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Weaving Livelihoods

A study of the determinants and effects of
Livelihood Diversification on Guatemalan weaving
households



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ABSTRACT

The objective of this study is to explore the rationale behind livelihood diversification behavior of rural Guatemalan households involved in the weaving sector. Livelihood diversification behavior stems from the necessity for rural households to manage risk, accumulate assets, cope with sudden environmental crises or pursue diversification as a natural strategy stemming from a historically social importance. The motivations and impacts of the behavior, however, vary from context to context and are determined by a combination of vulnerabilities, resource constraints and institutions within which households pursue their livelihoods.

This paper thus explores these motivations in the context of Guatemalan artisans to explain what factors contribute to their livelihood diversification behavior and, given the vulnerabilities in which they exist, what implications diversification has on them in terms of assets invested between on-farm and off-farm activities. The research draws on DFID's Sustainable Livelihoods framework as the theoretical model through which relevant information is captured on livelihoods by exploring the relationship between assets and diversification. The drawn conclusions suggest that diversification in weaver households stems from a combination of risk management and consumption smoothing needs with human and financial capitals being the driving assets in maintaining income levels.

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LIST OF ABBREVIATIONS

FC	Financial Capital
HC	Human Capital
LD	Livelihood Diversification
LS	Livelihood Strategies
MSE	Micro-and-Small enterprises
NC	Natural Capital
PC	Physical Capital
RNFE	Rural Non-Farm Economy
SC	Social Capital
SL	Sustainable Livelihoods
SLA or SLF	Sustainable Livelihoods Approach or Framework

1. INTRODUCTION

1.1. THE RESEARCH PROBLEM

In light of the debate over how to best address the complexities of rural economies in a more holistic manner, particularly by taking into account how the rural populace makes socio-economic decisions (Chambers 1983), theories on Sustainable Livelihoods (SL) have increasingly started to come into the forefront over the past 20 years (Doward et al. 2002). By portraying the linkages of the rural populace to both the material assets at their disposal as well as their overall capabilities to achieve a range of desirable outcomes, SL theories have effectively shifted the focus of development policies from relying on traditional sectoral initiatives to encouraging the appreciation of asset holdings and livelihood strategies in addressing poverty issues in the rural sector (Scoones 1998; Castro 2002). At the micro-level, the distinguishing feature of these theories is to depict the household as a single unit that works towards maximizing its welfare through pursuing a range of diversified livelihood activities (Ellis 1998). While the ends of these livelihood activities is generally to increase well-being, financial security and incomes (DFID 1999), the motivations behind the actual diversification of these livelihood activities has been a much-debated topic in development theory.

Development theorists, including Ellis (1998), Hossein & Nelson (1998), Jones (2008) and Reardon et al. (1992) argue that to simply pass off the rationale behind diversifying livelihoods as the pursuit for asset accumulation, risk management or a coping strategy would be naïve and overlooks the true complexities of Livelihood Diversification (LD). Households employ a range of livelihood activities for much the same reason that a broker buys a variety of stocks, the only difference being that rural households have very limited options and given their limited assets and investment options, do not have the luxury of diversifying their asset portfolios. As pointed out by the authors on the subject, rural households generally diversify their livelihood strategies for either one of the following reasons: -

- **Accumulation vs. survival:** To enable accumulation of assets for consumption and investment (Hossein & Nelson 1998) OR as a survival strategy in the absence of sufficient assets (Barett et al. 2001)
- **Risk management vs. Coping strategy:** Accounting for the probability of income failures OR coping with exogenous, sudden crises
- **Adaptation:** Adaptive response to detrimental conditions that imply reduced future incomes
- **Livelihood strategy:** A natural socio-economic behavior pursued in conjunction with existing and available assets and institutions (Hossein & Nelson 1998; Ellis 1998; Unni 1996).

Thus, the extent and nature of how a household spreads out its livelihood activities will vary from context to context and be specific to the conditions it faces. In a study on famine coping strategies in Burkina Faso, for instance, Reardon et al. (1992) showed that that the driving forces behind income diversification were harvest shortages and unfavorable terms of trade while constraints to land ownership had no correlation to diversification. And the reason was that households in the region had transferred their livelihood activities to livestock and other non-farm activities and were

no longer reliant on subsistence farming, i.e. it was a coping strategy. On the other hand, in Jones' (2008) work in Rajasthan with informal financing, it was found that livelihood diversification was a norm and a means to maintain a certain level of income, i.e. it was a natural behavior. These examples thus show that in order to comprehend the motives behind livelihood diversification, the relevant context must be made clear first.

1.1.1. THE CASE: GUATEMALAN HANDICRAFTS WEAVERS

“Sales have been very low in the past years but we cannot change the work we do. I have to feed my family when my husband is not around and I do what I can to make sure my children don't go to sleep hungry. Now I have started selling chickens. I know there is not much earning in that either but at least it's something I do on my own.” – Kristina Huc, Tamahú

The quote above reflects the sentiments of one of the several women in Guatemala working with hand-woven textiles, particularly back-strap loom weaving. Like Kristina, about 900,000 other women in Guatemala are dependent on the artisanal activity as a primary source of income for their households (Dunn & Villeda 2005). As a craft that has been passed down through generations since the Mayans, hand-woven textiles represents a heritage that women like Kristina have religiously held on to and continue to pass on to their daughters. Statistically, about 20-30% of the entire population is in some way dependent on the handicrafts sector with women almost completely comprising the sector (Merriam 2002; AGEXPRONT). But with an outdated mode of production, compounded by increasing competition from Asian markets and a range of other impediments, more and more artisans are finding it difficult to proceed with the tradition and livelihood that has been their way of life for generations. As a result, many women have resorted to expanding their livelihood activities by taking up other rural professions such as farming, poultry and commerce.

At first glance, this action may seem like a simple and rational risk management and coping behavior in response to vulnerability. The reality, however, is more complex. To understand the rationale guiding their livelihood diversification, we must first examine the socio-economic context within which women artisans carry out their daily activities as well as the potential Vulnerabilities and Transforming Structures and Processes¹ in which they exist. Firstly, a distinguishing characteristic of the artisanal women is that they are mostly household heads who, in the absence of their husbands, are responsible for both running domestic affairs as well as working on a variety of income-generating activities. The main reason for the absence of men has been found to be migration and because of the delays, and often complete uncertainty, of receiving remittances from their husbands, artisanal women must rely on their own incomes with the assumption that they may not receive incomes from their husbands (Little 2004). In this regard, their

¹ The terms 'Vulnerabilities' and 'Transforming Structures & Processes' are described in more detail in the section on Sustainable Livelihoods framework, but to put it simply, refer to a range of institutions and institutional mechanisms at the communal level that shape the rural populace's livelihood (DFID 1999).

behavior can be classified as risk management and not coping, as coping implies the measures taken to deal with a recurring crisis while risk strategies are taken to reduce the probability of income failures (Ellis 1998).

Unfortunately, such a hasty oversimplification is also fallacious and incomplete. The second important feature of the weavers' context is that there are important social and political linkages that stem from the cultural relevance of weaving. Unlike traditional non-farm livelihood activities, hand-woven crafts are more streamlined to promote a "continuity of Mayan tradition rather than capital production", i.e. it is not just an income-generating activity but a way of life that has remained unchanged for over a thousand years (Nash 1993:23). Additionally, the household dynamics of these weavers is a lot more different than traditional rural households in that while other households pursue agrarian activities as their primary livelihood, opting to diversify according to varying circumstances, artisanal households engage in weaving as the primary activity and compliment it with semi-subsistence small farming based on seasonal variations (ibid.; Little 2000). As an in-house activity, and thus a microenterprise, weaving activities are almost exclusively dominated by women and the gender implications of this feature also affect livelihood strategies (USAID 2007). Thus, livelihood diversification in this regard, according to Hossein & Nelson's (1998) definition given earlier, is a natural process relevant to this socio-economic reality.

Thirdly, and most importantly, another feature of the hand-woven textile workers that makes it difficult to define their motivations for livelihood diversification lies in the nature and structure of their particular market value chain. As Dunn & Villeda's (2005) study shows, there is a complex hierarchical structure of the hand-woven textiles in Guatemala in which vertical (retail, wholesale, production and inputs) and horizontal (between the artisans themselves, primarily at the communal levels) relationships determine how market forces work to provide resources to each involved actor. Additionally, the study identifies three primary channels of demand (popular tourist markets, exclusive shops and exports) and weavers at the production level can only access these through artisan-brokers (see Figure 1). This is further complicated by the fact that with recent declines in the demand for the weaver's products arising from failure to meet consumer tastes to increasing competition from Asian markets, the hand-woven textile sector has become a less lucrative venture (ibid.). This limits the real benefits that can potentially be accrued by artisans and thus, instills the need for weavers to look to other income-generating ventures to maintain a specific level of income.

1.2. STUDY AIM

The points mentioned above suggest that to understand the livelihood diversification behavior of Guatemalan artisans, a range of socially and economically relevant aspects need to be studied first. But because of the complex and extensive nature of these aspects, an appropriate model needs to be used that captures these various complexities. As an approach that depicts the mechanisms and forces that shape livelihoods of households in a development context, DFID's (1999) Sustainable Livelihoods Framework (SLF) provides researchers with the pertinent issues that determine how households interact with the factors that affect their decisions, and the institutional influences and processes

within this context. To this end, this study draws upon SLF by analyzing the relevant aspects of the model in the Guatemalan weaver's context.

Inspired by the literature and dialogue on livelihood diversification issues, this study aims to explore the various factors influencing diversification determinants, strategies and effects as pursued by Guatemalan artisans. In addition, using SLF as the backdrop theoretical framework, the main objective is to portray the Guatemalan weavers' context through the SL model by discussing market structures, social/cultural factors and existing vulnerabilities in an attempt to see how they affect LD behavior.

1.2.1. RESEARCH QUESTIONS

With the debate on livelihood diversification and SLF providing the overarching theoretical framework, this study aims to answer the following central question: -

Given the social and economic multi-dimensionality of the context within which Guatemalan weavers pursue their livelihoods, what are the determinants and effects of livelihood diversification?

The underlying assumption is that weavers' households base their LD behavior on a range of factors including, but not limited to: -

- 1) The pursuit to accumulate existing assets, both material and intangible. In the SL context, the framework classifies these into 5 essential capitals: human, social, physical, natural and financial.
- 2) Reduce financial risk, or take measures against the probability of income failures, especially when there are recurring failures. The flipside of this is coping, or the actions taken by the household to deal with an unforeseen crisis. In summary, risk management is prudent and suggests the LD is a positive thing, whereas coping strategies imply livelihood failures. Thus, if a household has reduced its assets (or in the weavers' context, not been accumulating any of the 5 capitals), then it is simply coping (Ellis 1998; Hussein & Nelson 1998).
- 3) On the same lines as coping strategies, households may have to take adaptive responses against expected longer-term declines in income or entitlements, especially due to economic or environmental changes beyond their control (ibid.). In the case of the weavers, this exists in the form of continuously declining demand of their products which has recently plummeted to the extent that weavers have started to shift out of the market rather than just begin work in other sectors (USAID 2007).
- 4) Pursued as a "natural" part of the livelihood strategy within the context, mostly in response to seasonal changes (Reardon et al. 1992:13) or as part of the gender dynamics in households that demarcate occupational roles of women (Unni 1996). This is particularly true for the Guatemalan weavers. As Nash

(1993) points out, women weavers work on their small farms for semi-subsistence in conjunction with weaving activities. This is not a novel strategy and has been pursued by these Mayan weavers for century, and finds its roots in their cultural heritage where roles of household members were defined based on their “functional and social embeddedness” in the household (p. 64).

Thus, in light of these multi-dimensional explanations for diversification, this study seeks to explain the rationale behind LD of weavers in the social settings given this range of vulnerabilities and exogenous (and even endogenous) influences shaping their Livelihood Strategies (LS). Because of the various possibilities for the reasoning behind LD behavior, we will be testing various aspects of the LD behavior motives using the Sustainable Livelihoods approach in conjunction with the LD debate. In order to achieve this, the following sub-questions will be dealt with concomitantly in an attempt to both identify the most relevant social, cultural and economic factors influencing the weavers’ reality and how they contribute to their diversification strategies and behavior: -

Accumulation of the 5 capitals and implications for Livelihood diversification

According to the Livelihood Diversification debate, the existence of more assets (i.e. rich household) implies that the household will be less vulnerable to seasonal and risk factors than households with lesser assets. But if assets are low and the household is employing LD strategies, they are traditionally coping strategies to deal with diminished incomes. On the other hand, richer households showing a greater presence of diversification implies that they are accumulating assets rather than minimizing risk. Consequently, in order to understand the motivation behind capital accumulation and livelihood diversification, we must ask the following: -

- a) *What are the circumstances in which households have higher or lower capitals? Are they community-specific or ethnically biased? What implications do these differences imply for livelihood diversification?*
- b) *Has the household accumulated capitals in the past? What does this suggest for benefits reaped from diversification?*
- c) *What is the correlation between asset combinations and livelihood diversification in weaver households? What are the implications for these correlations? Are households managing risk or employing coping strategies?*

Socio-economic factors and vulnerabilities

- a) *What is the inherent social and economic structure of the weavers’ market and how do they place themselves in it?*
- b) *What are the potential vulnerabilities for weavers and how do these affect their diversification behavior? Are there any indications that shocks are recurrent or permanent (indicating risk management or coping)?*

2. BACKGROUND

This section presents the literature review and qualitative research based on observations from the field on the Guatemalan textile handicraft value chain and reveals important information about its structure, thus creating the motive for a livelihood diversification study (detailed in the subsequent section). In describing the value chain, the greatest emphasis is placed on understanding the role of weavers as self-employed micro-and-small enterprises (MSEs) who work from their homes. Additionally, it will provide an outline of the relationships between MSEs and the intermediaries in the value chain and how this affects their income, production behavior and ultimately, livelihood decisions.

We will first discuss the history of hand-woven textiles taking into account its relevance and importance as more than a just an income-generating activity and the ensuing implications for rural households. This is followed by a brief economic history of the sector in light of Guatemala's ever-changing political climate. Next, an overview of the market value chain will be provided, elaborating on the linkages among weavers as well as between the other actors comprising the sector and how these affect diversification behavior. Finally, we conclude with how issues of seasonality and production shifts in the sector affect livelihood activities of weavers in rural Guatemala using examples from existing literature and observations from the field.

2.1. SOCIAL, ECONOMIC AND POLITICAL RELEVANCE OF HAND-WOVEN TEXTILES IN RURAL GUATEMALA

2.1.1. HOUSEHOLD DYNAMICS OF WEAVERS

Artisanship has been one of the fundamental livelihood activities for many rural households in Guatemala and is run almost exclusively by women. Over 93% of the rural population in Guatemala consists of indigenous Mayans and virtually every weaver in the region belongs to one of the 24 Mayan ethnicities (Little 2004). Known for its colorful weaving tradition that has been passed down through generations, Guatemala's indigenous population has depended on the craft both for creating its identity as well as sustaining it (Nash 1993). For the rural populace involved in the trade, weaving traditions extend beyond mere livelihood activities or a way of generating income. Its value is best summarized in the words of a weaver herself: -

“My grandmother taught the trade to me and before her, her grandmother taught her how to weave and it has been passed on since our Mayan ancestors. For us, it is not only about earning money but something we have to do regardless of whether the money comes.” – Anonymous, Purulha

The tradition of teaching daughters and the women of the household the trade of weaving thus implies that the very Mayan identity is transmitted to the next generation, not just is a livelihood skill. As a result, weaving processes have

remained remarkably constant over thousands of years (Nash 1993; Little 1998). In terms of productivity, this proves to be problematic as completing a single *güipile*² usually takes anywhere between 15 days to a month using standard back-strap loom techniques. Consequently, a single woman in the household only produces 1 or 2 and must rely on the sales of these to support the entire family.

Another interesting feature of the trade is that it employs virtually no investment capital and relies more on labor and skills. This makes it a lucrative and relevant in the rural context of Guatemala where households seldom have enough capital to invest in costly ventures. Weavers generally come from the socially and economically marginalized segments of Guatemalan society because of the limited economic opportunities available to them, weaving is usually the only livelihood activity they can rely on complemented by semi-subsistence farming. In the majority of cases, even this is non-existent and there are seldom any capital gains to increase capital (Dunn & Villeda, 2005).

These weavers integrate back-strap loom weaving into their household maintenance responsibilities, such as cooking, childcare, small animal husbandry, kitchen gardening, and water and fuel collection. According to the findings in the field, the maximum hours spent on back-strap loom weaving is typically between five to six hours, both because of their other commitments as well as the potential for physical fatigue. Additionally, since the back-strap loom is portable, it can be taken to the yard, field, or market and women can thus conveniently work from various locations without having to rely on an established workplace. This gives the weaver considerable mobility and makes it easier to integrate back strap weaving into other economic and household activities (ibid.; Chen & Dunn 1996).

Although the statistics for the labor force share of artisans varies across different sources, primarily because it has not been adequately measured or measured using very different techniques/criteria, it has generally been accepted that about 15% of the Guatemalan population is comprised of weavers, out of which over 95% are women (USAID 2007; Merriam 2002). Unfortunately, considering the true nature of how weaving activities affect households socially and economically, these figures can be very misleading. Unlike other on-farm or even off-farm activities, weaving is not a distinct, independent livelihood activity but deeply entrenched in the household's strategies to the extent that it is often the only activity the household relies for its income. There is a clear labor specialization where the household head³ and the other members participate in the activity in unison, allocating their time strategically between household chores, child rearing, farming (usually very small farms, if at all) and weaving activities. As a result, the 15%

² *Güipiles* are traditional Mayan blouses made from three panels of clothing that are stitched together to complete the dress. In our study as well as prior studies referenced herein, *güipiles* are the primary products made by weavers.

³ Bossen (2005) and Little (2001:23) both claim that in weaving households, the mothers or wives are the "unnamed" household heads since men are usually wage laborers working in distant communities and visit the family on certain occasions. In their absence, the entire household is dependent on the earnings from the weaving activity.

mentioned above is a misrepresentation of the real population that is dependent on the craft as those 15% represent households, not individuals.

We can conclude from these points that weaving activities represent more than an income opportunity and are deeply embedded into the social reality of rural Guatemalans. It is because of this that in this study we refer to weavers 'weaving households', not just weavers. Unfortunately, the activity is not unaffected by trends in the market economy and as we show in the next section, these trends have transformed weaving activities and forced weavers to change their livelihood strategies.

2.1.2. ECONOMIC BOOM AND BUST OF HAND-WOVEN TEXTILES

Traditional economic theories, such as Rostov's Stages of Growth model or Schumpeter's "creative destruction", contend that as economies grow, the transformational processes rid the economy of obsolete, inefficient and non-progressive sectors, thereby either upgrading their technologies to a globally competitive level or causing them to be "weeded out" in the progression (Caballero & Hammour, 2000:215). For Guatemala, this implies that sectors such as hand-woven textiles and artisanship should either be upgraded with the introduction of newer technologies or eliminated entirely. The problem with that argument is that economies do not always 'shift' in the same manner and the development is often more complex with the existence of multiple but unequal sectors competing to establish themselves. More importantly, such a progression fails to take into account the impact it would have on the populace involved in the informal sectors, especially if a large percentage of the population pursues its means of livelihood within that sector. In countries such as Guatemala where inequality is so rampant (UN 2008), the people in the lower rung of the economy, represented largely by weavers, will naturally be overlooked or lose what little market presence they already have. The case for overlooking such sectors can only be made when truly pro-economic conditions exist, including but not specifically, a stable economy with at least a constant economies of scale, a clear progression towards industrialization, lucrative investment conditions, ease of market access and so forth (Caballero & Hammour 2000). In Guatemala's case, unfortunately, none of these conditions hold. Additionally, as mentioned earlier, at least half of the country's population relies on the sector and overlooking it would be a tremendous oversight. This further suggests the importance of the sector in context of the population at large.

Nonetheless, the fact remains that the hand-woven textiles sector has been dwindling in the past and this has meant troublesome implications for households involved in the sector. Exports of artisanal products increased in the 1980's, reaching their peak in 1992 and a sudden and almost permanent decline in the following years. There are several important reasons for this rise and fall. Firstly, Guatemala ended a 36-year-old civil war in 1990 and with the consequent rise in tourism, Guatemalan textiles became increasingly popular (USAID 2007). Secondly, Bossen (2005) observes that there was an international shift in consumer trends as the demand for indigenously hand-woven textiles grew. As a growing sector operating in an economy that had recently opened itself up to international trade, Guatemalan weavers were able to successfully take advantage of this demand. Unfortunately, the boom did not last

very long. In the following decade, exports began to decline as competition increased from Asian markets and consumer tastes for the products began to change. Unable to adapt to these shifts in trends, coupled with little sectoral support from the government or NGOs, the once thriving weaving industry began to falter (Dunn & Villeda, 2005). The situation was complicated by the fact that the boom had given rise to the number of artisans involved in the sector and with increasing saturation and a low demand, prices began to fall and competition among the weavers grew tremendously (USAID 2007).

2.1.3. THE INDIGENOUS IN A POLITICAL CONTEXT

As mentioned earlier, the weaving sector is almost exclusively dominated by the indigenous population. We have already discussed the social features of the Mayan weavers and how these affect their weaving and livelihood activities in general. But as an ethnicity that is substantially marginalized both economically and politically from the rest of the country, it is important to ask how or why weaving is an exclusively indigenous activity and what the roots of this sectoral dominance.

We will first examine the political history of the indigenous to understand how weavers fit into the context. Little (2004; 2005) elaborates on the issue of the “Mayan identity” and how this has been the leading problem in the integration of the indigenous. Following Guatemala’s independence, the indigenous, in spite of being the majority, failed to acquire any substantial assets in the newly-formed state and their dependence on rural activities prevented the majority of them from entering into other commercial ventures or the polity. However, Bossen (2005) points out that it wasn’t just their dependence on rural activities but also the fact that *Ladinos* (non-indigenous), through their involvement in the independence, had already acquired assets and land rights. Consequently, the indigenous were marginalized.

Thus, with regards to hand-woven textiles, it follows that both through their inability to access landholdings and other assets in the country, coupled with the persistence to maintain social and economic traditions, the indigenous continued to pursue the livelihood strategies that they had for centuries. That is not to say, however, that they did not adapt or failed to progress. The need to maintain their identity was a choice of “cultural consciousness” and this they transferred to the entire country through their crafts, language and way of life (p. 24). As a result, the need to become united became secondary and, according to Little (2004), almost irrelevant: -

“Despite the fact that being “Maya” is important to handicrafts vendors, committing to a particular type of social movement limits them politically as they present their identity to tourists to whom they sell their wares, to Ladino (non-Maya Guatemalan) officials from whom they seek sanctioned and safe locations in which to sell, and to themselves and the Mayas in the course of maintaining their integration into the marketplace and their respective communities.” (p. 1)

By 'social movements', Little refers to the Mayan groups and suggests that in spite of the several movements attempting to unite the indigenous, they have been unsuccessful to do this for the simple reason that following the independence, and then after the 36-year-old civil war in which thousands of indigenous were killed and exploited, the motive to unite became mundane as the priority was for survival rather than becoming politically relevant (ibid.). In conclusion then, these problems explain why weavers have been unable to unite more effectively and grow as a united, independent sector, as well as why they continue to pursue weaving in spite of its economic drawbacks.

2.2. OVERVIEW OF THE HAND-WOVEN TEXTILE VALUE CHAIN

These problems highlighted in the preceding section suggest that weavers who existed prior to the sectoral boom now have to deal with an increasing competition, topped by lowering demands and little or no financial security. The predicaments that these weavers thus face have significant consequences on how they conduct their business within their socio-economic reality, adjust their livelihood strategies and interact within the market. We have already discussed the first facet of the weavers' context and now turn to how the weavers' market is structured and how actors within the market interrelate. The aim is to show how the market functions as whole, how the supply and demand forces affect the flow of resources, the relationship of weavers with other players in the market and the resulting implications of these on weavers' livelihoods.

2.2.1. STRUCTURE OF VALUE CHAIN

As shown by Figure 1 below, there are four basic segments in the hand-woven textile value chain: (1) Input supply, (2) Production, (3) Retail and (4) Wholesale. The 'Production' segment represents approximately 900,000 of the weavers that we are referring to in this paper. As the diagram shows, the only entry points for weavers to sales are through artisan-brokers, with whom weavers share a very important bond (the boxes that have been highlighted in blue show the market components relevant to the weavers and the actors that weavers interact with directly). The diagram also suggests that there are three main market channels that form the demand for hand-woven textiles: (1) exclusive, (2) popular/tourist and (3) export markets. Exclusive markets represent shops in the larger cities of Guatemala where local buyers go to buy textile products, and though weavers make products for these markets, they can only access these through artisan-brokers. These represent the major demand for weavers and most of their products are sold to through this channel. Export markets are also found in larger cities, particularly where tourists are or locations where large export companies have established their operations to sell products abroad. Once again, access to these markets is not possible without artisan-brokers acting as middlemen. And finally, the popular/tourist markets represent small shops that are found all over tourist destinations in Guatemala and while some weavers do have access to these, it was found that very few have the resources to "self-market" themselves and once again, rely on middlemen to purchase products and sell at these locations.

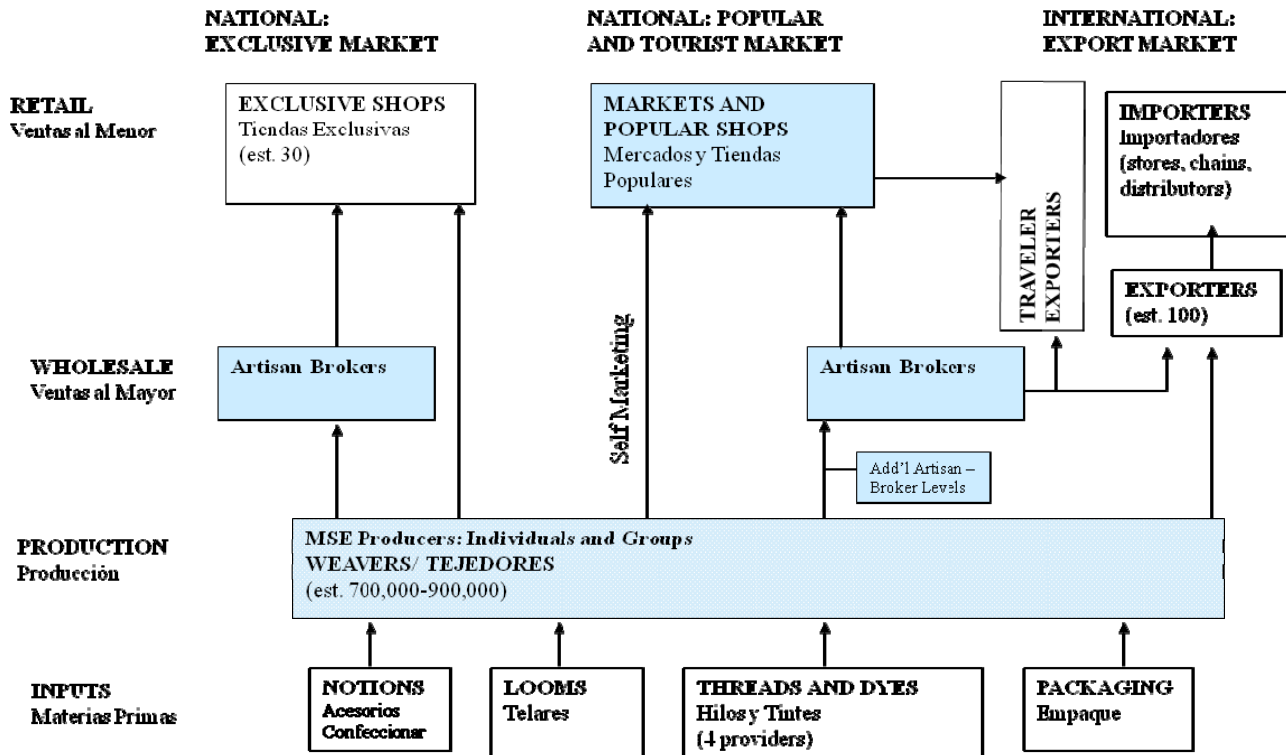


Figure 1: Market Value Chain of Guatemalan Hand-woven Textiles (Dunn & Villeda 2005:23)

Thus, it is clear that weavers have limited access to the actual market outlets and must rely on artisan-brokers to sell their products for them. In the next section, we will discuss the relationship between weavers and brokers, and how they affect the earnings of the weavers.

2.2.2. WEAVER AND ARTISAN-BROKER RELATIONSHIP

“The ‘coyotes’ are important for us because they can find markets and buyers. It costs us 20 quetzales and an entire day just to take the güipiles to them. Can you imagine how much it would cost us if we tried to search for buyers on our own? We call them coyotes because they can hunt for buyers.” – Patricia Macz, Tamahú

As Figure 1 illustrates, artisan-brokers (or *coyotes* as referred to by the Guatemalan weavers) are essentially the customers for Guatemalan weavers. Based on the field findings, it was observed that weavers travel to the main square of the closest city from their village almost twice every month (depending on how many products they bring to sell) and bargain for a price for their products. Although they mostly establish a permanent relationship with a single and known broker with whom dealings were conducted in the past, there are rare occasions in which prices will be quoted to other brokers. This depends on several factors: (1) nature of the relationship with broker, (2) prices offered, (3) design/product requirements and (4) credit options. Brokers and weavers usually establish a bond in a mutually

agreed manner, in that the weaver will stay with a broker as long as the broker offers preferable prices and the broker will continue to buy from the weaver as long as the products she produces are at par with his/her quality and design requirements. Additionally, brokers are usually well-linked to customers in each one of the 3 market channels shown in Figure 1 and can therefore offer competitive prices to weavers. This does not always bode well for the weavers, however. As saturation increases and demand falls, brokers are looking to find the artisans that will accept the lowest prices. But since the market is competitive and follows the rules entailed by such a setup, prices offered to weavers are usually the same across the market. The problem, as identified by the research findings and concurred upon by Dunn & Villeda (2005), is that when brokers buy from these pre-established marketplaces, they come with a target range of the number of products they will be buy based on orders given to them by their clientele from the 3 sales channels. As a result, most weavers find it difficult even sell their products or, as they often quoted during my surveys, “*no hay pistos*”! (“There are no orders!”) One may point out that weavers can opt to offer their products to other brokers in the market but, as mentioned earlier, the relationships established between the two parties are complex and loyalty plays an important role. As several weavers claimed, brokers with whom relationships had been established in the past may be reluctant to continue do business if products were sold to a competing broker.

Another important aspect of the relationship has to do with credit options, and ties in greatly with the nature of the broker-weaver relationship. In many instances, if the weaver does not have sufficient resources to buy additional threads, brokers may lend threads to the weaver and deduct the cost when the final product is purchased. Concomitantly, weavers may give their products to brokers and receive payments at a later time. This is an especially important aspect of the relationship and usually arises when the broker claims there aren’t sufficient orders but he/she would be willing to try and sell the products directly to the markets on the off-chance that someone else does purchase it. At times when demand is low and brokers are not receiving orders (brokers usually hoard stocks of textile products but only when market conditions are lucrative), this option gives weavers a much needed assurance that their income will remain consistent.

The third aspect in which these intermediaries are important to weavers is that unlike weavers, brokers are employed full-time and are constantly finding clients in each of the 3 channels. Consequently, they are always updated with the latest trends and can effectively provide weavers with knowledge of these trends through design/product specifications and better match demands. In times of low demands, and especially when global trends are against the Guatemalan weavers, brokers have the capacity to help the sector better compete internationally (Giuliani et. al.).

Each of these aspects point to the fact that brokers play an essential role for the weavers that goes beyond merely providing access to end markets. Unfortunately, there is also an obvious disadvantage having intermediaries conduct these transactions. When products are sold to the end markets, they are almost three times more expensive than the price at which brokers purchase them, and weavers never realize these profits on their own (Dunn & Villeda 2005). But most weavers are aware of these stark differences and claim that without the brokers, they would not be able to sell

any product and are complacent with the terms of the relationship for the simple fact that they can maintain a smooth stream of income.

3) SUSTAINABLE LIVELIHOODS AND LIVELIHOOD DIVERSIFICATION: THE THEORETICAL FRAMEWORK

Now that we have studied the cultural and economic factors affecting weaver households' livelihoods, we can better identify what motivates their LD behavior. To achieve that, however, we need to describe a relevant theoretical framework through which our analysis will be conducted and, consequently, the research aims given in the 'Introduction' can be brought to fruition.

In this section, I first describe DFID's Sustainable Livelihoods framework (SLF), elaborating on the definitions of the various aspects of the model. Based on its ability to encapsulate a multitude of aspects relevant to the rural context by focusing on the factors that influence the livelihoods of households, I explain why and how it has been used in this study. I will also explain the importance of the 5 types of assets described in the model and, consequently, how they affect the livelihood strategies that households employ. This is followed by a brief overview on Rural Non-Farm Economies (RNFE), particularly how households in the rural context differentiate between on-farm and off-farm activities and how these relate to the overall livelihood strategies. Finally, I have outlined the debate on Livelihood Diversification based on existing literature, explaining what authors and critics have identified as the various motives and effects of LD behavior and thus providing the rationale for the study described in the subsequent section.

3.1. SUSTAINABLE LIVELIHOODS FRAMEWORK

The Sustainable Livelihoods Framework (SLF) is an approach to understanding poverty issues by focusing on the factors that are most relevant to people's livelihoods and provides a model that depicts the relationship between these factors. According to the framework, a livelihood is "the set of capabilities, assets, and activities that furnish the means for people to meet their basic needs and support their well-being" (DFID 1999:2.1). The building of livelihoods reflects and seeks to analyze a broad range of assets, the weaknesses and strengths of these assets within a *Vulnerability Context* as well as the institutional structures and processes (called *Transforming structures and Processes* in the model due to their dynamic nature). The idea is not to focus on just one economic livelihood but at the types of strategies employed and the range of assets that need to be strengthened to reduce vulnerability. Thus, livelihoods are not simply a localized phenomenon, but connected by environmental, economic, political and cultural processes to wider national, regional and global arenas.

Figure 2 below shows the basic outline of the SLF. It is important to note that the 5 types of assets are in essence what define the household as a socio-economic unit whereas Livelihood Strategies (LS), according to the definition we will be using, refer to the nature of the economic activity the household is involved in which normally tend to be more than

one. The impact, in turn, is determined by livelihood outcomes, or the results of these livelihood strategies which the household strives towards. In an ideal world, livelihood strategies would generate more income, increased well-being, reduced vulnerability, improved food security, and sustained use of natural resources. In reality, however, households have specific agendas and motivations that determine the assets they will or won't have and this, in turn, shapes their livelihood strategies.

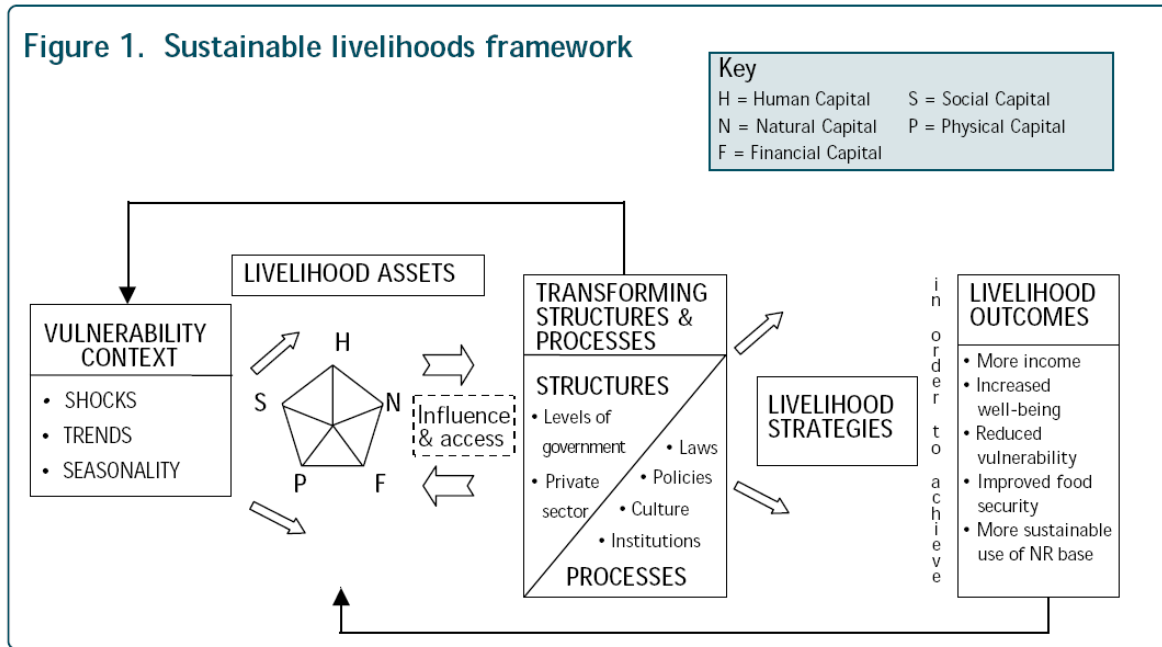


Figure 2: Sustainable Livelihoods Framework

The question of a livelihood's capacity for sustainability involves evaluating current circumstances and assessing future trends, as well as past conditions and patterns. According to Chamber & Conway's (1992) definition, a livelihood is sustainable when "when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base (p. 2)". It is important to note that sustainability does not only have an environmental connotation through preservation of resources but also an economic association, i.e. the livelihoods' ability to continue to provide benefits to the household in spite of shocks and other variable factors identified by the Vulnerability context (Scoones, 1998). In our model, we focus more on economic sustainability than environmental.

3.1.1. IMPORTANCE OF LIVELIHOOD ASSETS

Livelihoods involve the use of assets in activities to produce outputs, both to meet people's consumption requirements and aspirations and to invest assets and activities for the future. All this takes place in the context of an uncertain environment with various factors affecting the household's assets by their accumulation, destruction or alteration. The

ultimate goal of livelihood strategies is to smooth income and consumption patterns because seasonality, temporary shocks and variations in production trends are intermittent and through employing various assets at different spatial and temporal levels, households effectively ensure a consistent stream of resources to allow their households to function (Dorward et. al 2009; Bebbington 1999). The following then summarizes the dynamic relationship between assets and livelihood strategies: -

- Different assets play different roles in people's livelihoods and are applied differently in various contexts to achieve specific outcomes
- A range of core processes of investment, production, diversification, social integration and financial flows are essential in livelihoods, and these vary from context to context
- People with varying livelihood systems (i.e. asset combinations, vulnerabilities and institutions) are likely to have different preferences on their holding of assets and will employ them for different outcomes
- The assets' capacity to fulfill different functions or achieve specific outcomes depends on the attributes and environmental context (i.e. natural, physical, social, economic) within which they exist (Dorward et. al. 2009:242).

The 5 capitals specified in the model above are especially important in the rural context. Due to their limited access to resources and various institutions affecting how households form their livelihood strategies, households in the rural context have to rely on the assets in their current possession and employ strategies with their endowments to survive. As the model shows, assets are in a highly dynamic environment and through achievements of livelihood outcomes and the impacts from the Vulnerability context, assets can either be destroyed or accumulated.

In general, households seek to either accumulate assets or, in the existence of too many vulnerabilities or inadequate support, use them in the most effective manner to survive, i.e. cope with circumstances. This naturally depends on what assets they already possess and how they are able transform them. As Carloni (2005) suggests, households generally have two options for transforming assets in their livelihood strategies: -

- **Sequencing:** Given a specific context (institutional mechanisms, socio-economic factors, history, cultural aspects, politics), different combinations of assets will be utilized differently by households to achieve livelihood outcomes outlined by the model. The notion is that certain capitals may be more beneficial for households seeking to exit poverty, i.e. to employ livelihood strategies that help accumulate assets rather than just help survive.
- **Substitution:** If some assets can be substituted for others to compensate enough to still allow the achievement of livelihood outcomes, then households do not have to be too concerned with overall low asset levels if the pursuit of a few can achieve the desirable results. For instance, in the rural context, if an abundance of farmland (i.e. physical capital) can compensate for low levels of interactivity with other

members of society (social capital) to the extent that the household manages to accumulate assets in the short-run and long-run, then the capitals are substitutable and, thus, the importance of SC is reduced.

Various capitals represent various aspects of the household and its ability to successfully pursue livelihood strategies, as shown by the sub-sections below.

HUMAN CAPITAL

According to the framework, human capital refers to the “skills, knowledge and ability to labor and good health that together enable people to pursue various livelihood strategies and achieve livelihood objectives” (DFID 1999:2.1). It essentially represents the capabilities of households to successfully pursue livelihood strategies. In an economic sense, it represents the training and experience that laborers possess and the extent to which this allows them to be productive. Higher human capital will thus be represented by households with more skilled and healthy workers (Becker 1993).

SOCIAL CAPITAL

Social capital, like human capital, is also an intangible asset but even more difficult to assess. It represents the social linkages, either vertical (across hierarchies) or horizontal (between the actors, e.g. community members), which households can employ to successfully pursue livelihood strategies (DFID 1999). One of the most important features of social capital is its representation of both the breadth of interconnectedness (number of linkages) as well as extent (levels of trust, reciprocity, etc.). Higher social capital implies that the household can successfully employ its contacts without having to access intermediaries and that these connections improve its ability to achieve livelihood outcomes (Portes, 1998).

NATURAL CAPITAL

Environmental factors, particularly conservation and sustainability of resources, are one of the most essential aspects of households in the rural sector. Natural capital thus represents how the stock of these resources is used in a manner through which benefits are received by the household without comprising future availability of these resources (DFID 1999).

PHYSICAL CAPITAL

The assets that the household possesses to successfully pursue various LS are best portrayed by physical capitals. Representing the infrastructure (transport, shelter, water supply, energy, etc.) that the household possesses, physical capital is particularly important for non-farm activities.

FINANCIAL CAPITAL

Financial capital represents both the available stock of liquid assets that the household possesses as well as the stream of income that the household receives.

3.1.2. ROLE OF RNFE ACTIVITY IN THE RURAL SECTOR

Placing Sustainable Livelihoods in a rural context, one of the most important distinctions that need to be made regarding the livelihood strategies pursued in the sector is between on-farm and off-farm activities (Ellis, 1999). Off-farm activities generally involve wage labor or self-employment in any sector in the rural context not pertaining to agriculture. Davis' (2003) definition of rural non-farm economy (RNFE) elaborates on the concept by defining it as "all non-agricultural activities which generate income to rural households" (p. 7). He suggests, and rightly so, that RNFE is often more important to the rural sector than agriculture since it provides alternative opportunities that reduce vulnerabilities present in the dependence on the agriculture sector, thus being an essential part of the livelihood strategies in the rural sector. Haggblade et. al. (2002) add to this by suggesting that apart from being clever LS, RNFE is a necessary aspect of "agriculture's structural transformation" and without its presence or dynamics, the agriculture sector would fail to upgrade its production capacity (p. 32). They suggest that as the GDP in the agricultural sector grows, the share of investment in the agriculture should decline with progressive economic development and as non-agricultural demand rises, investments are transferred in RNFE, thus reducing the labor and capital invested in agriculture and allowing it to return to economies of scale (ibid.).

While they also place an importance on RNFE as a critical factor in the rural context, Hussein & Nelson (1998) introduce the concept of "deagrarinization" as push factor for the shifting out of labor and resources from on-farm activities into RNFE and migration as the pull factor for causing rural sector activities to shift towards off-farm work (p. 17). Unlike Davis and Haggblade et. al., they suggest that the transformation to RNFE is a risk minimizing strategy arising from seasonality in that as income opportunities arise in RNFE during non-harvest seasons, households prefer to invest more and more labor and capital into RNFE. With the gains from this sector being perceived as lucrative, they devote less time and resources into agriculture even when the harvest season arrives. Dorward et. al. (2009) further this concept by suggesting that households eventually make a "permanent shift" into the off-farm activities as the household realizes how RNFE provides higher returns. Figure 3 below summarizes these push and pull factors: -

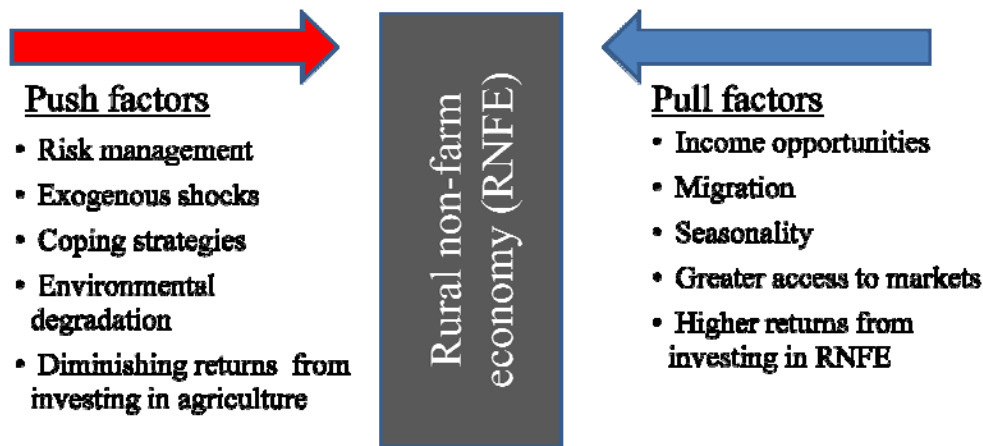


Figure 3: Push and pull factors influencing shift to Rural Non-farm Economy (RNFE)

In the context of Sustainable Livelihoods (SL), RNFE provides the motivation behind not only employing various livelihood strategies but also diversifying them. In combining on-farm and off-farm activities, households effectively maximize the returns they get from each sector. But as we've discussed, the profitability of RNFE eventually causes households to strategize in a manner that less resources are invested into agricultural activities and more into RNFE. This branching out of existing resources is referred to as Livelihood Diversification (LD) and is the next topic of discussion.

3.2. RATIONALE FOR LIVELIHOOD DIVERSIFICATION

It is a natural and necessary behavior for rural households to diversify their sources of income, whether it is by investing their existing assets in multiple ventures or seeking employment in various activities. Though the motives for diversification may vary from household to household, the basic rationale is primarily to accumulate assets, reduce financial risk, maintain financial liquidity and secure a consistent flow of income in response to seasonal changes and other shocks (Ellis, 1998; Unni, 1998). In a rural context, these changes are usually more recurrent and households shift between different livelihoods as seasons change. The changes are not only limited to harvest cycles or weather patterns but also to demand variations. As a necessary response, households employ the strategy to invest assets (physical, human/labor and intangible) into various income-generating activities. But as I will discuss below, livelihood diversification is not limited to generating income and is in fact distinct from income diversification. Reardon et. al. (1992) equate income diversification with livelihood diversification by relating household's economic activities through household income levels and distribution and the consequence on its future investment and consumption decisions. Ellis (1999), on the other hand, contends that the definition goes beyond such simplifications, suggesting that livelihoods have a very strong and important social context which effectively biases benefits of income flows towards households with improved asset combinations. Lipton (1996) shares a similar belief and provides the example of state-sponsored social and public services to suggest that provision of these services tends to favor households with higher

human, social and physical capitals, not just financial. These contentions clearly indicate that the definition of diversification is wide-ranged and must be well-established for each context.

Ellis (1997) defines Livelihood Diversification as “the process by which rural households construct a diverse portfolio of activities and social support capabilities in their struggle for survival and in order to improve their standards of living through accumulation of assets” (p. 5), while Hussein & Nelson (1998) describe it in terms of what households can achieve through LD given “the degree of freedom of choice (to diversify or not) and the reversibility of outcome⁴” (p. 3).

For our model, we use a more functional definition in that we look at it in terms of what it seeks to achieve (risk prevention, asset accumulation, etc.) and how it achieves these objectives (combination of on-farm and off-farm activities given existing assets, i.e. livelihood strategies). These form the basis of three central themes that describe the motivations and consequences of LD and have been discussed below.

3.2.1. ASSET ACCUMULATION VS. SURVIVAL STRATEGY

In all our discussions on households and livelihoods, we have referred to households as a “single decision-making unit” seeking to maximize its welfare by making coordinated decisions over resource allocation and income pooling given a set of resource constraints and institutional factors (Ellis 2000: 34). Quite naturally, however, households must make decisions and employ livelihood strategies much differently given what those constraints are. We have already established that the objective of LD by a household is to increase its asset holdings. But in the absence of adequate assets for the household to form adequate livelihood strategies or maintain a substantial level of income and consumption (i.e. households that within poverty levels), existing material capitals at the family’s disposal are often utilized just to ensure a minimum level of consumption and income (Hossein & Nelson 1998). For instance, in their study on Sahel in West Africa, Barrett et. al. (2001) found that the notion of subsistence farming had been generally misconstrued. While farmers pursued agricultural activities solely for consumption, they were also engaging in non-farm activities and these were found to contribute at least 40-45% of the household’s income (p.316). This suggests that African households were not necessarily employing survival strategies but simply diversifying assets investments to maintain consumption levels.

Another important aspect of LD is that prevalence of its behavior in a certain contexts may not necessarily be a good sign. According to Bernstein et. al. (1992), it was found that in continuing state of agrarian crisis and economic or political instability, “farmer’s propensity to invest in [their] extended social networks” increased substantially as they

⁴ Reversibility of outcomes here refers to whether households can easily alter livelihood strategies given the outcome is not desirable. This is especially important in the rural context because if an attempt at reinvesting assets in a potentially lucrative non-farm activity from an agrarian activity fails, assets should not be lost (Hussein & Nelson 1998).

desperately sought ways of reacquiring production capabilities (p.132). As a result, most began to shift out of agriculture not because of an agricultural transformation but out of survival needs. Capitals were altered or foregone and livelihood strategies adjusted in response to the shock and while asset accumulation was maintained as a constant pursuit, LD was also shown to have been increased but as a survival strategy.

These two examples illustrate that the true motivations and objectives of LD are not always clear-cut. Although asset accumulation is the ultimate objective of LS, we can conclude that LD, in varying contexts, is pursued either to generate a stable flow of income to ultimately contribute to capital increases or to allow the household to simply maintain the flow even if it is weak.

3.2.2. RISK MANAGEMENT VS. COPING/ADAPTATION

Another important and fairly obvious motivation for LD is risk management. Due to ever-existing vulnerabilities toward livelihoods, households often opt not to rely on a primary activity and work at various income-generating activities either part-time or get household members to specialize in different types of skills (Hussein & Nelson 1998). However, much like the polarity between asset accumulation and survival strategies, in certain circumstances, households may not be managing risk but coping in the presence of an unfavorable environment. As Ellis (1999:13) describes the difference, risk management is the “deliberate household strategy” taken in anticipation of income failures in either one of the livelihood activities the household has maintained a spread over. Coping, on the other hand, is the “involuntary response to disaster” or a sudden crisis that by employing survival strategies described in previous subsection. Bernstein et. al. (1992) elaborate on the distinction by suggesting that risk management can be interpreted as “ex-ante income management” or strategically avoiding potential risks before they happen, while coping is “ex-post consumption management” in the wake of a crisis and the only remaining strategy is to maintain consumption (p. 121).

While the concepts of risk management and coping are similar to asset accumulation and survival, there are important differences and implications for LD. Firstly, risk management refers to a strategy employed to counter possible failures while asset accumulation is an ultimate end in itself. Secondly, coping strategies refer to drastic measures taken to ensure that future survival of households is maintained in lieu of the recent shock; selling or abandoning of critical assets is only taken as a last measure to prevent starvation. On the other hand, survival is simply a readjustment of livelihood strategies and shifts in LD behavior to maintain a minimum degree of current consumption and income. Thus, both concepts indicate motivations for similar behaviors but refer to entirely different methods of pursuing livelihood strategies (Ellis 2000; Hussein & Nelson 1998).

Another important concept related to coping is livelihood adaptation. According to Davies’ (1996:5) definition, livelihood adaptation is the “continuous process of changes to livelihoods which either enhance existing security and wealth or try to reduce vulnerability and poverty”. Adaptation is effectively the experiences gained and capitals accumulated through employing diversified LS. While it is generally positive in that it reduces vulnerability, in

circumstances when households adapt to conditions out of necessity and are forced to, for instance, sell assets, it may be negative (ibid.). It is thus very closely linked to coping with a few subtle but important differences.

3.2.3. LIVELIHOOD DIVERSIFICATION AND SEASONALITY

In the previous sections, we have referred to diversification in conjunction with livelihood strategies. The pursuit of achieving livelihood outcomes through a range and combination of activities and household decisions is referred to as Livelihood Strategies (LS) (DFID 1999). In this regard, LD is effectively LS; through ensuring multiple livelihood opportunities and a diversification of assets into numerous activities, a household ensures that its livelihood outcomes will be achieved. Furthermore, in the rural context, one of the principal concerns for households is income stability and consumption and through ensuring a combination of on-farm and off-farm activities, households reduce vulnerabilities the vulnerabilities that they face.

With regards to seasonal variations, however, the issue is slightly more complex. In the lexicon of LS, as shown by the SLF diagram in Figure 2, seasonality constitutes a central part of LS as households base their activities around seasonal changes. In harvest seasons, agricultural activity increases and off-farm labor shifts its priorities to farming (particularly in the case of Guatemala's rural sector). Additionally, several markets become more lucrative and depending on where the income tends to be higher, the rural sector sees a greater shift to the relevant RNFE. In terms of LD, this is a central motivation for households to diversify assets but in a dynamic yet consistent manner throughout the year.

4. METHODS

Now that we have discussed the theory and rationale behind livelihood diversification, let us now establish the methodology for our particular study. It becomes clear that the motivations for LD are broad-ranged and context-specific. The purpose of this research is therefore to explore the theories of LD established in the previous sections to a selected segment of the weaver households in Guatemala to see what the impetus for LD in their context is.

We first draw out the design of the research by discussing how the research was conducted and what the overarching inspiration behind the study is. This will be followed by sampling strategies and reasoning

4.1. RESEARCH AIMS

The previous sections were presented to provide the importance of LD behavior in the rural context, but particularly in weaver households where it played such a central role. In order to apply the theory to the actual context, however, this study was constructed as a condensed and trial version of the larger theoretical framework. The principle of the LD theory were placed in the weaver household context and tested based on theoretical implications. In order to achieve this, the questions given in the "Introduction" were attempted to be answered using the following strategies.

4.1.1. ACCUMULATION OF THE 5 CAPITALS AND IMPLICATIONS FOR LD

Asset accumulation is central to the LD debate and in order to capture it, substantial background research on the theory was conducted. The aim was to see what assets were relevant to weaver household realities and, using pre-designed interviews with mainly quantitative measures, the asset holdings that a household possessed were constructed based on the 5 capitals in SLF's model. These were then compared with livelihood diversification indicators (also constructed quantitatively) and, in light of socio-economic realities captured through the second part of the study (detailed in the subsequent section), analyzed to get an idea of whether households were employing risk management or coping strategies, whether assets were being accumulated as a consequence of LD and, conversely, how LD, as a livelihood strategy, was influencing assets.

4.1.2. SOCIO-ECONOMIC FACTORS AND VULNERABILITIES

Since understanding the context is imperative for livelihood systems and any study involving it, it was captured through this second aspect of the study. Socio-economic realities were understood through a combination of participant observations and open-ended interviews with weavers, brokers and artisan NGOs. The purpose was to:

- (a) get an idea of the vulnerabilities faced by weaver households,
- (b) provide an overview of the social linkages between weavers and other actors in the market, including other weavers in the community as well as household dynamics
- (c) give a rationale for the construction of asset indices and its relevant indicators, and
- (d) substantiate/support findings

4.2. SAMPLING

The central idea behind the research was to take the several theories on LD and test them in the field using context-specific and measurable indicators. But because of the breadth of such an endeavor, only a small sample was selected and the indicators used were thus not all-encompassing and only provided an indication for asset calculations. Although random sampling would have been ideal, as I found out, this is not always practical. Participants are often unavailable and I had to rely on my field guide to take me to households, in addition to being my translator for participants who couldn't speak Spanish. Thus, the sampling used was "stratified random sampling" contingent on respondent availability (Bryman 2004:83). This simply means trying to have equal number of interviews from different communities and relying on my field guide to take me to the ones he knows would be home. The advantage of this strategy was that my time was significantly saved, especially for distant communities. Unfortunately, it also limited the number of households I could visit and interview. Though I had intended for a larger sample, my eventual sample size came out to 36 respondents with a reasonably representative portion taken from each of the 8 communities interviewed as Table 1 below shows. And, as mentioned in 'Research Aims', a large and random sample size would

have been ideal since the research sought to capture correlations, descriptive statistics and mean comparisons to establish relationships and patterns for data analysis. But because of limited time and resources, I had to adjust my research accordingly (discussed later).

		Community			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Panjornal	7	19.4	19.4	19.4
	Chiquim	4	11.1	11.1	30.6
	Rio Bravo	5	13.9	13.9	44.4
	Wuaxpac	4	11.1	11.1	55.6
	Panimaquito	4	11.1	11.1	66.7
	Monjas	4	11.1	11.1	77.8
	Durazno	4	11.1	11.1	88.9
	Eben-Ezer	4	11.1	11.1	100.0
	Total	36	100.0	100.0	

Table 1: Sample distribution – community

Figure 5 below shows the regions in which research was done (highlighted in yellow). As shown, the fact that the communities were more or less within the same region made environmental and context-specifications fairly uniform.

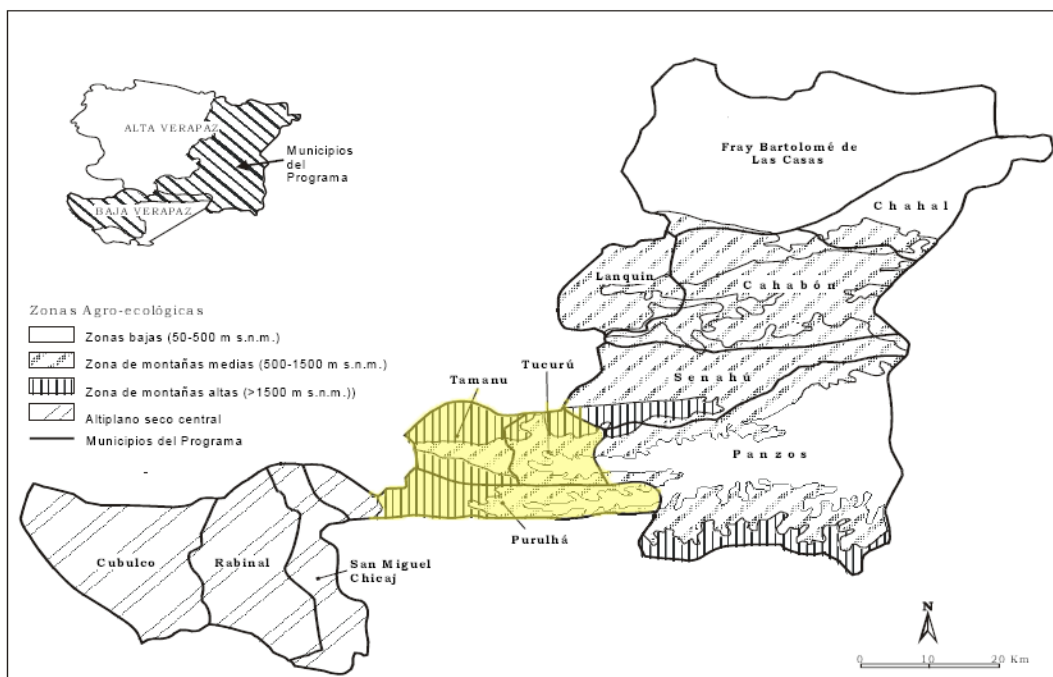
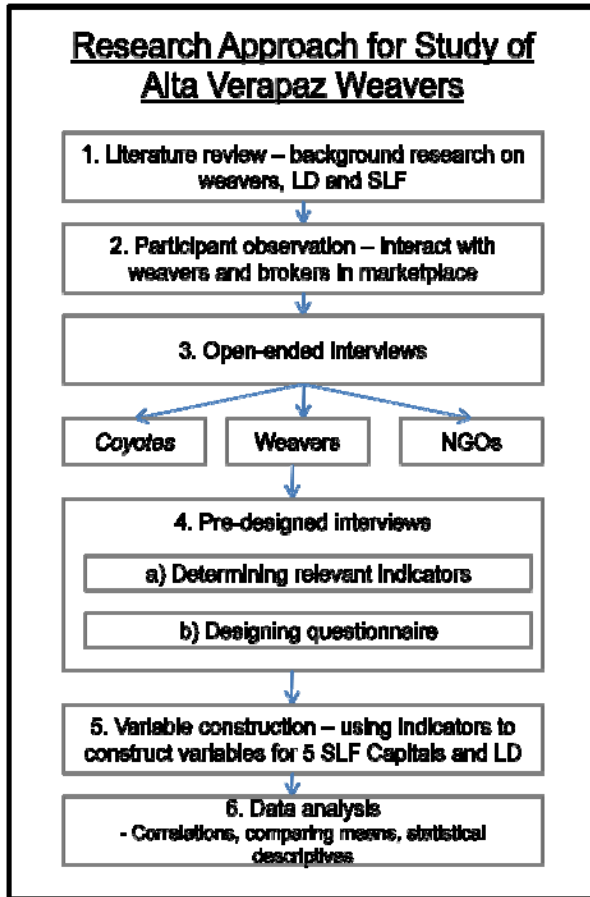


Figure 5: Map of research areas in Alta Verapaz (Source: IFAD 2004:4)

4.3. DATA COLLECTION METHODOLOGY AND ANALYSIS



This model has primarily been created based on the logic provided by Bryman (2004), Creswell (2007) and Mikkelsen (2005). To achieve any contextual understanding of the reality, one must forego one's own notions of the social world and understand it as it exists within the people and their institutions. Thus, I resorted to conducting participant observations initially after going through relevant literature and data sources. The idea was that in order to structure my research topic and questionnaires more concretely, I needed to understand what existed in reality and formulate some type of a grounded theory. Silverman (2005) suggests this notion as well, i.e. to conduct participatory observations at the initiation of the research.

Thus, the methodology used for this research can best be described as a mixed method cross-sectional assessment (i.e. using quantitative and qualitative approaches collectively to examine livelihood strategies of households – with a focus on a specific livelihood strategy, i.e. weaving – at a period of time

and studying the various aspects that influence these strategies). Mixed methods are generally used when a transformative/concurrent knowledge is sought, i.e. information that can neither be quantified without having obvious subjective drawbacks, nor qualified without overlooking essential quantitative mechanisms that are essential to the context. Additionally, since it relies on both qualitative and quantitative approaches and at various and appropriate intervals of inquiry (Creswell, 2007; Bryman, 2004), mixed methods is without a doubt the best approach⁵ for understanding SLF-related components and gather relevant and meaningful information that can describe LD behavior.

Another reason for using mixed methods for my particular study is that, as I learnt from participatory observations, livelihoods is a very constructionist concept in nature and changes not only from context-to-context but also household-to-household (Bryman 2004). The strength of the SL framework is that it captures the quantifiable portion of what constitutes the source of a household's livelihood: its assets. Where these are quantified, what remains is finding correlations and statistical patterns between LD and assets (which is what my study does) and identifying the

⁵ Put simply, the qualitative aspect of the research seeks to ascertain the variables and the theory to be examined while the quantitative portion will measure dependent and independent variables as cross-sectional data.

business, institutional, economic and social environment (macro- and micro-) in which households design and run their livelihood strategies.

4.3.1. BRIDGING THE QUALITATIVE AND QUANTITATIVE DIVIDE

Since I will be capturing several variables that indicate the nature of 5 critical assets, my research design can best be described as a cross-sectional study, i.e. examining variables within the sample of households over a single period of time and creating “patterns of association” to see which assets best indicate LD, i.e. analyzing how different asset combinations affect the households’ expenses, livelihood diversification and so forth (Bryman, 2004:42).

Perhaps the most important aspect of the research is the nature in which qualitative and quantitative aspects have been divided (although in the research itself, they will be used together). Quite simply, the reasons for the division are:

-

- A. Qualitative research may facilitate the interpretation of relationship between variables. Quantitative research readily allows the researcher to establish relationships among variables, but it is often weak when it comes to exploring the reasons for those relationships. A qualitative study can be used to help explain the factors underlying the broad relationships that are established.
- B. Relationship between macro and micro levels. Using both quantitative and qualitative research provides a means of bridging the macro-micro gulf. Quantitative research can often tap large scale, behavioural aspects. When research seeks to explore both levels, integrating quantitative and qualitative research may be necessary.

As discussed in the ‘Research Design’ section, the indicators that I will be using to assess changes in livelihoods will primarily be quantitative variables, yet obtained in very qualitative manners. For example, in order to capture changes to Financial Capital, households traditionally don’t have accounting records of their expenses and so, there is no objective information that one can use to assess this change. Unfortunately, the only alternative (given the brief period of time in which this research has been conducted) is to capture the participants’ Likert-scale responses such as “To what extent do you agree or disagree with this statement: Since starting the artisanal business, my income and savings have improved”. On that premise, specific quantitative information was obtained through a pre-designed interview (Appendix XXX), such as asset information, group categorization (e.g. assessing changes across communities, ethnicities, etc.), changes in income and so forth. The other portion of the interview was on perceptions of livelihoods and constituted more open-ended qualitative interviews seeking a more epistemological understanding of livelihood changes. Table 2 below summarizes the indicators used to indicate/measure each capital and the nature of each of those variables.

Asset	Relevant Indicators	Description
Human capital	- Education level of all household members	Taken as a sum of highest grade graduated from for each member
	- Training received in weaving, accounting, savings or social themes	Binary question complemented with number of workshops
	- Existing health issues	Likert-scale
	- Perception on food intake	Likert-scale
Social capital	- Membership in social/communal group	Binary questions on 4 different social group options
	- Perception on decision-making capability, financial and social	Likert-scale
	- Group confidence and participation perception	Likert-scale
	- Level of trust with group, perception within group	Likert-scale
Natural Capital	- Land holdings	Scaled
	- Cultivation, type and size	Ordinal question complemented with scale
	- Livestock, variety and size	Ordinal question complemented with scale
	- Natural capital accumulation	Likert-scale
Physical Capital	- Shelter: quality, ownership status and size	Ordinal question complemented with scale
	- Electricity	Binary
	- Water access	Ordinal
	- Distance from asphalt road	Scaled
	- Physical capital accumulation	Likert-scale
Financial Capital	- Income level of all household members	Taken as a sum of income levels (represented ordinally) of all working household members
	- Savings amount	Binary with scaled for existing amount
	- Access to financial capital	Ordinal
	- Financial capital accumulation	Likert-scale

Table 2: Relevant indicators for each of the 5 Capitals

Since the SL framework necessitates the identification of institutions, structures and procedures under which livelihoods are pursued, it is natural that the interview must capture this. Unfortunately, since it is a very broad and complex need and can't possibly be met by an interview (let alone several research strategies), I have had to limit this to institutional norms pertaining to the weaving trade and institutions relevant to it, qualitative responses given by households, brokers and NGO leaders on their perceptions, understanding and knowledge of this market and how it affects them in terms of desirable outcomes⁶.

⁶ In the SL framework, livelihood strategies are employed by households to achieve certain outcomes. Though the framework has a list of its own, part of the reason for the qualitative portion of the interviews is to ask open-ended questions in which households identify their own specific, desirable outcomes. This will generate a better idea of what households seeks to achieve through LD.

QUANTITATIVE COMPONENT

The quantitative component of the research will seek to identify relationships between several variables to answer the two essential questions (as well as the other five derived from Figure 2). To carry out the research, data has been collected using specific questionnaires (see Annex I), then categorized/arranged appropriately to conduct comparisons, make statistical inferences and find correlations (index construction has been provided in Appendix XXX). Variable descriptions are also provided in the Appendix and summarized in Table 2.

COMPARISONS AND STATISTICAL INFERENCES

SPSS will be used to compile and analyze data. The aim is to find patterns in variables using comparisons of means, descriptive statistics, correlations and frequency tables.

4.4. RELIABILITY, VALIDITY AND LIMITATIONS OF THE STUDY

Based on the fact that this study was conducted with large time and resource constraints as well as a limited access to households, there are several issues of reliability in the study that need to be mentioned.

- **Small sample size:** Even though this study relies on a lot of quantitative information, a sample size of 36 is too small to make any qualified analysis. However, the emphasis is on how indices are constructed, what correlations they represent and so, statistical significance will not be considered. Instead, the emphasis is placed on subjective significance and implications gleaned from the presented data.
- **Issues of translation:** The researcher had to master Spanish once he arrived in Guatemala. Unfortunately, the Mayan weavers that were interviewed almost exclusively spoke their indigenous languages and in translating from the Mayan language to Spanish to English, a lot of qualitative relevance from the information may have been lost. To counter for these problems, post-interview discussion were often conducted at the end of the interviews with translators to ensure that as much of the original expression as possible could be captured.
- **Sampling issues:** Given my limited resources and time constraints, reliance on translators/field guides was essential. Thus, true random sampling could not be ensured. However, the remedy to this problem was taken in the form of establishing contacts with a variety of weaving NGOs to diversify community access, thus making the sample as representative as possible.
- **Biased responses:** During the interviews, women were often prompted by other respondents in the same room (in cases where weavers could only be accessed during group meetings). While I tried to correct for the bias using my own intuition or at times asking if the interviews could be conducted in privacy, these biases were inevitable.

- **Inability to answer**: In many cases when respondents were unwilling or unable to respond to questions, particularly on perceptions, various approaches were needed in asking the questions to extract the necessary response such as asking the question differently or asking other household members the questions.

4.5. ETHICAL CONSIDERATIONS

Even though rural communities in Guatemala are not very conservative and foreigners are especially looked upon with affinity, there were several precautions I had to take as a researcher to ensure respondents felt at ease during interviews. Firstly, each respondent was asked before interviews if she was free and had the time to answer the questions. I was always accompanied with a field guide who, being an employee at the participating NGO, was known to the people and could ensure her comfort.

In a few cases where questions on husbands were asked, some women refused to answer due to grievances, particularly in cases where husbands had abandoned the household. In these cases, a polite apology was given (field guides would ensure the apology was gotten across) and care was taken in avoiding any related questions. And finally, at the end of each interview, respondents were asked if they had any questions and comments.

5. FINDINGS AND ANALYSIS

Based on the questions laid out by the “Research Design” section, this chapter presents the findings and analysis of the research.

5.1. ACCUMULATION OF THE 5 CAPITALS AND IMPLICATIONS FOR LIVELIHOOD DIVERSIFICATION

5.1.1. CIRCUMSTANCES OF HIGHER CAPITALS – COMMUNITY AND ETHNICITY

In order to isolate the effects of community and ethnicity biases in capital strengths, a mean comparison of each of the 5 capital indices was done with community and ethnicity variables. The results have been summarized below.

Mean Comparisons - Communities vs. Capital indices and Livelihood diversification

Community		Liv_div_hh	HC_index_scaled	SC_index_scaled	NC_index_scaled	PC_index_scaled	FC_index_scaled
Panjornal	Mean	3.5714	.422159	.519497	.230909	.372990	.646752
	N	7	7	7	7	7	7
	Std. Deviation	1.71825	.2072840	.3194187	.2256893	.1653052	.2335945
Chiquim	Mean	3.5000	.351820	.242377	.310197	.154751	.507411
	N	4	4	4	4	4	4
	Std. Deviation	2.51661	.2153883	.1791476	.1489880	.0643655	.1491239
Rio Bravo	Mean	2.8000	.401405	.575771	.419819	.400588	.675047
	N	5	5	5	5	5	5
	Std. Deviation	1.48324	.2729078	.1819302	.1974072	.1789551	.2115335
Wuaxpac	Mean	2.5000	.672987	.591873	.387603	.909975	.653310
	N	4	4	4	4	4	4
	Std. Deviation	1.73205	.3169856	.1122753	.0477571	.0604207	.3402046
Panimaquito	Mean	1.7500	.585372	.442224	.306785	.611423	.415944
	N	4	4	4	4	4	4
	Std. Deviation	.95743	.1820585	.2776682	.2210820	.0225544	.3737435
Monjas	Mean	1.0000	.517808	.552093	.209457	.271384	.286761
	N	4	4	4	4	4	4
	Std. Deviation	1.41421	.3858624	.2590186	.2152589	.2882042	.3110156
Durazno	Mean	2.7500	.499036	.637313	.612582	.659263	.379050
	N	4	4	4	4	4	4
	Std. Deviation	.50000	.2708463	.4454758	.2931204	.1372137	.1100069
Eben-Ezer	Mean	3.2500	.705381	.574824	.507854	.669828	.765244
	N	4	4	4	4	4	4
	Std. Deviation	1.70783	.3190281	.2630509	.3933331	.1829132	.1817999
Total	Mean	2.7222	.508104	.518838	.362594	.492232	.553705
	N	36	36	36	36	36	36
	Std. Deviation	1.66667	.2706173	.2701333	.2469437	.2676785	.2730496

While there are no substantial differences between capital holdings in households across communities, there are some interesting patterns. Firstly, LD is found to be highest in Chiquim, Panjornal and Eben-Ezer but once the capital combinations are considered and in light of the LD theory discussed in previous section, LD motivations are entirely different. Now while capitals are relatively higher in the latter two, Chiquim is found to have generally lower capitals. Thus, it can be argued that households in Chiquim have been employing survival strategies to maintain a certain degree of income stream (represented by the comparatively higher Financial Capital index). In Eben-Ezer, however, the prevalence of relatively higher capitals coupled with high LD implies that asset accumulation has been the dominant strategy. It is also interesting to note that Human Capital and Financial Capital indices in the community are also relatively the highest, suggesting that these capitals play a substantially more important role in determining higher and positive LD behavior. Proof of this hypothesis is given by the communities such as Wuaxpac and Rio Bravo where higher HC and FC are accompanied by higher LD values. The only interesting exception is Durazno but as shown, lower HC and FC values are compensated for by other larger capitals.

Mean Comparison - Ethnicity vs. Livelihood diversification and Capital indices

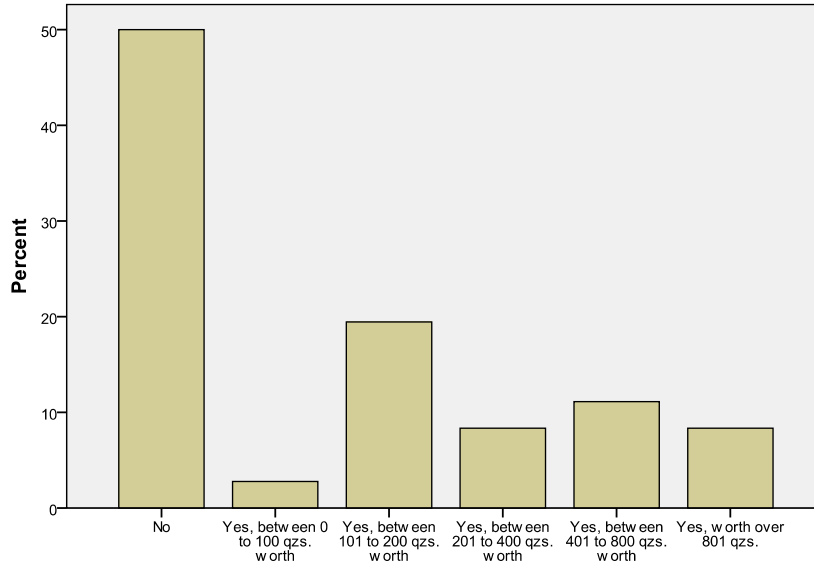
Ethnicity		Liv_div_hh	HC_index_scaled	SC_index_scaled	NC_index_scaled	PC_index_scaled	FC_index_scaled
Pokomchi	Mean	3.0833	.460730	.516733	.373208	.479576	.585899
	N	24	24	24	24	24	24
	Std. Deviation	1.61290	.2534924	.2853919	.2275771	.2777864	.2318399
Kekchi	Mean	1.8182	.580418	.512399	.324252	.480756	.482280
	N	11	11	11	11	11	11
	Std. Deviation	1.53741	.2927798	.2579572	.2993950	.2329853	.3594520
Ladino	Mean	4.0000	.849644	.640177	.529605	.922227	.566713
	N	1	1	1	1	1	1
	Std. Deviation
Total	Mean	2.7222	.508104	.518838	.362594	.492232	.553705
	N	36	36	36	36	36	36
	Std. Deviation	1.66667	.2706173	.2701333	.2469437	.2676785	.2730496

When comparing ethnicities, however, it is more difficult to make any valid analysis for the simple reason that the sample represents a Pokomchi majority and only one Ladina. Nonetheless, it has been socially known that Ladinos, as a white-Hispanic ethnicity, are generally wealthier for reasons discussed in the “background” section. Interestingly though, as the figures suggest LD is higher for Pokomchis than the Kekchis even though their asset holdings are relatively the same. This has important implications for the relationship between LS employed by these two ethnicities in that one could suggest that the Kekchi are more prone to focus on lesser types of LS to maintain a consumption and income levels. However, the answer for this deviation lies in the way that the LD index is constructed (see Appendix XXX). LD as created in our study represents number of household members employed and the range of activities they are involved in. In Kekchi communities, as observed in the field, women weavers tended to specialize more on weaving than other activities while Pokomchis diversified more. Consequently, employing different strategies and time in each one of these, the women of both ethnicities were able to maintain a similar asset level.

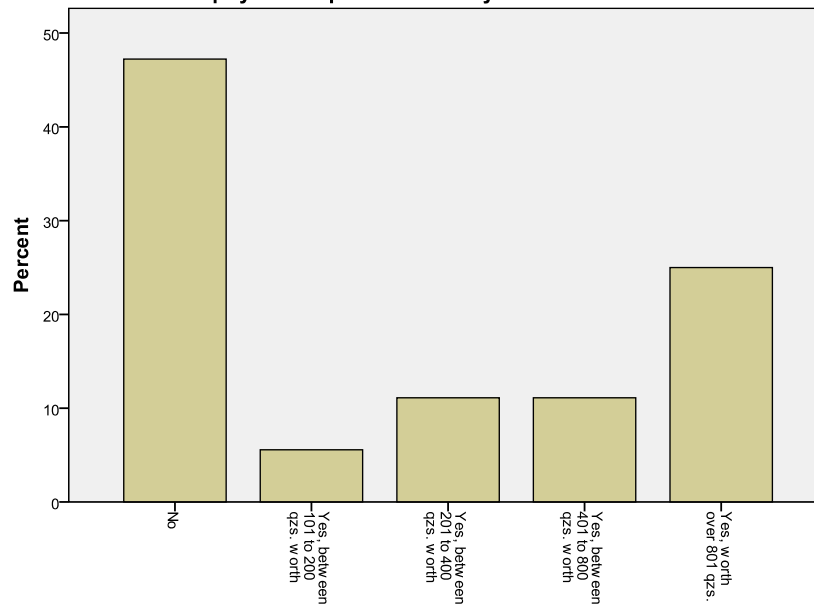
5.1.2. ACCUMULATED CAPITALS IN THE PAST

The purpose of this part of the study was to see whether capitals had improved as a consequence of livelihood diversification. As the results below show, capitals were generally not accumulated, implying that weaving households in the sample were simply maintaining a steady consumption and income level and not achieving the ultimate objective of LD: capital accumulation.

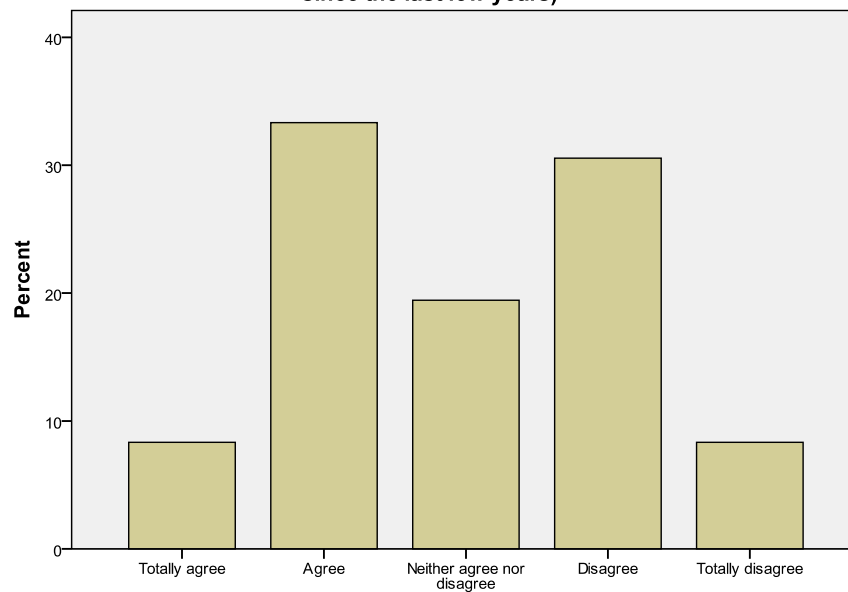
Since the last few years (or initiation of artisanal activity), have you purchased/rented additional natural resources?



Since the last few years (or initiation of artisanal activity), have you made any physical improvements to your house?



My income has substantially changed since commencing the artisanal activity (or since the last few years)



While one may point out that it is worth investigating the rare cases where capitals did increase, it was found that these increases were mostly found in the communities of Eben-Ezer and not because of LD but because there had been various NGOs working in the community providing support for purchasing farmlands and improving shelters (Community-specific figures have not been shown). This is depicted by the minute 20% in NC increase, with households saying they had seen an investment of 100-200 quitzales in natural capital, which can generally only fund a *cuerda* (half-acre) of farmland. Thus, we can conclude that capitals have not increased as a consequence of LD.

5.1.3. CORRELATION BETWEEN LIVELIHOOD DIVERSIFICATION AND ASSETS

Correlations

		Liv_div_hh	HC_index_scaled	SC_index_scaled	NC_index_scaled	PC_index_scaled	FC_index_scaled
Liv_div_hh	Pearson Correlation	1	.136	-.180	.127	-.111	.236
	Sig. (2-tailed)		.429	.292	.461	.521	.166
	N	36	36	36	36	36	36
HC_index_scaled	Pearson Correlation	.136	1	.364*	.326	.414*	.351*
	Sig. (2-tailed)	.429		.029	.052	.012	.036
	N	36	36	36	36	36	36
SC_index_scaled	Pearson Correlation	-.180	.364*	1	.280	.332*	.280
	Sig. (2-tailed)	.292	.029		.098	.048	.098
	N	36	36	36	36	36	36
NC_index_scaled	Pearson Correlation	.127	.326	.280	1	.276	.195
	Sig. (2-tailed)	.461	.052	.098		.103	.256
	N	36	36	36	36	36	36
PC_index_scaled	Pearson Correlation	-.111	.414*	.332*	.276	1	.033
	Sig. (2-tailed)	.521	.012	.048	.103		.848
	N	36	36	36	36	36	36
FC_index_scaled	Pearson Correlation	.236	.351*	.280	.195	.033	1
	Sig. (2-tailed)	.166	.036	.098	.256	.848	
	N	36	36	36	36	36	36

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations between capital indices and LD suggest what assets cause the household to employ diversification behavior⁷. For instance, LD is associated positively with human, financial and natural and negatively with social and physical capitals. There are various implications for this but these are speculative at best. Firstly, notice that social and physical capitals are significantly and positively correlated either because (a) households with higher social and human capitals generally have more improved infrastructure or (b) there are inherent problems in the way that the indices have been constructed. While we have already admitted to the latter in the Limitations section previously, let us proceed with the first assumption. Then, the implication for negative correlation with LD is that households with

⁷ It must be pointed out that while statistical significance is important, as mentioned in the Methodology, due to the nature of our study and small sample, significance will not be taken into account as being representative of the data. Instead, subjective significance is given importance here, i.e. the manner in which these representative indices have been created.

already high social capitals don't diversify because while theoretically, SC should be positively correlated with LD because households will generally try and capitalize on their networks to expand LS, in the case of weaver households, increased trust and network strength provides households with sufficient resources and reliance of weaving to the extent that they don't feel the need to diversify. Also, as LD is related positively to HC, NC and FC, we can further conclude that weaving households with higher capacities, access to natural resources (i.e. farmland and livestock) and financial capital diversify as a risk management strategy to minimize failures of artisanship.

5.2. SOCIO-ECONOMIC FACTORS AND VULNERABILITIES

5.2.1. MARKET VULNERABILITIES AND LINKAGES

Earlier in the second chapter, we elaborated on the structure of the weaving market and its problems. Carrying the discussion forward, the following are some important findings based on the qualitative aspects of the study.

- **Access to lucrative markets and worsening market trends:** As mentioned earlier, essentially there are 3 market channels where products can be sold: the local market for traditional clothing such as *güipiles* (traditional clothing) and *cruches* (blouses), the market for tourist products and foreign markets where products can be exported. While the export market tends to be the lucrative outlet for artisans, none of the participants in the study claimed to have access to them. According to the study, the most common outlet for selling products was to local buyers, specifically intermediaries, and diversification of production was almost non-existent with the two products mentioned above being the only products made. Exporting products, on the other hand, was a concept which neither the artisans nor intermediaries/NGOs had been ever had been exposed to. Thus, due to this increasing saturation, prices had fallen substantially and LD was increasing generally because households were no longer able to maintain basic consumption and income patterns.
- **Dependency on artisan-brokers:** There are two sides of the case of artisans. While we have established the complex but important relationship shared between these weavers and *coyotes*, in terms of LD, brokers have been dubbed the only reason weavers maintain a constant stream of income. According to the participating artisans and the intermediaries, demand for their products in the local market tends to decline in March-April and is higher from November through January. Although lack of orders⁸ and low prices was an oft-repeated complaint against the market, intermediaries always had orders or were buying from the artisans on a monthly basis (or less; the number of times products were bought varied from community to community). Thus, brokers reduced vulnerabilities. At the same time, however, this strong dependency, which NGOs

⁸ The phrase used was '*falta del mercado*', literally meaning 'lack of market' implying there are no places where neither weavers nor intermediaries can find willing customers.

working in the sector either wished to eliminate or ignore, reduces the potential benefits weavers can accrue if they diversified their production.

- **Trust within the market and consequent low LD:** One of the most interesting observations in the field was that horizontal (among the weavers within communities) as well as vertical (across communities and with brokers) trust was pleasantly strong. Weavers interviewed in the study often quoted how credit on looms and threads was easily given by members within the community. As shown by the quantitative findings in section 5.1.3 above, LD and SC were, contrary to the theoretical assumption, found to be negatively correlated and the reason for this can be understood once we realize how higher trust contributes to lesser reliance on alternative means of livelihoods and capitalizing on existing trust and contacts that help them acquire resources so fluidly, LD is not a very necessary strategy.

5.2.2. MAYAN WEAVERS' TRADITIONS ON LIVELIHOOD DIVERSIFICATION

Box 1: The story of Roberta

As a member of the ACDIJ artisans group, Roberta learned to weave about two years ago when, as she puts it, "a trainer from a village in another province came to Eben-Ezer to teach us how to weave". Inspired by the various designs that reminded her of her "Mayan ancestors", Roberta learned to weave but was never satisfied with making only 4 *cruches* (blouses) or 8 table-centers or 2 *güipiles* in a month. As a 25-year-old mother of two, Roberta worked on her small farm of 4 *cuerdas* (half acre) planting *milpa* (corn), took care of her children, participated in the weekly community meetings, saved the weekly 10 quitzales into the group's newly-introduced savings initiative and spent 8 hours of her night working on the loom. She only slept for 5-6 hours and returned to weaving during the day, after which she cooked, sent her kids to school, planted *milpa*, returned to weaving and went to the group meetings. When I asked her about weekends or holidays, she laughed at me and I actually felt, well, stupid for asking the question.

Roberta claims that her passion for weaving relates to her Mayan ancestry and that as a child, she knew women who weaved but she never learned it because none of her family members knew how. But when ACDIJ approached their existing INGO-supported community center, she was more than excited to join. With the money that she has accumulated, Roberta has bought twelve *cuerdas* for *milpa* and is now also growing coffee. (Source: author)

In the Mayan tradition, the family is looked upon as a single unit with each member playing specific assigned roles. The daily life of the household revolves around predetermined livelihood activities that each member pursues, whether it is child-rearing, cooking, farming, learning or teaching. This functional division of labor within the households makes every member an essential part of the unit and allows the household to be more progressive. In weaving households, daughters are taught the handicraft trade from a very young age and once they have completed their basic education at schools (which, though not common in the past, is now slowly becoming a trend), they join their mother in the weaving activities and allocate several hours of their day working on back-strap looms. Thus, roles adapt according to gender and age, and the notion of multi-tasking and time allocation is encouraged in every member. The only exception to these fixed time allocations, however, occurs during seasonal changes. Regardless of whether the

household possesses any farmland, at the change of seasons, households changed their activities entirely to match agricultural and market demands. It was observed that in the times of harvest, specifically March and April, weaving households either reduce the hours allocated on weaving or completely forfeit the activity to go work on their farmlands or distant plantations as day laborers. Additionally, in the winters, more time is allocated to weaving for two main reasons. Firstly, plantations are stopped during the peak of the winters and women have more time available to weave. Secondly, the demand for textile products goes up during the winters as agricultural activities fade out.

These seasonal variations have important implications in terms of livelihood diversification. In LD theory, as we discussed earlier, seasonal adaptations occur naturally in response to lower returns in an existing activity causing households to shift to more lucrative ventures (Ellis, 2000). In the context of Guatemalan weavers, the reduction in weaving activity or the increase in agricultural activities follows the same patterns but for different reasons.

On the household level, an important observation was how every member was assigned a role, a function to fulfill whether it was child-rearing, studying or weaving. While in some households, particularly Kekchi households, multi-tasking was limited and labor specialization was the norm. In Pokomchi households, however, it was observed that women performed a range of daily tasks and while these did not substantially improve their assets, it was a fair balance between on-farm and off-farm activities (according to the statistics, Pokomchi households had significantly more farmland and Natural Capital than Kekchi households) and the result was that both achieved an almost equal amount of consumption and income. Additionally, in terms of gender empowerment, LD between weaving and other activities meant women were effectively the bread-runners of the household and when asked about the whether they made financial and social decisions in the house, over 86% responded that they were responsible for both decision-making facets.

6. CONCLUSIONS

In attempting to answer the following question: -

Given the social and economic multi-dimensionality of the context within which Guatemalan weavers pursue their livelihoods, what are the determinants and effects of livelihood diversification?

We have discussed the range of market factors, social linkages, political and economic influences and environmental factors that, in varying circumstances, motivate weaver households atypically on LD behavior. Additionally, I have attempted to show the impact of LD on households in terms of economic gains and general improvements to their households. In summary, while many households were shown to have benefitted from employing LD strategies, these have varied across ethnicities, communities and economic circumstances.

In terms of whether households chose between risk management or coping strategies (or equally, accumulated capital or simply employed survival strategies), it was found that asset combinations that favored human and financial capital tended to be associated with positive degrees of LD behavior. Additionally, natural capital was positive and significantly related to LD, implying that households with farmlands were successfully diversifying LS, and given the vulnerabilities and uncertainty of the weaving market, this strategy was necessary and while it did not provide any substantial gains in terms of capital accumulation (which were found to be virtually non-existent), consumption and income levels were still maintained.

As a micro-study on such a vast and complex subject, my intention was to somehow test the motivations and effects of LD using a practical approach (mixed methods) under a relevant framework that captured rural households' livelihood dynamics holistically (SLF) and present the findings in a systematic and relevant manner. Unfortunately, in the process, I acknowledge that while my intention was based on a personal motive to try and quantify and breakdown intangible aspects into measurable (to a certain degree at least) aspects, I have overlooked a lot of important aspects and dynamics of the weaver households. Firstly, the manner in which data was collected, analyzed, calculated (especially the indices used in the analyses) and presented has flaws in terms of overlooked information and perilous assumptions. But that is not to say that the study is limited or invalid. The findings presented above reflect a mode of analysis and data collection methodology which, if captured at a broader level with adequate resources, would extend the poverty assessment objectives of the Sustainable Livelihoods lexicon.

Secondly, a very important aspect of the rural dynamics, even in weaving households, is that of migration. Because it is such a broad aspect, I have only referred to it in passing and only in the context of weavers' husbands, a majority of who worked in semi-urban or agriculture sectors outside their communities. This spatial recognition of non-resident family members, particularly husbands working in urban centers, was not incorporated for the simple reason that those dynamics cannot be captured in our study and are too broad to be captured given our limited time and resources. Nonetheless, in the hope that this approach is followed up in a larger context, migration would need to be a necessary aspect.

As a concluding remark, I feel I must highlight the current development debate and how livelihood systems play a necessary role in understanding and dealing with poverty. The inspiration for my study came from the observation that NGOs and aid agencies sought to understand rural realities without being able to accurately account for the factors influencing poverty-stricken households. Attempts at providing training, building infrastructures or supporting microenterprise development, especially in the weaving sector, failed to bring about any substantial results for the simple reason that these interventions were so foreign, external and transient to the rural reality that benefitting households only participated and took advantage of these initiatives with this notion of temporality in mind and returned to their original livelihood strategies once these 'development projects' were completed. In spite of the constant persistence by development organizations on seeking long-term benefits, these were never found. My study, though limited and confined to a specific sector, market, culture and region, provides a potential remedy to the flaws in

development projects and with adequate research, could provide development projects a better understanding of rural actualities, especially if long-term benefits are the goals.

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APPENDIX 1: CREATION OF THE 5 SLA CAPITALS INDICES AND LIVELIHOOD DIVERSIFICATION

Various indicators were used in the study to compare with other variables in order to establish any existing correlations with Livelihood Diversification. The most important indices in these were those that amalgamated and produced each of the 5 capitals in the form of a single figure. This section provides a comprehensive explanation of the creation of these indices and the justification behind their construction.

LIVELIHOOD DIVERSIFICATION

According to our theoretical framework, LD is “the process by which rural households construct a diverse portfolio of activities and social support capabilities in their struggle for survival and in order to improve their standards of living through accumulation of assets” (Ellis 1998:5). But due to its complex nature and difficulty in measuring it accurately, livelihood diversification was simply represented by the extent to which household members, especially the household head, had diversified income-earning opportunities and captures the number and extent to which household members are working; the number is given by a simple summation of working household members while the extent is determined by whether they have a secondary occupation as well. Thus, it has been calculated as follows: -

$$\text{Livelihood Diversification} = 2X\text{Occup}_{\text{secondary}_{\text{HH}}} + \sum \text{Occup}_{\text{Primary}} + 2X \sum \text{Occup}_{\text{Secondary}}$$

Where $\text{Occup}_{\text{Primary}}$ and $\text{Occup}_{\text{Secondary}}$ take the values -1, 0 or 1 representing ‘unemployed’, ‘not applicable’ and ‘employed’ respectively. The first component represents where the household head has a secondary occupation, implying that she has diversified her activities. The reason for giving the component twice more weight is because the household head represents a significantly important part of the household and as the head artisan, her behavior carries more weight.

1 – HUMAN CAPITAL INDEX (HC_INDEX)

Due to its broad nature, human capital has varying definitions. In an economic context, human capital refers to “the stock of competencies, knowledge and personality attributes embodied in the ability to perform labor so as to produce economic value” (Sheffrin, 2003:5). According to DFID’s *Sustainable Livelihoods Sheets* (2003), human capital is defined as: -

“the skills, knowledge, ability to labour and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives. At a household level human capital is a factor of the amount and quality of labour available; this varies according to household size, skill levels, leadership potential, health status, etc.”

Even with a much larger study, it would not be possible to capture these factors in a household accurately. In the context of the current sample, however, the following gives a fairly balanced indication of human capital: -

- Education of household members, specifically household head
- Health
- Number of working household members - d
- Number of studying household members

- Extent of training in artisanship and other themes
- Food intake

The index itself was constructed as a sum of several variables that represented each of the preceding components. The following equation shows these varying components with their respective weights: -

$$HC_{index} = Education_{scaled} + Health_{scaled} + Training_{scaled} + Food_{scaled}$$

The component for Education carry twice the weight because (a) they represent the entire household as opposed to the respondent herself and (b) are contextually and theoretically more important.

SCALING

Because of the qualitative and unbalanced nature of the calculated variables, scaling them between values of 0 and 1 is necessary and was done using this simple equation: -

$$Var_{scaled} = \frac{Var_{raw} - \min(Var_{raw})}{\max(Var_{raw}) - \min(Var_{raw})}$$

The purpose of this scaling is to give equal weights to components when they are placed together in calculating indices. Thus, all the variables used in this paper with 'scaled' subscripts have been indexed using the equation above. The inspiration comes from UNDP's HDI index⁹ and much like indices used in this study, the HDI was constructed as a single unit representing relevant, weighted components.

EDUCATION

This component was constructed in response to specific questions on education levels of the household members. Because of her importance, the household head was given twice more weight than the sum of the entire household in the calculation of this component. Thus, the *Education* component was calculated as: -

$$Education = \frac{2Educ_{HHhead} + \sum_{i=2}^n Educ_i}{n}$$

Where *n* is the number of household members. *Educ_i* represents the education level of each household from a range of -1 to 7 where -1 is when the given response is 'unschooled' and 7 for a 'baccalaureate'. The value of -1 is used instead of 0 to distinguish from non-applicable or missing responses.

HEALTH

The health component was calculated using a simple question asking if any members of the household were sick or unhealthy to the extent that it had limited their ability to work. Thus, the component is a simple binary variable.

TRAINING

⁹ http://hdr.undp.org/en/media/HDR_20072008_Tech_Note_1.pdf

Training is perhaps the most complicated variable to calculate. The concept behind the variable is to capture the artisan’s capacity to work in terms of training received. The component captures both the types of training received and number of times they were given.

$$Training = (Artisan_{trained} \times Artisan_{number}) + (Savings_{trained} \times Savings_{number}) + (Accounting_{trained} \times Accounting_{number}) + 2(Social_{trained} \times Social_{number})$$

Where the variables with *trained* subscripts are binary and *number* variables represent the number of trainings/workshops that were received in the particular theme. As you’ll notice, because of its intrinsic importance in terms of human capital, the Social training theme has been given twice the weight.

FOOD

The food component determines whether the household is receiving sufficient nutrition to work adequately and based on Likert-scale responses, this component captures household perceptions on food intake. On a simple scale of 1-5, households were asked to rank the quality and quantity of their food and the responses were scaled for the component.

2 - SOCIAL CAPITAL (SC_INDEX)

Social capital refers to the inter-connectedness of social networks, and in an economic context, it can be argued that in much the same manner that “a screw driver (physical capital) and college education (human capital)” improve productivity of an individual, the extent of being socially interconnected also improves productivity (Portes, 1998). In the context of livelihood analysis, it refers to the resources and contacts that households use to successfully pursue their livelihood objectives (DFID, 2003). To capture it, the SLA framework identifies (1) interconnectedness of networks, (2) membership within formal and informal groups and (3) relationships of trust.

In the context of artisans, social capital would be indicated by the extent to which artisans were linked “vertically” and “horizontally”, i.e. across different levels in the market value chain and among themselves, respectively. Because the questionnaires were mostly quantitative and specific, vertical relationships have not been captured and the index only reflects horizontal relationships. Additionally, in order to utilize these contacts effectively, participation and membership within these groups is essential. And finally, the nature of these relationships must be analyzed to determine whether the social associations are constructive or counterproductive. To capture this at the micro-level, respondents were asked about three specific aspects: participation within/among their groups, decision-making capacity and trust at communal and market level. The index was thus constructed as follows: -

$$SC_{index} = Participation_{scaled} + Decision_{scaled} + Trust_{scaled}$$

PARTICIPATION

The extent of participation has been captured by both how many social groups the respondent belongs to as well as a Likert-scale response on the perception of participation within groups. Once again, because it is neither accurate nor simple to capture the social participation of the respondent with her group in a systematic fashion, this component only gives an indication of group participation as perceived by the respondent. As the equation below shows, participation is a simple summation of these two aspects: -

$$Participation = GroupMembership + GroupParticipation_{likert}$$

Where *GroupMembership* refers to the number of groups the respondent belong to and *GroupParticipation_{Likert}* is the respondent's perception of freedom of expression in social groups.

DECISION-MAKING

Decision-making, in this context, pertains to how the respondent feels about her decision-making capacity in social and financial matters in the household, and group decisions within her social groups. All three questions were asked as Likert-scale questions and simply summed together.

TRUST/CONFIDENCE IN GROUP

This component has been constructed as a sum of two Likert-scale questions on extent of trust within the group and the respondent's perception of the relationships within group members.

3 – NATURAL CAPITAL

The issue of environmental resources in the rural context is by far too essential to be overlooked. In the case of livelihoods, it is the source from which all natural resource stocks are derived and utilized. Unfortunately, because of their wide variation and complexity, at a micro-level, they primarily refer to immediate resources the household employs and the available access to them (DFID, 2003).

As an index for the study, natural capital is measured by (1) access to natural resources, specifically land for cultivation, (2) size of natural resource stock and (3) the diversity/quality of the available resources.

$$NC_{index} = Access_{scaled} + Size_{scaled} + Quality_{scaled}$$

Where *Access* refers to existing land owned by the household, the highest value for forestry land and the lowest value for no ownership of cultivable land, as well as the nature of ownership (e.g. rented, leased, propriety, etc.). *Size* is both the size of existing livestock as well as cultivable land size. While Ellis (1999) has argued that livestock and agrarian commodities are different, Dorward et. al. (2003) suggest that in capital accumulation, they can be used together. *Quality* refers to the diversity of crops.

4 – PHYSICAL CAPITAL

According to the SLF model, physical capital refers to the basic infrastructure and producer goods households need to successfully employ LS. They are essentially represented by shelter, electricity, water, types of tools and equipment owned by the household to pursue LS and access to roads. In our context, since each household used the same tools, physical capital was measured as follows: -

$$PC_{index} = Shelter_{scaled} + Electricity + Water + Roads$$

Where each variable is an ordinal scale indicator suggesting the availability and access to each resource, except for *Roads* which was represented by distance to the nearest asphalt road.

5 – FINANCIAL CAPITAL

Financial capital refers to both the stock of available liquid cash as well as extent of available income sources. Thus, it was measured as follows: -

$$FC_{index} = Incomes_{scaled} + Account + Savings + Funds$$

Where *incomes* were calculated using a scaled sum of the earning levels of all existing working members. *Account* refers to the types of financial accounts the user had access to, *Savings* as a combination of stock and option of savings while *Funds* was represented by options available to access funds in emergencies.

**APPENDIX 2: Pre-designed questionnaire
HOUSEHOLD INTERVIEW
Weaving Livelihoods: Sustainable Livelihoods Assessment**

No. de participante:.....
Language:.....
Date:

1. Name: _____ 2. Sex: _____ 3. Father's name: _____

4. Community: _____ 5. Municipality: _____ 6. Dept.: _____ 7. Ethnicity: _____

8. Información de Hogar: Quienes viven en el hogar con usted?

S 1 #	Name	Sexo 1-M 2-F	Age (Años)	Relations hip (<i>escribe en código</i>)	Estado civil (<i>escribe en código</i>)	Educación (<i>escribe en código</i>)	Ocupación					
							Tipo (escribir códigos)		Ganancia promedio total (aprox.)	Ganancia promedio total antes de artesanía	Ingreso promedio total, aprox	Gastos promedio total, aprox
							Principal	Secundaria				
1				Misma								
2												
3												
4												
5												
6												
7												
8												
9												

- **Relación** - 1-Individual, 2- Esposo/-a, 3-Hijo/-a, 4-Padre/Madre, 5-Hermano/-a, 6- Suegro/-a, 7-Cuñado/-a, 8- Sobrino/-a, 9-Nieto/-a, 10- Otros
- **Estado Civil**- 1-Casados 2-Solteros 3-Viudo/-a, 4-Seperado, 5- Divorciado/-a, 6 – Esposo perdió
- **Educación**- 1- Analfabetos, 2- Puede firmar, 3- Preescolar, 4 – Primaria (1-6 clase), 4a- Deserción escolar de P, 5- Básica (1-3 nivel), 5a- Deserción escolar de B, 6- Diversificado (1-9 nivel), 6a- Deserción escolar de Diversificada, 7-No se aplica (menor de 3años) [Si está en 5 o 6, pregunte si va estudiar más, en qué?]
- **Tipo de empleo**- 1. Artesanía, 2. Cultivo, 3. Trabajo asalariado (operadores y trabajadores; trabajadores de construcción) 4. Pesca 5. Tienda 6. Trabajo asalariado de agricultura 7. Ganadería 8. Madereros, trabajos forestales 8. Proveedor de servicios informales. 9. Otros (Especificar). 10. Ninguno 0. N/A

NOTA:

11. Capitals

11.1. Human Capital

11.1.1	Donde aprendió la capacidad para hacer productos artesanales? <input type="checkbox"/> Capacitación de ONG <input type="checkbox"/> Relativos/amigos: _____ <input type="checkbox"/> Madre <input type="checkbox"/> Otro:
11.1.2	Si recibió algunas capacitaciones, Cuando y cuantas veces? En qué temas? <input type="checkbox"/> Hacer productos <input type="checkbox"/> Administrar cuentas <input type="checkbox"/> Manejar ahorros/créditos <input type="checkbox"/> Otros (lista todos): -
11.1.3	Cree que los capacitaciones han mejorado su capacidad de trabajo? Cómo? [Especialmente capacitación artesanal]

NOTA:

11.1.4	Ha enseñado sus hijos, familia o otras personas de comunidad la capacidad artesanal? Si sí, cómo?	
11.1.4	Tiene problemas de salud? Explique por favor. (Si sí, como ha afectado su capacidad a trabajar?)	
11.1.5	Algún miembro de su hogar es discapacitado/a? <input type="checkbox"/> Sí <input type="checkbox"/> No Tipo: _____	
11.1.6	De las 4 opciones que voy a leer, dígame cuál de estos describen mejor el consumo de comida en su hogar:	1. Siempre comíamos suficiente de lo que quería <input type="checkbox"/> 2. Había suficiente comida pero no siempre <input type="checkbox"/> 3. A veces no teníamos suficiente comida <input type="checkbox"/> 4. A menudo no teníamos suficiente comida <input type="checkbox"/>

11.2. <i>Capital Social</i>		
11.2.1	Es un miembro de algún grupo social, cooperativa, comité o grupo comunal? <input type="checkbox"/> Grupo <input type="checkbox"/> Cooperativa <input type="checkbox"/> Grupo de ahorros <input type="checkbox"/> COCODE <input type="checkbox"/> Comité <input type="checkbox"/> Otro <input type="checkbox"/> Ninguno	
	Nombre y detalles: _____	
11.2.2	Cuál es su posición en este grupo? <input type="checkbox"/> Líder/Presidente Directivo <input type="checkbox"/> Administrador <input type="checkbox"/> Responsable de finanzas <input type="checkbox"/> Miembro de junta directiva <input type="checkbox"/> Solo integrante sin cargo <input type="checkbox"/> Otro: _____	
11.2.3	Cuál es su opinión sobre la declaración: "Tengo la responsabilidad para tomar decisiones financieras en mi hogar" (para comida, ropas, mantener la casa, etc.) <i>Explicación:</i>	1. Totalmente de acuerdo <input type="checkbox"/> 2. De acuerdo <input type="checkbox"/> 3. Ni acuerdo ni desacuerdo <input type="checkbox"/> 4. Desacuerdo <input type="checkbox"/> 5. Totalmente desacuerdo <input type="checkbox"/>

NOTA:

11.2.4	Cuál es su opinión sobre la declaración: "Tengo la responsabilidad para tomar decisiones sociales en mi hogar" (para educación, fertilidad, resolver disputas, que hacer en emergencias, etc.) <i>Explicación:</i>	1. Totalmente de acuerdo <input type="checkbox"/> 2. De acuerdo <input type="checkbox"/> 3. Ni acuerdo ni desacuerdo <input type="checkbox"/> 4. Desacuerdo <input type="checkbox"/> 5. Totalmente desacuerdo <input type="checkbox"/>
11.2.5	¿Quién es el jefe de la familia? ¿Quién toma las decisiones financieras en la casa?	
11.2.6	De 4 opciones que voy a leer, cuál de estos representa su confianza en los miembros de su grupo: <i>Explicación:</i>	1. Tengo mucha confianza en mi grupo y confío en todos miembros <input type="checkbox"/> 2. Tengo confianza en el grupo pero no en todos los miembros <input type="checkbox"/> 3. No tengo confianza en todo el grupo pero confío en unos miembros <input type="checkbox"/> 4. No tengo confianza en el grupo ni en ninguno de los miembros <input type="checkbox"/>
11.2.7	De 4 opciones que voy a leer, cuál de estos representa como toman decisiones en su grupo (por ejemplo, para dar dinero a alguien, reinvertir ahorros en algo, etc.): <i>Explicación:</i>	1. El grupo siempre toma decisiones conjuntamente y escucha opiniones de todos <input type="checkbox"/> 2. El grupo toma decisiones conjuntamente pero algunos miembros no hablan <input type="checkbox"/> 3. El grupo toma algunas decisiones conjuntos pero sin participación de unos miembros <input type="checkbox"/> 4. El grupo nunca toma decisiones conjuntos; unas personas toman decisiones <input type="checkbox"/>
11.2.8	De 4 opciones que voy a leer, cuál de estos representa la medida de su participación en grupo (porque es un cuestión de participación, evalúa la participación de la entrevistada a mismo): <i>Explicación:</i>	1. Siento que el grupo siempre escucha mis opiniones y son importante para todos <input type="checkbox"/> 2. Siento que el grupo muchas veces escucha mis opiniones <input type="checkbox"/> 3. Siento que a veces escuchan mis opiniones <input type="checkbox"/> 4. Siento que nunca escuchan mis opiniones <input type="checkbox"/>

NOTA:

11.2.9	Cuál es su opinión sobre la declaración: “Algunas veces, siento que no puedo participar ni decir lo que pienso”. <i>Explicación:</i>	1. Totalmente de acuerdo <input type="checkbox"/> 2. De acuerdo <input type="checkbox"/> 3. Ni acuerdo ni desacuerdo <input type="checkbox"/> 4. Desacuerdo <input type="checkbox"/> 5. Totalmente desacuerdo <input type="checkbox"/>
11.2.10	Cuál es su opinión sobre la declaración: “Las relaciones entre de los miembros del grupo están bien y hay confianza entre todos”. <i>Explicación:</i>	1. Totalmente de acuerdo <input type="checkbox"/> 2. De acuerdo <input type="checkbox"/> 3. Ni acuerdo ni desacuerdo <input type="checkbox"/> 4. Desacuerdo <input type="checkbox"/> 5. Totalmente desacuerdo <input type="checkbox"/>

11.3. <i>Capital Natural</i>	
11.3.1	Cuáles de estos tiene? <input type="checkbox"/> Área para Parcela/Cultivar <input type="checkbox"/> Gallinero <input type="checkbox"/> Granja de cerdos <input type="checkbox"/> Bosque <input type="checkbox"/> Otros: _____
11.3.2	Si tiene parcela o terreno, cuál es el cultivo principal al que se dedica? <input type="checkbox"/> Frijol <input type="checkbox"/> Maíz <input type="checkbox"/> Hortalizas <input type="checkbox"/> Papa <input type="checkbox"/> Tomate <input type="checkbox"/> Café y cardamomo <input type="checkbox"/> Otros: _____
11.3.3	Cuántas cosechas tiene en cada año? _____
11.3.4	(a) Cuáles tipos de animales tiene: <input type="checkbox"/> Pollos <input type="checkbox"/> Cerdos <input type="checkbox"/> Otros: _____ (b) Propósito de tenerlos (marca todos que se aplican y pone porcentaje de uso): <input type="checkbox"/> Vender <input type="checkbox"/> Comer <input type="checkbox"/> Crianza/Ahorra <input type="checkbox"/> Otro: _____
11.3.5	Tiene algunos dificultades para obtener o tener acceso a estos recursos? (tierra para vivienda, tierra para cultivar, tierra para ganadería, animales, agua, etc.)

NOTA:

11.3.6	Desde el inicio de actividad artesanal, ha comprado más tierras para los fines antes mencionados o que se compren más ganado? En qué, cuándo y cuanto pagó (pregunte sobre animales, tierras y otros recursos naturales comprado/vendidos desde inicio actividad artesanal):
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11.4. <i>Capital Físico</i>	
11.4.1	El material predominante de los pisos de vivienda: <input type="checkbox"/> Tierra <input type="checkbox"/> Ladrillo de barro <input type="checkbox"/> Torta de cemento <input type="checkbox"/> Ladrillo de cemento <input type="checkbox"/> Madera <input type="checkbox"/> Ladrillo de cerámico <input type="checkbox"/> Granito <input type="checkbox"/> Otro: _____
11.4.2	(a) Tamaño de casa: _____ (b) Cuartos: _____
11.4.3	La casa donde vive es: <input type="checkbox"/> Propia <input type="checkbox"/> Arrendada <input type="checkbox"/> Compartida <input type="checkbox"/> Prestada <input type="checkbox"/> Otro: _____
11.4.4	Cuando llueve, tiene algunos problemas (por ejemplo, fugas, con electricidad, pisos, etc.):
11.4.5	(a) Si hay energía eléctrica, cuanto paga cada mes: <input type="checkbox"/> Sí <input type="checkbox"/> No Pago: _____ (b) La tenía antes de actividad artesanal? <input type="checkbox"/> Sí <input type="checkbox"/> No Si sí, cuánto pagó? _____
11.4.6	La fuente principal de agua que consume: <input type="checkbox"/> Agua entubada <input type="checkbox"/> Pozo <input type="checkbox"/> Nacimiento <input type="checkbox"/> Río <input type="checkbox"/> Agua de lluvia <input type="checkbox"/> Otro: _____
11.4.7	Como cocina su comida? <input type="checkbox"/> Estufa de gas <input type="checkbox"/> Estufa de eléctrica <input type="checkbox"/> Leña/fuego abierto <input type="checkbox"/> Otro: _____
11.4.8	Cuanto es la distancia a la carretera asfaltada (tiempo para caminar o distancia)? _____
11.4.9	(a) Qué tipo de carretera hay hacia su comunidad: <input type="checkbox"/> Asfaltada <input type="checkbox"/> Tierra <input type="checkbox"/> Brecha <input type="checkbox"/> No hay (b) Ha habido mejoras introducidas en los últimos seis meses?

NOTA:

11.4.10	Como transporta en su comunidad? <input type="checkbox"/> Camionetas <input type="checkbox"/> Bicicleta <input type="checkbox"/> Moto bicicleta <input type="checkbox"/> A pie <input type="checkbox"/> Otro: _____
11.4.11	Desde inicio de actividad artesanal, ha hecho algunas mejoras a su vivienda? Ha comprado algo (e.g. pregunta sobre las paredes, pisos, techos, muebles, electrodomésticos y otros artículos domésticos)? En qué, cuándo y cuanto pagó:

11.5. <i>Capital Financiero</i>										
11.5.1	(a) Tiene cuenta de ahorros o creditos en algún organización financiera: <table border="0" style="width: 100%;"> <tr> <td><input type="checkbox"/> Banco comercial</td> <td><input type="checkbox"/> Banco comunal</td> <td><input type="checkbox"/> Cooperativa</td> </tr> <tr> <td><input type="checkbox"/> Comité</td> <td><input type="checkbox"/> Hogar</td> <td><input type="checkbox"/> Grupo de ahorros</td> </tr> <tr> <td colspan="3"><input type="checkbox"/> Otro: _____</td> </tr> </table>	<input type="checkbox"/> Banco comercial	<input type="checkbox"/> Banco comunal	<input type="checkbox"/> Cooperativa	<input type="checkbox"/> Comité	<input type="checkbox"/> Hogar	<input type="checkbox"/> Grupo de ahorros	<input type="checkbox"/> Otro: _____		
<input type="checkbox"/> Banco comercial	<input type="checkbox"/> Banco comunal	<input type="checkbox"/> Cooperativa								
<input type="checkbox"/> Comité	<input type="checkbox"/> Hogar	<input type="checkbox"/> Grupo de ahorros								
<input type="checkbox"/> Otro: _____										
11.5.2	Desde el inicio de la actividad artesanal, han aumentado sus ahorros? [Discutir ahorros en cada mes, la organización y el cambio en las cantidades y los motivos]									

NOTA:

11.2.8	Cuál es su opinión sobre la declaración: "Mis ingresos han aumentado desde el inicio de actividad artesanal". <i>Explicación:</i>	1. Totalmente de acuerdo <input type="checkbox"/> 2. De acuerdo <input type="checkbox"/> 3. Ni acuerdo ni desacuerdo <input type="checkbox"/> 4. Desacuerdo <input type="checkbox"/> 5. Totalmente desacuerdo <input type="checkbox"/>
11.5.3	Si necesita dinero en efectivo inmediatamente, qué haría? De donde puede obtenerlo? [Marca todos que se aplican] <input type="checkbox"/> Ahorros <input type="checkbox"/> Vende bienes (especificar <input type="checkbox"/> Prestar de vecinos <input type="checkbox"/> Prestar de relativos <input type="checkbox"/> Grupo de ahorro <input type="checkbox"/> Otro: _____ <i>Explica:</i>	

NOTA: