-,1234	3,1024
	Godo	1,79293*	,59793	,037	,0768	3,5091
	Jirani	2,82468*	,62950	,001	1,0179	4,6314
Godo	Lunga Lunga	-,30342	,47906	,940	-1,6784	1,0716
	Perani	-1,79293*	,59793	,037	-3,5091	-,0768
	Jirani	1,03175	,55675	,338	-,5662	2,6297
Jirani	Lunga Lunga	-1,33516	,51792	,095	-2,8217	,1514
	Perani	-2,82468*	,62950	,001	-4,6314	-1,0179
	Godo	-1,03175	,55675	,338	-2,6297	,5662

*. The mean difference is significant at the 0.05 level.