Strength of Weak Ties in Microfinance

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DECLARATION

I certify that this work has not been accepted in substance for any degree, and is not concurrently being submitted for any degree other than that of PhD being studied at the University of Greenwich. I also declare that this work is the result of my own investigations except where otherwise identified by references and that I have not plagiarised another's work.

Signed:

Student Date

Supervisor Date

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ABSTRACT

This research makes a contribution to knowledge by testing Granovetter's (1973) theory of the strength of weak ties in microfinance based on an empirical study in India. Specifically, it looks to test if the addition of weak bridging ties to the networks of microfinance clients who own businesses will improve their businesses and help to reduce their poverty. This research also investigates Burt's theories on structural holes (1992), brokerage and closure (2005) and network spillover (2010) can assist with the building of weak bridging ties.

Microfinance is the delivery of financial services to the poor which includes credit, savings, insurance and remittances. The original goal of microfinance is to do financially sustainable poverty reduction.

The key issue for microfinance is that it has not achieved levels of poverty reduction envisioned when the modern microfinance started. One reason for this is that microfinance clients start businesses with low barriers to entry which makes them very susceptible to competition. Also, the poor tend to inhabit fragmented social networks with few ties outside it that would bring needed information on markets, finance, suppliers, customers and the competition that would help to improve their businesses.

Network analysis provides, with theory of the strength of weak ties, an approach that will give poor people access to information need by them to improve their businesses.

India is one of the largest microfinance markets in the world which also has a unique form of microfinance. In addition to individual lending and joint liability groups, India has self-help groups which are essentially microbanks owned and operated by its members. Sari sellers, who happen to be members of self-help groups, are good example of a low barrier to entry business.

Using a variation of the method developed by Kahn and Antonucci (1980), sari sellers were asked to identify the people they were connected to for supplies, finance, market information and customers. These are placed on a target diagram indicating how close these are to the sari seller who is at the centre of the target.

Lines connecting the alters who know each other are drawn. In addition, a network intervention was conducted in attempt to introduce weak bridging ties into the social networks of the sari sellers. A simple method of providing sari sellers in the treatment group a list of other sari sellers they could contact for help while those in the control group did not receive the list.

Several interesting findings came out of this research. Analysis of the sari sellers' ego networks shows that there is a reliance on strong ties which confirms Granovetter's (1983) argument. The analysis of the ego networks also show the sari sellers do have access to structural holes but do not take advantage of these. When the ego networks are combined using their contacts with the microfinance institution's staff, analysis shows that the resulting network has a parent-subsidiary structure which reflects the hierarchical nature of Indian society. Finally, the analysis also shows that this network is fragmentary and fragile. Weak bridging ties would make the full network less fragile and allow the sari sellers to take advantage of the structural holes they find. This is what the intervention is attempting to do.

While the intervention did not go as planned, evidence was found to support the hypothesis that addition of weak bridging ties to the social networks of sari sellers improved their businesses. A group of 15 disparate sari sellers created weak bridging ties to take advantage of one of the sari seller's contacts to buy saris in bulk. Another sari seller saw a significant increase in sales for Diwali 2011 because a new member of her social network created a weak bridging tie which introduced her to many new customers.

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List of Acronyms

ASA – Association for Social Advancement

ASCA – Accumulating Savings and Credit Association

BC – Backward Caste

BFL – BWDA Finance Limited

BKB – Bangladesh Krishi Bank

BRAC – Bangladesh Rehabilitation Assistance Committee

BWDA – Bullock Cart Workers Development Association

CGAP – Consultative Group to Assist the Poor

CRISIL – Credit Rating and Information Services of India Ltd

DID – Développement International Desjardins

EffSize – Effective Size

EgoBet – Ego Betweeness

Ego#Strong – Number of strong ties in the ego network

Ego#Weak – Number of weak ties in the ego network

E – I Index – After partitioning network into mutually exclusive groups, index indicates how many ties are external and internal to the group

FINCA – Foundation for International Community Assistance

FT – Full Time

JLG – Joint Liability Group

KfW – Kreditanstalt für Wiederaufbau, a German state-owned development bank

KSBKBT - Kyunki Saas Bhi Kabhi Bahu Thi, an Indian soap opera

MFI – Microfinance Institution

MIS – Management Information System

MRFC – Malawi Rural Finance Company

NABARD – National Bank for Agriculture and Rural Development

NBFC – Non-Banking Finance Company

NEgoBet – Normalised Ego Betweeness

NGO – Non-Governmental Organisation

NPFIL – Nagercoil Prompt Finance and Investment Pvt Ltd

OBC – Other Backward Caste

OC – Other Caste

OECD – Organisation for Economic Cooperation and Development

PDI – Power Distance Index

PPI – Progress Out of Poverty Index

RBI – Reserve Bank of India

RCT – Randomised Control Trial

ROSCA – Rotating Savings and Credit Associations

RRB – Regional Rural Banks

SC – Scheduled Caste

SHG – Self Help Group

SME – Small and Medium Size Enterprises

SNA – Social Network Analysis

SO & PT – Sari Only and Part Time

ST – Scheduled Tribe

UCINET – University of California at Irvine Network Analysis software

UNICEF – United Nations Children’s Fund

VSLA – Village Savings and Loan Associations

1 Chapter One – Introduction

1.1 Chapter Summary

Microfinance which provides financial services to poor people has the goal of providing financially sustainable ways to reduce poverty which means it is able to consistently meet its own costs. However, the amount of poverty reduction produced has been disappointing (see Comim, 2007; Rutherford, 2009; Duvendack, 2010; Duvendack and Palmer-Jones, 2011; Roodman and Morduch, 2009). One of the key problems is that microfinance clients have a tendency to start low growth, low entry barrier businesses that do not help to reduce poverty. This chapter will outline the thesis that will show how this research makes a theoretical contribution to microfinance by applying social network theory, specifically Granovetter's (1973) strength of weak ties argument, to address the problem of how to grow these low growth, low barrier to entry businesses tended to be started by microfinance clients by introducing weak bridging ties to their social networks.

1.2 Background

In 1974, Professor Muhammad Yunus, teaching economics at Chittagong University in Bangladesh, led a field trip to Jobra, a poor village next to the university. There he interviewed a woman who made bamboo stools and found out that she needed to borrow 15 pence from a moneylender to buy bamboo for each stool made. The moneylender charged up to 10% interest a week and as a result she was left with only 1 pence profit. If she had been able to borrow at lower rates she could have increased her profit and raise herself above subsistence level. Being shocked by this, Yunus decided to find out how many in Jobra village were borrowing from the moneylenders. There were 42 and Yunus decided to lend £17 to them. Yunus found that this small amount of money not only helped them to survive but helped create the initiative and enterprise needed to pull them out of poverty. This was to be the start of what was to become Grameen Bank (Yunus, 1998, pages 3 -12). He was pleasantly surprised to see 98 percent of the borrowers pay their loans back (Yunus, 1998, pages 81).

This story presented the ideal of microfinance. That microfinance could be a financially sustainable method of reducing poverty. Give a loan to a poor person to invest in their microenterprise and the investment will help the business grow and as a result the loan is repaid and the poor person's poverty is reduced

This story of Yunus and Grameen inspired another focus for microfinance in the years to come: the one on women. Yunus found that giving credit to women brought about changes faster than given it to men. This was because he believed that women experience hunger and poverty in a much more intense way than men in Bangladesh. When a woman is given the smallest opportunity, she will struggle extra hard to get out of poverty. He found that women adapted better to the self-help process than men. He said that money going through a woman in a household brought more benefits to the family than money entering the household through a man (Yunus, 1998, page 88). In the mid 1990's, Yunus started to promote microfinance as a panacea for poverty reduction (Hulme, 2009). Ledgerwood (1999, page 7) countered that microfinance is not a panacea for poverty alleviation and that poorly designed microfinance can make things worse by disrupting informal markets that have reliably provided financial services to poor households over the centuries.

The drive to achieve financial sustainability in microfinance has led to the "financial systems" approach to microfinance. Ledgerwood (1999, pages 2-3) describes the beliefs of this approach:

- Subsidised credit undermines development
- Poor people can pay the interest rates that are high enough to cover the transaction costs
- Sustainability is the key to institutional permanence and to making them more focused and efficient.
- Because loans to poor people are small, MFIs must achieve sufficient scale to become sustainable
- Measurable enterprise growth and poverty impact cannot be demonstrated easily or accurately. Outreach and repayment rates can be used as proxies for impact.

The three largest microfinance institutions (MFI) in Bangladesh, ASA, BRAC and Grameen Bank, all now follow the “financial systems” approach (Hulme, 2009; Rutherford et al, 2006; Rutherford, 2009; Mannan, 2009). The impressive growth of these three MFIs alone helps explain why Bangladesh has one of the largest penetrations of microfinance into the population. Bangladesh has a population of around 162.2 million people (UN, 2009). At the end of 2003, ASA had 2.3 million members, BRAC had 3.9 million members and Grameen Bank had 3.1 million members. At the end of 2007, ASA had 5.4 million members, BRAC had 7.4 million members and Grameen Bank had 7.4 million members (Armendáriz and Morduch, 2010, page 3). In addition to these three large MFIs, there are a number of other MFIs in Bangladesh also.

However, all of this microfinance in Bangladesh raises a very important question. If microfinance reduces poverty and so many Bangladeshis are microfinance clients, why does Bangladesh still suffer so much poverty? Exactly where are all these empowered women and their successful microenterprises? (Rutherford, 2009, Chapter 9, page 2). These questions are extremely pertinent if, as Yunus had said, microfinance was a panacea for reducing poverty.

Microfinance impact studies have been done to answer this question in Bangladesh and other countries where microfinance is practised. Khandker (1998), in a seminal study, showed that microfinance in Bangladesh allowed clients to do consumption smoothing and increased their consumption. However, Morduch (1998) found no real positive impact but only a reduction in client vulnerability and Roodman and Morduch (2009) using a more sophisticated replication found negative impacts.

It seems that the financial intermediation approach, an approach focused primarily on the provision of financial services to the poor, is not sufficient on its own to consistently reduce poverty. This suggests that financial intermediation needs to be paired with social intermediation which provides non-financial interventions for the poor. Sunderasan (2008, pages 1 – 2) argues that while low cost access to financial services can be an important ingredient in reducing poverty, it is not enough by itself to alleviate poverty. The other constraints poor people face is lack of primary education, primary health care and their use of relatively primitive technologies. Even Yunus (1998, page xvii) eventually admitted that microcredit alone will not end poverty.

One of the main problems in getting more poverty reduction for microfinance clients is that when they choose to start a microenterprise with the loan, these businesses tend to be low growth businesses with low barriers to entry which results in facing a lot of competition (Khandker, 1998, pages 148- 149; Kumar L., 2010; Bateman 2010; Spears, 2009). These businesses can have a high failure rate which sometimes leaves their owners worse off (Hulme and Mosley, 1996).

Bhagavatula and Elfring (2010) argue that the only advantage a poor microentrepreneur can gain in a low entry barrier environment are the social and business networks they nurture. Bateman (2010, pages 103 – 105) goes further to say the way that microenterprises can overcome the disadvantages of small scale is to build a network with both horizontal and vertical links among each other.

The contribution this research makes to microfinance theory is to apply social network theories to partially answer the problem of making the microenterprises of microfinance clients more successful. Specifically, using Granovetter's (1973) seminal work, showing how the addition of weak bridging ties to the social networks of their businesses will bring in non-redundant information that will help to improve their businesses and increase their poverty reduction. The research population for this study is 111 sari sellers who are clients of a MFI, the Bullock Cart Workers Development Association (BWDA) in Tamil Nadu in India. Most of them are also members of Self-Help Groups (SHG). Sari sellers were chosen because sari selling is a low entry barrier and low growth business. The motivation for this research is to use the theories of social network analysis to improve the lives of microfinance clients by improving their businesses in a way that helps to reduce their poverty. The MFI also benefits because the probability of business failure goes down and the probability of repayment goes up. Finally, if this theoretical approach works for a low growth, low barrier to entry business such as sari selling, it will also work for other low growth, low entry barrier businesses that microfinance clients tend to have.

1.3 Thesis Outline

This section will describe the contribution each chapter will make to the thesis. This thesis outline will give a preview each chapter showing how the thesis is organised.

Chapter 2 focuses on a discussion of the concept of microfinance in general and will start with a definition of microfinance. It was the failure of the development bank approach in 1960's and 1970's that created the opportunity for microfinance. Microfinance started with microcredit in South Asia and Latin America in the 1970's. There will be a review of achievements, contradictions and failures of the three big Bangladeshi MFIs, ASA, BRAC and Grameen Bank, because this model of microfinance was replicated all over the world. Another model of microfinance, Village Savings and Loans (VSLA) will also be described as well as informal financial organisations such as Rotating Savings and Credit Associations (ROSCA) and Accumulating Savings and Credit Association (ASCA). All three of these continue to operate in parallel to microfinance and the VSLA approach has become more popular as the importance of savings for the poor is recognised.

The ideal for microfinance is to become a financially sustainable way to reduce poverty. This led to a debate between the poverty lending approach versus the financial system approach in microfinance with the eventual victory of the financial system approach. However, questions arose over how much, if any, reduction of poverty was caused by microfinance. The myriad problems of measuring the impact of microfinance are described and examples from the literature of both positive and negative impact are discussed. The literature describing the benefits and criticisms will be reviewed with discussion on subjects such as profitability, transparency and economic development or the lack thereof. The chapter will end with research which shows how dependent microfinance clients are on businesses that are low growth and have low barriers to entry and then ask the questions of how reducing poverty can be achieved with businesses like these and what can be changed to make these businesses better agents of poverty reduction?

Chapter 3 is focused on the Indian context this research was done in. Besides having a large microfinance market, it also has a unique form of microfinance: the SHG. The chapter will start with a discussion of Indian culture in general including the caste system. This will be followed by a discussion of Tamil culture, one of the last classical civilisations in existence. The Indian government has been much more interventionist in its banking sector than Bangladeshi government has. The Indian banking sector will be described along with the interventions the Indian government has made in banking and especially the priority sector lending policy aimed at meeting the needs of the poor. As elsewhere, the development bank approach failed in India also which led to the rise of microfinance in India. The size, characteristics and models of Indian microfinance with particular attention paid to the SHG model created by the National Bank for Agriculture and Rural Development (NABARD). The host MFI for this research, BWDA, will be described. Finally, the microfinance crises in India will be portrayed as a cautionary tale of the dangers of rapidly scaling up of commercial microfinance and the questions it raises for the financial system approach of microfinance especially the Andhra Pradesh microfinance crises of 2010. It will also be shown that Indian microfinance has also failed to come up with the answer to the question posed at the end of the last chapter of how the reduction of poverty can be achieved with low growth, low barrier to entry businesses and what can be changed to make these businesses better agents of poverty reduction.

Chapter 4 focuses on social networks and explores the potential answers that social networks provide to questions on how these low entry barrier businesses can become better agents of poverty reduction. If Bhagavatula and Elfring (2010) and Bateman (2010) are right about social networks being the only advantage a poor owner of a small scale, low growth, and low entry barrier business has, then role of social network in reducing poverty is now more important. The term social network is defined and the reasons why social networks are so important will be discussed. Key social network concepts such as homophily, centrality, ego networks, small world networks, scale free networks, diffusion, contagions and network interventions will be explained and the historical foundations for some of these will be described. The workings of connections and influence in networks will be discussed. How networks impact the poor and work in microfinance will be explored. Until very recently, the importance of networks in microfinance has not been recognised. However, researchers have begun to explore how networks impact the work of microfinance and this literature will be reviewed in this chapter to identify the relevant insights. One of them describes the importance of the acquisition and dissemination of information for microentrepreneurs. However, so far, no one has tried to apply Granovetter's (1973) strength of weak ties argument in microfinance to verify that the acquisition of non-redundant information will improve the poverty reduction for owners of low growth, low barrier to entry microenterprises.

Chapter 5 sets out the theoretical framework for this research. This framework contains five sections. The first section will focus on microfinance theory. The chapter will first look at the theories that explain groups in microfinance, such as joint liability groups and self-help groups' work. The irony today is that no MFI claims to use joint liability anymore. The next theoretical area looked at is that related to the importance of social relationships. With exception of Karlan (2001), theories in this area are mostly looking at how social relationships impact the repayment of loans. Karlan, on the other hand looks at how the social network impacts the repayment of loans. The second section looks at social capital and discusses what social capital is, how social capital works and how it impacts microfinance. The third section focuses on social intermediation. If financial intermediation alone does not help poor microentrepreneurs with low growth, low entry barrier businesses reduce their poverty then social intermediation needs to be added. Much of the early theoretical work on social intermediation concentrated on making microfinance clients ready for financial intermediation. However, later work on social intermediation centres on how it can provide a more holistic approach to reducing poverty. The fourth section focuses on social network theory. This research will use Granovetter's (1973) strength of weak ties theory to show how to socially intermediate to build weak bridging ties in the social networks of microfinance clients who own these low entry barrier businesses so that they can acquire the non-redundant information they need to improve the business and reduce their poverty. Granovetter's (1983) observation that the poor rely on strong ties because of the insecurity the poor face. Burt's (1992) theoretical concepts of structural holes and network brokerage and closure will be assessed on how helpful they are for microentrepreneurs needing to get access to non-redundant information. Burt's argument is that bridging structural holes in one's ego network gives access to non-redundant information. The fifth section focuses on Hofstede's Power Distance Index. Hofstede and Hofstede (2005) created a theoretical framework on differences between cultures that had five dimensions. One of the dimensions, power distance, describes how the culture handles inequality. The high power distance index for India indicates a high level of inequality in the society. This poses an additional problem the poor owners of those low growth, low barrier to entry businesses. In order to establish those needed weak bridging ties, these microfinance clients need to connect to those who are more powerful or have more status than them. This means they run the risk of being seen as a supplicant and run the risk of being seen not worthy of establishing the tie.

The above shows that there is a gap in the microfinance theoretical base on the power of social networks and specifically weak bridging ties being used to improve the social networks of microentrepreneurs who own low entry barrier businesses so they can access the non-redundant information needed to improve their businesses and reduce their poverty. The research questions become:

- How can a MFI help their clients bridge the structural holes in their ego networks?
- How can MFIs socially intermediate to help clients establish weak bridging ties in their social networks?

This naturally develops into a hypothesis that if weak bridging ties are introduced into the social networks clients use for their businesses, one should see improvement in the business.

In Chapter 6, the focus is on the methodology used. Taking a qualitative approach, 178 members of 10 BWDA SHGs were interviewed to see the type of businesses they started. Of those who started businesses, all of these were low growth, low entry barrier businesses. The focus of the research was chosen so that it would be on a business owned by a significant number of BWDA clients but has not had major research into it yet. Of the top five by the number of businesses started, sari selling was chosen. Two of them, dairy animals and farming, are businesses that have had much research done on them and there have major work on agricultural value chains recently. Two of the others, tailoring and food products, have very short value chains that would not be of much interest. Sari selling offered much more varied value chains and not much research has been done on saris. In order to put the sari sellers in context, a description of the pertinent elements of the sari industry in India will be provided. Reverse small world technique questions will be used to make these networks as complete as possible. To measure the strength of the ties the focus was on the level of trust in the relationship. A high level of trust indicated a strong tie. A poverty index is used to determine how poor the sari sellers are. There is a discussion of the pros and cons of several indexes and the simplicity and low cost of the chosen index, the Grameen Foundation's Progress Out of Poverty Index (PPI). The other data collected will be on caste, financials of the business and data on network spillover.

The next section describes the methodology for the third research field trip. To get better network data, a variation of a method by Kahn and Antonucci (1980) was used. This method has respondents placing their network contacts on a diagram of concentric circles to indicate how close personally the contacts are. This gives an indication of the strength of the relationship. The respondents will draw lines between the contacts who know each other to get an indication of how interconnected their network is.

The next part describes the network intervention. The sari sellers were asked if they wished to volunteer to train other sari sellers in the areas of the business they knew. Of the 111, 54 sari sellers volunteered. Their names and contact details were collected. A sheet with the names and details of the volunteers was given to the 47 sari sellers in the city of Villupuram, Tamil Nadu. None of the other sari sellers were given this information. The premise of the intervention is that the Villupuram sari sellers will be able contact the volunteers across the branches and be able to get non-redundant information on sari selling and use this to improve their business and reduce their poverty.

Chapter 7 presents the data analysis for all the research field trips. The social networks of 111 sari sellers were mapped concentrating on who they go to for information on customers, finance, markets and suppliers. The discussion will then move on to what the data says about the sari sellers. On average the sari sellers have 42.9 percent probability of living below US$2/day which puts them among the borderline poor. Of course, there is a great variation of poverty level among the sari seller population. The analysis of the data shows that most of the sari sellers have small social networks for their businesses which are focused on strong ties. This confirms what Granovetter (1983) said about the networks of poor people. Because the sari sellers had at least one BWDA contact in their ego networks, a whole network could be created by connecting the sari seller ego networks to their common BWDA contacts. The resulting network showed a parent-subsidiary structure in the network as the branches was shown clearly in the network and that there were no links between any of the branches. This suggested a network intervention of adding weak bridging ties to the sari seller's business networks in order to improve their businesses.

The data analysis from the third research field trip shows again that the sari sellers' ego networks are small and are reliant on strong ties. The use of the degree, betweeness and eigenvector centrality analysis identified the best people in the network and the branches for spreading information. However, using the Girvan-Newman technique showed how fragile the whole BWDA and branch networks were which indicates how easy to break the flow of communication. The addition of weak bridging ties would strengthen these networks. This suggested a network intervention of adding weak bridging ties to the sari sellers' business ego networks in order to improve their businesses and show how Granovetter's strength of weak ties can fill the gap in microfinance theory on how to achieve a greater reduction in poverty.

An organisational snafu during the intervention resulted in only 8 of the 47 Villupuram sari sellers were interviewed at the end of the intervention. However, one Villupuram sari seller the introduction of weak bridging ties had a dramatic impact on the business. A new contact in her social network introduced her to a significant number of new customers which resulted in a significant increase in the amount of business she did during Diwali 2011 compared to Diwali 2010. While interviewing sari sellers who were part of the control group in Pondicherry, one of them wanted BWDA to act as a broker and buy saris for all of their sari sellers at a big discount. Prompted by a BWDA staff member, the sari sellers there exchanged mobile phone numbers with a sari seller who had a relative in Surat, Gujurat, the centre for sari production in India, in order to form a group that could get a big discount buying saris in bulk. While not conclusive, it is indicative of the big impact that weak bridging ties can have on low growth, low barrier to entry businesses owned by microfinance clients. However, the importance of connections in developing and growing business has been shown by Bateman (2010, pages 103 – 105), Piore and Sabel (1984), Pyke (1994), Weiss (1988) and others. These are weak bridges originally that connects these businesses. One can easily imagine the large flow of non-redundant information as these firms first start cooperating. One should expect similar impact on low growth, low entry barrier businesses as they start to cooperate similar to the sari sellers in Pondicherry.

Chapter 8 discusses the results of the research. It discusses how the evidence suggests the benefit of adding Granovetter's (1973) strength of weak ties theory to microfinance. The benefit of adding this theory to microfinance is the improvement of the low growth, low barrier to entry businesses often started by microfinance clients. It will also discuss how microfinance clients need help in adding weak bridging ties to their social networks. There are five ways that MFIs can do social intermediation to help their clients:

- Informal Connections in Same Sector – Similar to the intervention which tried to connect those needing training with those willing to offer it. These can spawn weak bridging ties but the MFI needs to encourage this as was seen in Pondicherry.
- Formal Sector-Based Network – This formalises the above by forming an association for all the clients in the sector. This network can also spawn weak bridging ties. In India, a formal association has the additional benefit of being able to negotiate loans from banks in India. BWDA has started to

work on this but discovered it lacked the capacity to do this. It is applying for a grant to fund capacity building in this area.

- Acting as a Broker – Another way a MFI can help those who own low growth, low entry barrier businesses is for the MFI to act as a broker between the owners of these businesses and their suppliers. The owners get a reduction in their costs because the discount the MFI can get. However, MFIs need to obtain industry knowledge to ensure the relationship fully benefits their clients. By doing this non-redundant information can flow through this relationship in addition to supplies. BWDA is very interested in doing this and is attempting to find a sari industry expert to advise them.
- Retired Industry Mentors – BWDA has used retired business people to help with its financial intermediation. It can extend this by using retired sari industry personnel who are empathetic to BWDA's goals, for example, to mentor sari sellers. Invariably, non-redundant information will flow through this weak bridging tie.
- The MFI can reduce the insecurity felt by their poor clients. If the poor rely on strong ties because of insecurity (Granovetter, 1983) then reducing their insecurity would make them more willing to explore building weak bridging ties.

Chapter 9 starts by summarising the research. This will be followed by a discussion of the limitations of the research, what further research needs to be done and the implications of the research. The key implication of this research is that if adding weak bridging ties to the social networks the sari sellers use for business helps them improve their businesses then adding weak bridging ties to the social networks of microfinance clients who own other low growth, low barrier to entry businesses can help to improve these also. This implication shows the strength of weak ties in microfinance.

1.4 Chapter Conclusion

This chapter introduces the subject and defines the problem of microfinance clients starting low growth, low entry barrier businesses that do not help to reduce poverty. This research makes the theoretical contribution to microfinance by applying social network theory, specifically Granovetter's (1973) strength of weak ties argument, to address the problem of how to grow these low growth, low barrier to entry businesses tended to be started by microfinance clients by introducing weak bridging ties to their social networks.

2 Chapter Two - Microfinance

2.1 Chapter Summary

This chapter focuses on the concept of microfinance. After defining microfinance, the reach of microfinance and the background on the conditions that cause microfinance to be used as a poverty reduction tool will be discussed. The poverty lending approach and the financial systems approach to microfinance will be described. This will be followed by a description of the microfinance model in Bangladesh which is the most replicated microfinance model and its conversion to the financial systems approach. The chapter will then turn to subject of poverty. After a definition of poverty is given, various ways of reducing poverty in microfinance will be described. This leads to the subject of how much impact microfinance has had. Methodological problems and validity issues will be discussed. This will be followed by a discussion on the strength and weaknesses of microfinance. One of the reasons that microfinance does not produce radical transformation is because its clients often start the same, tiny, low growth, low entry barrier businesses. The chapter will conclude with an investigation on why this is the case and show that if the client has access to the appropriate information, the ability to act on it and the social network to grow the business, real poverty reduction can be achieved.

2.2 Definition of microfinance

The definition of microfinance has changed over the years. Originally it was synonymous with microcredit. For Khandker (1998, page 1), the purpose of microcredit is for the poor to become self-employed and escape poverty. It is one of the many ways to increase the incomes and the productivity of the poor. However, most other people now define microfinance as the provision of financial services to the poor that includes savings and other products. For Diop et al (2007, page 27), microfinance is a collection of low cost, short term financial products for people who do not have access to traditional financial services including individual and group loans, savings, cheque cashing, payment orders, microinsurance, loan guarantees and remittances. Kamath (2009, page 86) defines microfinance as the provision of services which include savings, loans, payment services, money transfers and insurance to poor, low income households and microenterprises. Ledgerwood (1999, page 1) gives a similar definition for microfinance saying that it is the provision of financial services to low income clients which include savings and credit with some MFIs providing payment services and insurance. Platteau and Siewersten (2009) say that microfinance is the practice of providing small scale financial services to the world's poor, mainly loans and savings and increasingly other products like insurance and money transfer. For Johnson and Rogaly (1997, page 1), when they refer to microfinance they mean very small deposits and loans. Sundaresan (2008, page 1), somewhat more pessimistically, defines microfinance as a mechanism that attempts to deliver core financial services to the poor. The definition of microfinance this research will be using is financial services for the poor which includes credit, savings, insurance and remittances among other services.

2.3 The Reach of Microfinance Today

Today microfinance is widespread throughout the world. Worldwide there are an estimated 10,000 MFIs, ranging from non-profit NGOs to Credit Unions and Commercial Banks. The 1,300 MFIs who at the end of 2008 were reporting to the Microfinance Information eXchange (MIX) have 70 million borrowers and a similar number of savers. Total loan portfolio stands at US$ 40bn. In the past years key volume indicators have been growing by 20-30% per year, more in some countries (Platteau and Siewersten, 2009).

The stock of foreign capital invested in the sector, which more than tripled to US$4 billion between 2004 and 2006, keeps on growing and now stands at over US$10 billion. Much of it is held by specialised microfinance investment vehicles, with an increasing proportion coming from the private sector that sees investment in microfinance as an attractive asset. Commercialisation has come to microfinance although at the same time there is increasing interest in achieving the triple bottom line (financial, social, and environmental) in microfinance (Platteau and Siewersten, 2009).

2.4 Microfinance Background

The poor have had financial services before microfinance but these were provided by informal credit markets (Sundaresan, 2008, page 4). According to Malkamäki et al (2009), informal groups were classified under the following five types:

- Welfare/clan group
- Rotating Savings and Credit Associations (ROSCAs)
- Individual Accumulating Savings and Credit Associations (ASCAs)
- Managed ASCAs
- Investment clubs.

Welfare/Clan Groups do not intermediate funds but provide financial support for members and their next of kin in the case of illness, death etc. ROSCAs and ASCAs facilitate saving and lending within groups. In a ROSCA, savings are collected at a group meeting and the whole pot is given to one member who has not yet received the pot. This is done usually on a monthly basis. In the case of ASCAs, instead of allocating the pot to someone, funds are lent to willing borrowers with interest. The interest paid on the loans will then accumulate in the group fund. Investment clubs are more recent phenomena. People come together to form a group in order to invest in property or business. Several investment groups also invest in the stock market.

After World War II, the formalisation of the credit markets for the poor began as part of the effort to reduce poverty. In the 1950's governments and international aid donors set up development finance institutions such as development banks to provide cheap credit to farmers. However, the credit provision for poor people was transitory and limited because fluctuating whims of governments and donors, poor investment decisions and low repayment rates which resulted in development finance institutions being unable to sustain their lending programmes. The tendency of governments to waive outstanding and overdue loans at election time also helped undermine the system (Johnson and Rogaly, 1997, page 5). It was not just the low repayment rates and frequent recapitalisations that caused the failures of these development banks but also the cheap credit offered to well off farmers (Armendáriz and Morduch, 2010, pages 9 -10; Ledgerwood, 1999, page 2).

The failure of the provision of subsidised agricultural credit in the 1970's began a search for more market based solutions that created more sustainable approaches. Formal microfinance was started in response to this (Ledgerwood, 1999, page 2). Microfinance fit these requirements with Grameen Bank, ACCION International and Fundación Carvajal leading the way in the 1970s. Bank Rakyat Indonesia moved away from providing subsidised credit and took a more market oriented approach. Sundaresan (2008, page 4) added SEWA Bank in India as one of the microfinance pioneers. He added that the efforts of these microfinance pioneers showed that poor borrowers, especially women, can utilise small loans to create microenterprises but can also have excellent repayment records. Ledgerwood (1999, page 2) shows that the pioneers were followed by many MFIs in the 1980s that provided credit and training. However, it was found that training required subsidies. While Grameen Bank pioneered the peer-group monitoring method to reduce lending risk, Johnson and Rogaly (1997, page 7-8) questioned the degree with which this method was implemented by staff.

Harper (2001, page 6) argues that the success of microfinance institutions is in large measure due to the adoption of the strengths of money lending and the local savings group and their future depends on how successfully MFIs continue to match the merits of money lending and the local savings groups and, at the same time, overcome their disadvantages. Banerjee and Duflo (2011, pages 166 – 167) agree that microcredit is moneylending reinvented for a social purpose. Where MFIs diverge from moneylenders, they say, is that MFIs remove all flexibility from microcredit. Johnson and Rogaly (1997, page 21) provide an example of the merits of money lending from Cochin, India. A professional moneylender charges his poor clients an APR of around 300 per cent. But, despite the very high interest rates, his clients have a favourable view of his service. Why? This is because the moneylenders do not needlessly harass clients over repayment but exhibit a willingness to accept loan losses. The moneylenders know their clients well enough that they will not lend more than they think the client can repay out of normal income. As will be seen later on, some Indian microfinance institutions were unable to replicate these features in their service.

2.5 Approaches to Microfinance

Robinson (2009) described two main approaches to microfinance. The first is the “poverty lending” approach which seeks to reduce poverty using foreign aid and subsidies. Second is the “financial systems” approach which focuses on developing savings and lending services that meet the needs of poor and non-poor households in a profitable manner.

Robinson championed the “financial systems” approach. The World Bank also tended to favour the “financial systems” approach. It sees microfinance less as an antipoverty crusade and more as a double bottom-line business—a business that seeks at one and the same time to make surpluses and serve a social purpose. The financial systems approach encourages microfinance providers to cover their own costs with few subsidies. Ideally, funds for borrowing would come entirely from savings, commercial debt, for-profit investment, and retained earnings rather than from donors. The providers would be regulated and supervised for-profit companies rather than NGOs. There would be no need for an exclusive focus on women, and borrowers could just as easily be individuals as members of a group. Some advocates of the approach also believed that the sharp focus on targeting the poor should be softened. First, they argued that working with better-off groups as well as with the poor will improve revenues, allowing providers to expand their services to all classes more quickly. Second, they warned against lending to the “economically inactive” poor who might encounter difficulties with loans. They tend to believe that the “economically inactive” poor are best helped by nonfinancial social programs of safety nets. Morduch (1999) and Diop et al (2007, page 29) said offering financial services to the poorest of the poor is not compatible with financial sustainability for MFIs

Morduch (2009) notes that a schism has opened up between those seeking primarily sustainability, roughly equating to the “financial systems” approach, and those primarily seeking economic and social impacts roughly equating to the “poverty lending" approach. Morduch said that in order to resolve the schism experimentation and innovation is required. However, the success of Grameen Bank has led to replication rather than innovation.

2.6 Bangladeshi Microfinance Model

The replication of the Grameen Bank model has meant that the model of microfinance practiced in Bangladesh became the most widely copied microfinance model in the world. Because it was the most replicated model, it was the model most tested to see what, if any, poverty reduction it achieved. The model Grameen created was also used by two of the other big microfinance organisations in Bangladesh, ASA and BRAC.

For Hulme (2009), the history of Grameen Bank is seen as a verification of Robinson's (2009) "financial systems" approach. After the initial experiment in Jobra, further trials were not as successful. Yunus (1998) thought this was because they had either used the money unwisely or were untrustworthy. So, after some time, a model was created that did the following:

- Lending to poor rural women because they were less likely to misuse loans and were more reliable for repayments
- Starting a Joint Liability Group (JLG) of 5 women creating social collateral and peer screening process. In a JLG, borrowers guarantee each other's loans so that if a JLG member does not repay, the other members are liable.
- Establishing centres of six JLGs that met each week to apply for loans and make repayments
- Charging higher interest rates than the government and NGOs
- Compulsory microsavings each week for financial discipline and the creation of financial collateral
- Simple, standardised products that required regular small repayments
- Hiring and training bright, young graduates to administer services to minimise corruption

The invention of the group lending model allowed Grameen Bank to grow quickly. This model had the poor being guarantors to each other. With this model, the

Grameen Bank was able to effectively outsource monitoring and enforcement to group members (Armendáriz and Morduch, 2010, pages 12 -13).

Originally, the Grameen Bank was a part of the state-run Bangladesh Krishi Bank (BKB). To prevent from becoming like BKB, Yunus negotiated through his connections a license for Grameen as an independent bank in 1983. With donor funding, Grameen Bank expanded to having 1 million clients by 1991. In the 1980's and 1990's, a lot of visitors came away impressed and resolved to replicate the Grameen model. In the mid 1990's, Yunus was promoting microcredit as a panacea to reduce poverty. The American NGO Results came up with the idea of a Microcredit Summit. Some within the Summit movement wanted to focus on microfinance and not just microcredit. However, this did not fit into Results campaigning style. They wanted the simple message that Grameen Bank was a panacea and the world should replicate it (Hulme, 2009).

Ironically, according to Hulme (2009), it was at the turn of the century that Grameen Bank experienced a repayments problem. The longer clients stayed with Grameen Bank, they tended to take larger and larger loans which they could not service with their income. Branch managers gave them larger loans to prevent defaulting. The crisis came to a head with an article in the Wall Street Journal (Pearl and Phillips, 2001). Grameen Bank took a three prong approach to resolve the crisis. First, it rescheduled and wrote off loans. Second, it recapitalised itself with donor funds to offset losses. Third, it redesigned the bank's products so they became more profitable and could compete with other MFIs in Bangladesh. It took Grameen Bank 25 years to get 2.5 million clients. It took 3 years for the bank to get its next 2.5 million clients after the redesign. This became a vindication of moving from what Robinson (2009) called the "poverty lending approach" to the "financial systems" approach. This redesign was called Grameen II by the bank. It included:

- A major focus on savings with voluntary savings, term deposits and a pension scheme.
- Flexible basic loans for variable amounts, variable terms, negotiable repayment schedules and interest rates determined by type of loan.

- Abandonment of joint liability
- Focused “struggling members” programme for beggars to prepare them for microfinance.

After Grameen II, Grameen found that not only was it more popular with the poor; it was also more popular with middle class and wealthy borrowers. The reason for this was they found the services and products offered to Grameen Bank members attractive. These services and products include large loans, educational loans, educational scholarships and the Grameen pension savings. What was also attractive was that these services were offered in a corruption free, friendly and relatively less bureaucratic environment. Grameen staff found it hard to resist the membership applications from the wives and daughters of middle class and wealthy villagers because of the pressure to recruit. Grameen found itself in a strange place because philosophically Grameen rejects the argument that by taking everyone on it will be able to expand its business and serve everyone, including the poor and very poor, better (Rutherford et al, 2006).

The Bangladesh Rehabilitation Assistance Committee (BRAC) started its development journey in 1972 as a small relief organization with a few employees. It now employs over 100,000 staff to carry out development activities in sixty-nine thousand villages in Bangladesh. It has also expanded its activities in Afghanistan, Sri Lanka, and several African countries. By 2009, BRAC is a conglomeration of organizations that typically combine three features in complex ways. The first feature is a projection of the image of a non-profit nongovernmental organization comprising an education program, a health program, and a social development, human rights, and legal services program. Second, the BRAC economic development program, with a strong microfinance component at its core, displays the features of a for-profit nongovernmental organization that transfers profits from its business operations to the BRAC poverty alleviation program and vice versa. Third, BRAC operates many profit-oriented business enterprises, including industrial concerns, a bank, and a university (Mannan, 2009).

BRAC’s savings and credit operations combine the advantages of a standard bank with mechanisms long used in traditional group-based modes of informal finance.

Similar to the Grameen model, BRAC formed their clients into groups called "village organizations". In village organizations, BRAC applies peer pressure on group members to attend weekly meetings, save and borrow money, and repay through weekly instalments (Mannan, 2009).

Mannan (2009) describes how BRAC tries to link its clients to the markets. For example, BRAC runs the largest poultry industries in Bangladesh. The poultry industry requires feed for its birds; maize is the main ingredient. BRAC established a chain of contract farmers who buy hybrid maize seeds on credit. BRAC then buys back the harvest at predetermined prices to produce poultry and cattle feed at its own feed mills. These poultry industries produce day-old chicks and sells to group members on credit. The clients then raise the chicks and collect the eggs. What they produce is collected by BRAC to process in its automated broiler processing plant to supply the dressed chicken to meet the demands of a growing market. However, clients are largely unable to change and escape from the cycle of poverty. BRAC claims that poor borrowers benefit from its loan operation as they escape poverty and accumulate assets (BRAC, 2006), but this claim contradicts a recent finding that shows that income from BRAC-related activities is significantly lower than income from other sources (Ullah and Routray, 2007). These fast-growing industrial and business enterprises that link clients to markets are not financed by BRAC Bank. Instead, it borrows heavily from commercial banks. In 2006 its total indebtedness to those banks stood at $91 million (Mannan, 2009).

Besides the lack of progress on poverty, another problem is the client's dependence on BRAC. Mannan (2009) quotes a senior staff member arguing,

"Why should they become independent as groups are continuously receiving finance and benefits from BRAC?"

Independence from BRAC may also mean the loss of trained and skilled persons who work for BRAC's internal markets (Mannan, 2009).

Mannan (2009) shows how BRAC has evolved through three phases journeying from the "poverty lending" approach to the "financial system" approach just like Grameen Bank. The first phase (1972–1990) started with donor financed microcredit operations that were "social". In the second phase (1990–2000), BRAC needed to discipline itself in light of ever increasing activities that gave rise to a development bureaucracy. It redesigned its governance, program management, and organizational structures to find synergies between its development objectives and its business plan. In 1997 it adopted a strategic plan to become more of a business corporation by 2007 rather than a pure development-oriented organization. The current third phase (post-2000) BRAC has gradually shifted from donor-financed microcredit to market-financed microcredit programs under an economic rather than a social model. The BRAC model, although rooted in the effort to alleviate poverty, is always searching for alternative avenues in the business sector for funding and financial sustainability.

BRAC can transfer capital between the non-profit voluntary sector and the for-profit business sector, which blurs the boundary between non-profit and for-profit. The ability to do this is an advantage to BRAC but also a problem. BRAC's overture to business has been challenged by civil society. Since 1994, it has faced periodic religious opposition from rural society. The civil society actors challenged the operation of a bank by BRAC, a voluntary organization. Bangladesh's High Court ruled against the operation of the BRAC Bank, but the Supreme Court overturned the decision. BRAC was even fined for evading taxes (Mannan, 2009).

Unlike Grameen Bank and BRAC, the Association for Social Advancement (ASA) started as a radical social action group. It transitioned itself into a conventional NGO. A serious cyclone in 1985 and devastating flooding in 1987 and 1988 allowed ASA to increase dramatically its cash support from international donors and to establish itself as a major mainstream NGO. Some of the cash was given as loans to cyclone or flood victims, and the borrower's propensity to repay took management by surprise. By 1990, in order to give the poor better incomes and reduced their poverty, ASA felt that there is no alternative to credit (Rutherford, 2009, Chapter 5, page 1).

ASA set up groups similar to those of BRAC and Grameen Bank where the group is called “samity”. However, in the early 1990’s its credit programme was of poor quality. Several thousand group members waited for several years to get credit (Rutherford, 2009, Chapter 5, page 12). By the end of 1996 ASA had half a million borrowing members and a billion-taka loan portfolio. Microcredit under ASA is simple, practical, measurable, and busy, characteristics that fitted snugly with the temperament of its founder (Rutherford, 2009, Chapter 6, page 1). At the end of 2008, ASA had a loan recovery rate of 99.6 per cent. Armendáriz and Morduch (2010, pages 1 – 2) say that the revenues have fully covered costs since 1993. However Rutherford (2009, Chapter 6, Page 18) says ASA became self-reliant in 2002.

ASA's loan officers and branch managers soon found that the standard claim that microcredit helped poor people escape poverty by investments in small businesses was hollow. They saw with their own eyes that ASA's loans were used for all manner of purposes, and not just for business investment. Management at some microcredit NGOs refused to believe the evidence of their own workers but ASA did. But ASA kept it tactfully quiet. It knew that international support for microcredit depended to a great extent on the microenterprise loan idea. But ASA eventually dropped the aspiration to make all its members self-reliant and described a new kind of loan product, designed expressly for real microentrepreneurs. A few of these were offered alongside the core loan. This was an early indication that ASA had understood that the core microcredit loan was in fact a multipurpose loan only sometimes used for business (Rutherford, 2009, Chapter 7, Page 10). The reason for this was that the three most important things to poor people are education of their children, food and shelter and if a loan could help pay for these three things when they had no other resources, they would use it (Maes and Reed, 2011).

In the 1980’s and 1990’s many MFIs began to develop around the world with many following the Bangladeshi microfinance model. Many of these MFIs were largely funded by governments and aid agencies. These MFIs focused on credit (Sundaresan, 2008, page 5). While there was a growing recognition of the importance of savings (Armendáriz and Morduch, 2010, page 171; CGAP, 2009b; Collins et al, 2009; Ledgerwood, 1999, page 2; Sundaresan, 2008, page 5), operationally, the focus remained on credit. This can be seen when in 2005 the United Nations wanted to recognise financial inclusion as a tool to reach the Millennium Development Goals, it declared the International Year of Microcredit, not microfinance (Sundaresan, 2008, page 5; UN, 2005).

When Dr. Yunus won the Noble Peace Prize in 2006, some notable people in microfinance such as Elizabeth Littlefield (2007), the former CEO of Consultative Group to Assist the Poor (CGAP) predicted there would be a backlash against microfinance. She and others knew that predominant Bangladeshi microfinance model did not meet all of the claims its promoters have made over the years. Armendáriz and Morduch (2010, pages 4 – 5) said there were four myths surrounding microfinance:

- Microfinance is only about providing loans. Savings is important but doubt that for the poorest that savings is more important.
- The high repayment rates are due to the group lending model.
- Microfinance has a clear record of social impacts and has shown to be a major tool for poverty reduction and gender empowerment. While microfinance can make a difference, it is not a panacea and cannot be expected to work everywhere and for everyone. Few rigorous studies have been completed so far and these show mixed results.
- Most microlenders are both serving the poor and making profits. Profitability has been elusive for many MFIs.

Cull et al (2009) state there is a basic tension between meeting social goals and maximising financial performance. Therefore, trade-offs need to be made between contracting mechanisms, level of commercialisation, rigor of regulation and levels of competition. Meaningful interventions in microfinance mean making deliberate choices and weighing trade-offs carefully.

The focus on the Bangladeshi microfinance model has overshadowed other microfinance models such as Village Savings and Loans Associations (VSLA) which do not follow the "financial systems" approach. VSLA is a microfinance model that provides simple savings and loan facilities in mainly rural areas. The model has group members contributing savings which are then lent out to members. After a year, the accumulated savings and profits from the loans are distributed back to the members (VSLA, 2011).

The tension between meeting social goals and maximising financial performance, elusive profits and lack of a clear record of social impacts brings the "financial system" approach into serious question. The 2010 microfinance crisis in India, as will be seen below, raises even more questions for this approach to microfinance. But, more importantly, it identifies that the central problem for the predominant Bangladeshi microfinance model is that it does not deliver the amount of poverty reduction envisaged by the founders of the modern microfinance movement.

2.7 Poverty and Poverty Reduction

Before the issue of reducing poverty in microfinance can be discussed, poverty must be described and defined. The World Bank estimates that 1.1 billion people are living below US$1 a day and 2.7 billion people living under US$2 a day (Sundaresan, 2008, page 1). For Khandker (1998, page 1) poverty is the result of low economic growth, high population growth and extremely unequal distribution of resources. In Bangladesh, poverty is caused by lack of physical and human capital. To combat this, employment needs to be created and human capital developed.

How is poverty defined? Conventionally, poverty is defined as an income shortfall measured against a standard (Copestake et al, 2005, page 23). However, others have a broader definition of poverty. Johnson and Rogaly (1997, page 73) define poverty as either lack of income, vulnerability to income fluctuations or powerlessness. Diop et al (2007, pages 29 - 30) also agree that vulnerability is another dimension that needs to be added to the definition of poverty. For them, vulnerability refers to the tendency that the poor are more prone to fluctuations in income and find it difficult to spread that income over time to meet basic needs all of the time. In addition, they also state that poverty is not being able to meet basic needs in both economic and social development. Even when progress has been made on income poverty, this does not mean social goals are closer to being met (Copestake et al, 2005, page 92).

How is poverty measured? Diop et al (2007, page 31 - 32) identify two measures that are widely used to measure poverty. First is the poverty line method – this method compares the household income against a threshold (the poverty line) that represents the income needed to meet basic needs in that country. Second is the unsatisfied basic needs method – observes the extent that basic needs are met or not. The definition of what are basic needs is the central difficulty with both methods

Diop et al (2007, pages 33 - 37) identify two theories of how microfinance can help reduce poverty. The first theory is that MFIs should target the less poor whose enterprises will create jobs for the poorest. The transaction costs for the MFIs are lower than targeting the poorest. The criticisms of this approach include that it reinforces local hierarchies and the creation of jobs does not necessarily benefit the poorest. The second theory is that MFIs should target the poor directly. However this means high transaction costs and much higher interest rates.

Comim (2007, pages 48 -51) reviews the literature to identify the issues microfinance has in reducing poverty:

- Mission Drift – The tendency for MFIs to serve wealthier clients over time
- Lack of depth – The poorest are the least likely to benefit from microfinance. However, this is based on an income only definition of poverty. The poorest could benefit in non-monetary ways from microfinance.
- Women's empowerment – It has been found that this is not automatic under microfinance. Before and after income comparisons provide only an incomplete picture of women's empowerment
- Wider impacts – Microfinance can impact the poor non-borrower community but these are very difficult to assess.

There has been recognition that the poorest do not benefit from microfinance. Two different approaches are being tried to reduce the poverty of the poorest. BRAC created the Targeting the Ultra Poor programme that has had some success of graduating the poorest out of extreme poverty. This programme uses asset transfers, business development training and ensures minimum subsistence needs are met and assists in helping the poorest set up sustainable livelihoods. It is only at this point that these people become eligible for loans. The TUP programme was done in Bangladesh originally and now has expanded to Ethiopia, Haiti, India and Pakistan (Huda and Simanowitz, 2009; Huda et al, 2009; Huda et al, 2011). The other approach is using conditional cash transfers. This programme entitles the very poor to a small cash sum on a conditional basis. Conditions can be taking the children for health checks or ensuring the children attend school. Unlike the BRAC TUP programme there is no attempt to build a sustainable livelihood. The cash guarantees that the minimum subsistence needs of the poorest are met (Bateman, 2010, pages 121-122, 167-168).

2.8 Microfinance Impact

To understand the impact of microfinance, one needs to measure the poverty reduction actually caused by microfinance. It is the causal link that is one of the most contentious issues in microfinance. There has been research that has claimed that microfinance has reduced poverty and research that claims it has not. There have even have been claims that microfinance has had a negative impact on the reduction of poverty.

A small sample of microfinance impact studies shows the variety of results obtained. Imai et al (2010) confirmed a significant positive effect of MFI productive loans on multidimensional welfare indicator. In addition, they found that loans for productive purposes were more important for poverty reduction in rural than in urban areas. However in urban areas, simple access to MFIs has larger average poverty-reducing effects than the access to loans from MFIs for productive purposes. In a 2001 study, BASIX in India found that half of its best established microcredit customers reported income increases, a quarter stayed the same and a quarter saw their income decline (Armendáriz and Morduch, 2010, page 268). Beck (2010) claims that rigorous microcredit studies find mixed results on the access of credit by the poor.

One of the biggest promoters of microfinance is the Microcredit Summit Campaign. This NGO gathers those involved in microcredit around the world with the goal of extending the outreach of microfinance. While savings is mentioned, the focus remains on microcredit. Their Global Microcredit Summits are the largest gatherings of the microfinance community. Table 1, presented at the Global Microcredit Summit 2011, shows where the campaign claims to have accomplished in outreach.

Microcredit Summit Campaign Figures as of December 31, 2010	
Data Point	**Finding**
Number of MFIs Reporting (data from 12/31/97–12/31/10)	3,652
Number of MFIs Reporting in 2011 (data from 12/31/10)	609
Total Number of Clients (as of 12/31/10)	205,314,502
Percent of Poorest Clients Represented by MFIs Reporting in 2011	56.5%
Total Number of Women (as of 12/31/10)	153,306,542
Total Number of Poorest Clients (as of 12/31/10)	137,547,441
Total Number of Poorest Women (as of 12/31/10)	113,138,652

Table 1 (Maes and Reed, 2011)

The Microcredit Summit Campaign has set some ambitious goals. The first goal is to ensure that 175 million of the world's poorest families, especially the women of those families, are receiving credit for self-employment and other financial and business services by the end of 2015. The campaign believes that this goal can still be met by 2015 despite the crisis in Andhra Pradesh (see Chapter 3). The second goal is to ensure that 100 million families rise above the US$1.25 a day threshold, adjusted for purchasing power parity, between 1990 and 2015. The campaign believes it will not be able to meet this goal. The campaign believes that going above US$1.25 a day threshold will move the client from mere subsistence to being able to provide a better life for her family and will also mean she is likely to belong to a rich social network. The campaign admits that it has a major problem in measurement because there is no poverty baseline for clients when entering a microfinance programme. Estimations made for the campaign claim that 2 million households in Bangladesh moved above the US$1.25/day threshold between 1990 and 2008 and that 9 million households in India moved above the US$1.25/day threshold between 1990 and 2010 (Maes and Reed, 2011).

These estimations are challenged today as there is growing uncertainty about the fruits of microfinance. Part of this is the backlash predicted by Littlefield (2007) above. The publicity surrounding the Nobel Prize reminded Bangladeshis again and again that microfinance, their country's most famous invention, is the single best antidote to poverty. In that case, why does Bangladesh still suffer so much poverty? Exactly where are all these empowered women and their successful microenterprises? (Rutherford, 2009, Chapter 9, page 2)

For Rutherford, (2009, Chapter 9, page 11) measuring the impact of microfinance on poverty is hard. It is not easy to understand the extent that microfinance improves incomes, or promotes microenterprises, or has some other effect on poverty or on poor people, such as improving their health or advancing their education or helping them to exercise their rights or to influence local or national politics.

In an attempt to put this issue to rest, in the late 1990s, Khandker (1998) undertook a large survey of 1,798 households in Bangladesh for the World Bank. It showed that households with someone in a microcredit group increased their expenditure on food and other goods and services more than households that lack such a member but are otherwise similar. It was presumed that they had increased their income. They were also better able to smooth consumption (meaning that savings and credit help them to have something to eat always, rather than just when they happen to have earned some income). This didn’t sound like panacea to end of poverty and some practitioners were disappointed (Rutherford, 2009, Chapter 9, page 11).

Despite the disappointment, Khandker (1998) study was used to prove microcredit reduced poverty. Khandker (1998, pages 60 – 61) showed that participating in a microcredit programme had a significant impact on per capita expenditure for women and the impact on consumption was twice as much for women than men. Borrowing by women improved the nutritional status of children. On the village level, microcredit increased household output by about 50 per cent. Grameen Bank and BRAC had positive impacts on average household income but only Grameen Bank had a positive and significant impact on rural wages. Consumption for 5 per cent of participants increased to the point that they were above the poverty line. This suggested that microcredit could reduce poverty in Bangladesh by about 1 per cent a year. Khandker (1998, page 81) also showed that Grameen Bank and infrastructure development projects appear more cost effective than other programmes in increasing consumption among Bangladesh's rural poor.

However, Khanker's (1998) study also contained some warnings. First, better credit availability does not ensure growth in income and employment in the rural nonfarm sector. Skills development, market promotion and other policies to enhance productivity must also be promoted. Plus, government facilitate growth by investing in infrastructure (Khandker, 1998, page 81). Second, credit-based interventions are best targeted to those among the poor who can productively use microcredit to become or remain self-employed. However, many women lack the entrepreneurial skills to become self-employed (Khandker, 1998, page 143). Third, if the reduction of poverty is achieved mainly through increases in consumption rather increases in income and productivity then poverty reduction impacts are difficult to sustain. Loan size matters as larger loans are needed to reduce poverty on a sustained basis (Khandker, 1998, pages 148- 149). Many studies have attempted to measure the benefits of microcredit in terms of income, employment and other socioeconomic outcomes but the analysis has largely failed to indicate whether measured benefits are due to programme participation (Khandker, 1998, page 9).

Khandker's study did not remain uncontested. Morduch (1998), ran an analysis of the data that Khandker (1998) had gathered and found the consumption smoothing but did not find an increase in consumption (Rutherford, 2009, Chapter 9, page 11). Duvendack and Palmer-Jones (2011) applied the propensity score matching method along with sensitivity analysis to the study done by Pitt and Khandker (1998), which is the same study as Khandker (1998) on Bangladeshi microfinance, shows that the relationship between microfinance and the outcomes is not causal. This despite an earlier paper by Duvendack (2010) concluding that doubts remain about the quality of the impact estimates obtained through advanced econometric techniques such as propensity score matching and sensitivity analysis. Roodman and Morduch (2009) redid the analysis of the Khandker (1998) again. This time they got negative impacts. They do not claim lending to women does harm but rather that the study failed to get rid of endogeneity.

Johnson and Rogaly (1997, page 73) identified three methodological problems faced by impact assessments of microfinance on the lack of income:

1. The respondents may give false information if loan was used for purposes other than the one given to MFI
2. Establishing causality to the loan requires knowledge of all the client's sources and use of funds
3. It is difficult to establish what would have happened if the loan had not been made

Armendáriz and Morduch (2010, page 267) agree with the last point that the key question is how have the outcomes changed with the intervention of microfinance relative to what would have occurred without the intervention. Agreeing with the point made by the Microcredit Summit Campaign, Copestake et al (2005, page 69) state that at most times there are no base line studies to compare the outcomes to. Johnson and Rogaly (1997, pages 10-11) imply that microfinance impact assessments are too narrow by asking for a focus on microfinance's influence on social relations and the circumstances which reproduce them.

Another serious problem with microfinance impact studies is selection bias. Without controlling for self-selection, estimated impacts will be misleading by making microfinance seem more positive than it really is (Armendáriz and Morduch, 2010, pages 269 – 270). In several studies such as Coleman (2006) and Alexander (2001), microfinance clients are wealthier than non-clients. Hashemi (1997) found half of those who chose not to participate in BRAC's microfinance programme did so because they felt they could not generate enough income to pay off the loans. A quarter did not do so because of religious and social sanctions on attending meetings away from home with nonfamily males. Another reason selection bias is important is that the biases can be large. McKernan (2002) found that not controlling for selection biases can lead to overestimation of the effect of microfinance by as much as 100 per cent.

One way around selection bias is for researchers take advantage of natural experiments which remove self-selection among clients. In his study, Coleman (2006) chose 14 villages in Thailand where eight had a village bank at the start of 1995 and the other six villages had to wait a year for a bank. But all villages were organised into groups. As mentioned above, he found that the wealthy participated and benefited from microfinance (Armendáriz and Morduch, 2010, pages 276 – 278).

In agreement with Coleman are Hulme and Mosley (1996) who also show that microcredit has a more significant impact on the incomes of the non-poor than the poor. They reason that this is because the poor have a greater need to divert microenterprise loans to consumption, sell assets because of shocks and have more limited investment opportunities than those who are better off. In order to improve microcredit impact, they suggest that savings facilities, simple insurance and small consumption loans with flexible repayment periods are provided to the poor. However, they realise that this may not work in all contexts.

One of the newest ways of getting around selection bias in microfinance impact studies are Randomised Control Trials (RCT). RCT finds ways around the problems of impact evaluations by using a methodology used in clinical medical research. A randomly chosen group is chosen to receive microfinance services while another group is randomly selected not to receive these services. The difference between the average outcome of the treated group and the average outcome of the control group is an accurate indication of the intervention's average impact. However, randomisation is not always feasible. Spillover can be a problem if someone in the control group can benefit from knowing someone in the treatment group (Armendáriz and Morduch, 2010, pages 293 -305).

Banerjee and Duflo (2011, pages 168 – 171) try to answer the question of does microfinance work for the poor? They found the answer depended on the definition of work. They found that no independent research had been done to answer this question. The MFI Spandana agreed to do a RCT on the impact of microfinance on poor people in two different neighbourhoods in Hyderabad in 2008. They found clear evidence that microfinance was working. They defined working as those in the Spandana neighbourhood being more likely to start businesses and more likely to have purchased large durable goods. Those households who did not start businesses in the Spandana neighbourhood were consuming more. Those who had started businesses were consuming less so that more money can be put into the business. But, they found no evidence of radical transformation. They found no evidence that women were feeling more empowered nor did they see any difference in spending on education or health between the treatment and control groups. The percentage of families starting businesses went up from 5 per cent in the control group to 7 per cent in the treatment group. While more studies needed to be done, they believed they had shown that microfinance was working and had earned its rightful place as one of the key instruments in the fight against poverty. In a report by Développement International Desjardins (DID, 2011), Esther Duflo later added:

> "It is true that microfinance results on an individual scale are modest – but they are real. And because they affect 200 million people, they have a multiplier effect making this one of the strongest programs in recent decades."

Of course, no method is without its weaknesses. Armendáriz and Morduch, (2010, pages 305 – 308) summarise the criticisms of RCT. First, RCT provides an estimate of the average impact only. It does not do median impact or the distribution of impacts. Second, it may be difficult to generalise form RCT results due to lack of external validity. Third, there may be major spillovers which remove the advantages of randomisation. Fourth, attrition and contamination can impact RCT results. Fifth, there is the ethical issue. Is it right to deny those who need the treatment access to it? Bateman (2010, pages 34 - 35) adds that RCT does not consider the displacement effects of new microenterprises displacing existing ones and the effects of the failure of client microenterprises.

Comim (2007, pages 56 - 58) proposes another way to measure microfinance which he calls the capability perspective. This perspective recognises that capabilities cannot be measured solely in the terms of resources but what the individual is capable of doing and being with these resources. He agrees with Sen (1999) who argues that it is difficult to conclude that equal levels of resources generate equal levels of wellbeing.

Duvendack et al (2011) comes to a pessimistic conclusion on the microfinance impact studies done so far. They conclude that almost all impact evaluations of microfinance suffer from weak methodologies and inadequate data (as already argued by Adams and von Pischke (1992), thus the reliability of impact estimates are adversely affected. This can lead to misconceptions about the actual effects of a microfinance programme, thereby diverting attention from the search for perhaps more pro-poor interventions.

Rutherford (2009, Chapter 9, page 12) makes two counterarguments on why microfinance impact studies do not pick up big effects associated with microcredit. First, because microcredit loans are so easy to repay, households use these loans, which are rarely worth more than two or three months of household income, for whatever purpose is most urgent at the time. Investment in businesses — permanent and profitable enterprises — is done by a minority of borrowers and the small microcredit loans more often supplement, rather than transform, the businesses. This helps explain why surveys do not pick up big effects on microenterprise development, and register only mild effects on household income. But, having a reliable financial partner is of immense importance for poor people because it helps them manage a resource that, by definition, poor people have in short supply—money. That may be why all surveys pick up microfinance's effects on consumption smoothing.

Second, many of microfinance's most important effects are indirect and surveys cannot detect them. For example, one lady was always able to borrow from her family when she needed to buy medicine for her children because they could rely on her repaying them when the next ASA loan came along. Another man and his family never used microcredit to run a business, but as the foundation for a complex structure of transactions that led to vastly increased income from his two employed sons which made them a part of the rural well-to-do. Another woman saved her father's life with the help of microcredit loans, something of immense value to her that would show up in no survey of income or microenterprise growth.

In summary, microfinance impact studies have at best shown that it helps the poor but no evidence of transformational change. Rutherford (2009) may be correct that some of the impacts of microfinance are indirect and hard to measure. But the talk of microcredit possibly being a panacea for poverty in the mid 1990’s may have given the microfinance movement promise it could not possibly deliver on. It may be as Banerjee and Duflo (2011, pages 168 – 172) state that microfinance finds itself trapped by overpromising. But, if only a minority of clients use loans to start businesses and a considerable number of those businesses fail, then it is not a surprise transformational change has not been found by the rigorous impact studies done recently. This is because, as a general rule, MFIs have focused on financial intermediation and have not done significant social intermediation alongside it.

2.9 Strength and weaknesses of microfinance

If there are questions on what impact microfinance delivers, what are the benefits of microfinance? What are its strengths? What are its weaknesses? According to Rutherford (2009, Chapter 7, Page 19), the key benefit of microfinance is having savings that allow you to spend past income now, or taking loans that allow you to spend future income now. Poor people need those services more often than others, because they are most often without liquidity when they need it. Where there are no microfinance providers, poor people have to manage this essential task on their own. Two studies show that when microfinance organizations arrive on the scene, they do not replace these well-established, homemade systems, and may not even handle more than a fraction of all the transactions that poor people make. But they are very much welcomed as unusually reliable, convenient, and transparent financial partners. Finding a reliable financial partner is no small thing. Rutherford argues that it is by supplying this basic service, more than by financing businesses, that microcredit has become so important to the poor of Bangladesh.

Green (2005) lists the benefits microfinance can bring. These include promoting microenterprise development, enabling bulk purchases of inputs, improving household income, reducing poverty, promoting the economic independence of the poor, stimulating employment creation for household members and others, enabling consumption smoothing by reducing seasonal fluctuations in income, help to avoid recourse to moneylenders, acting as a social safety net and reduce vulnerability by helping to protect against risk ahead of time and to manage losses following an adverse shock, increasing physical asset accumulation, improving assets, improving women's economic and social status**,** increasing clients' self-confidence, increasing human capital, allowing provisions for old age and allowing improvements in housing. As will be seen, many of these benefits of microfinance will be disputed by others.

Green (2005) also recognised the limits of microfinance despite its significant strengths and benefits. It was not a panacea for the elimination of poverty. Green found that by itself microfinance is often insufficient to alleviate poverty and microfinance typically does not reach the 'poorest of the poor'. Not all economically active poor want to become microentrepreneurs and microfinance may lead to the displacement of entrepreneurs without access to microfinance. There also might be cultural or religious reasons against accessing microfinance products. Finally, many microfinance programmes have simply failed.

Harper (2010a) says that microfinance was born with the purpose of giving support to millions of indigent people around the world, acting as a force for good. However, it has been acting both for good and for bad. The good includes targeting mainly women, as they are more reliable in terms of households, child-care and savings protection, and tend to put every effort into repaying the debt by the required time. Also, women tend to be less empowered than men, thus giving them credit can make them stronger. The bad includes basing the psychology of microfinancing on the dependence of its clients. The quote from the senior staff member of BRAC above shows the validity of Harper's concern.

Since the respondents in this research are all women, it is worth looking at the claims of the benefits that microfinance brings to women. Green (2005) makes the traditional case that microfinance empowers women by allowing them to make a greater economic contribution to the household which gives greater status and decision making power in the household. Also, women who are microfinance clients report better relationships with their husbands and less domestic violence.

However, all of the above has been disputed. For example, Agier and Szafarz (2011) actually find gender discrimination in microfinance. This is based on the findings that women entrepreneurs are known not only to reimburse loans swifter than men, but also to receive smaller loans. However, on average women have smaller-scope business project and are poorer than men.

Thakrar (2006) reports that microfinance can be a cause of domestic violence in the household because obtaining credit may make them challengers of patriarchal ideas and beliefs. Thakrar argues that breaking women out of the cycle of domination and patriarchy requires not just the expansion of the economic space through credit initiatives but equally the expansion of mental spaces of both genders. The empowerment of women is not dependant on access to credit therefore, but how that credit is put to use and who controls it.

One of the recognizable weaknesses of microfinance is overindebtedness. Schicks and Rosenberg (2011) define borrowers as overindebted if they have serious problems repaying their loans. This definition implies a view that borrowers can be over-indebted even if they are repaying their loans. Over-indebtedness often implies heightened vulnerability and further impoverishment of borrowers. Schicks and Rosenburg (2011) also argue that there are sociological effects related to peer pressure and a loss of social position, as well as psychological effects on mental and physical health. In extreme cases, borrowers' desperation can even lead to suicide.

This will become very pertinent in the next chapter when the crises in Indian microfinance are discussed. Schicks and Rosenberg (2011) do not believe overindebtedness can be totally eliminated but want the objective to be to reduce the prevalence of overindebtedness to reasonable levels. Schicks (2010) adds that if loan information is inappropriate to how borrowers mentally process information, this may contribute to overindebtedness.

Strong criticisms of microfinance come from those who argue that microfinance is not ideally suited to deliver economic development. De Ferranti and Ody (2007) argue that small and medium-sized enterprises (SMEs), typically employing between 10 and 250 workers, form the backbone of modern economies and can be crucial engines of development. However, in much of the developing world, SMEs are under-represented, stifled by perverse regulatory climates and poor access to inputs, especially capital. Tinier firms—micro-enterprises—frequently get more attention, as donors seek to help the very poor. But they argue that the type of support inherent to microfinance lending is generally ill-adapted to serving their slightly larger, and arguably more dynamic, cousins, the SMEs.

Dichter (2007) argues that the expectation that microfinance's investment in microenterprises will help promote economic growth is unrealistic for several reasons. First, most people, poor or otherwise, are not entrepreneurs, so there is little reason to think that mass credit would in general lead to viable business start-ups. Second, today as in the past, business start-ups in the advanced countries depend predominantly on savings and informal sources of credit. Third, most microcredit is actually used for consumption rather than investment. Fourth, in the history of today's rich countries, moreover, economic growth occurred first and then came credit for the masses. Therefore, Dichter concludes, we should not expect microfinance to noticeably affect growth or successful business development. Dichter's (2008) argument means that he does support microsavings and microinsurance.

Bateman (2010) makes a strong case that microcredit does not deliver economic development. He uses countries such as Bangladesh with a high concentration of microcredit as examples. The spark for this argument was the use of microcredit as an economic development tool in the mid 1990's. One of the arguments he uses is the fallacy of composition which assumes that what is good for a part of the economy will be good for the whole economy. Specifically, Yunus and others believed that an economy could absorb as many microenterprises as could be created. The example of Grameen Phone shows this. This is a social business created to allow clients to use loans to buy mobile phones that can be rented out for use by other villagers. Initially, a number of ladies were able to progress out of poverty but Grameen kept adding more and more women to the business to the point there was so much competition that it stopped allowing women to progress out of poverty. Another problem is that new enterprises from microcredit can displace already existing ones. It can also displace funding to SMEs. He gives alternatives to microfinance that are highly subsidised, long term and focused on small businesses as a local economic base. Ironically, two of these alternatives come from microfinance. The first alternative is the Kerala state SHG programme which takes a collective approach that builds cooperatives that could provide real economic growth. The second alternative is the MFI programme in Vietnam. These MFIs are public or semi-public entities that have much lower administrative expenses which mean they can charge lower interest rates, are policy based lenders and fund themselves through equity, donations and savings. However, Bateman (2011) criticisms are aimed at microcredit not at microsavings and microinsurance.

2.10 Trying to get clients beyond subsistence jobs

Banerjee and Duflo (2011, page 208) tell the story of a woman who was a client of the MFI Spandana in Andhra Pradesh in India. She was a trash collector, a very low status job. She took her first loan to pay off the moneylender to avoid the crippling interest rates. She noticed that the company that bought her trash sorted it before selling it to the recyclers. To earn extra money, she decided to do the sorting herself and sell it to the recyclers. With the second loan, she bought a cart which allowed her to collect more trash. The third loan allowed her to buy trash from others. Today she is at the apex of a large network of trash collectors. She no longer collects trash but organises the trash collection. The key ingredients to her success was getting the capital when she needed it, obtaining the information about the price differential for unsorted trash for the business she used to sell trash to and for sorted trash for the recyclers, obtaining the information on the how the recyclers wanted the trash sorted and the ability to build a large network of trash collectors.

This is what can sometimes happen in microfinance and this is the type of client MFIs like to show off. However, we know that this type of client is not the norm. If they were the discussion on microfinance impact and poverty discussion above would have been very different. Why aren't microfinance clients more like the trash collector? Banerjee and Duflo (2011, page 213) identify two reasons for this. First, the businesses typically run by the poor are tiny. Second these businesses make very little money. Banerjee and Duflo (2011, page 213) found that these businesses tend to have a high failure rate. In Mexico, only 41 per cent of the businesses they recorded in 2002 were still in existence in 2005. In Indonesia, 67 per cent of the businesses of the poor survived 5 years. These businesses remained tiny. In Mexico, 20 per cent of the businesses of the poor that had zero employees in 2002 had one employee in 2005. However, 50 per cent of the businesses of the poor that had one employee in 2002 had none in 2005. In Indonesia, the percentage of businesses that had one or more employees did not grow in the 5 years this was measured. In Andhra Pradesh, Banerjee and Duflo (2011, page 213 – 214) calculated the median business profit by the poor was around US$2/day. This explains why microfinance typically does not produce radical transformation.

The paradox is that these tiny businesses of the poor generate high marginal returns on investment. Banerjee and Duflo (2011, pages 214 – 223) argue that the marginal returns the poor make on their investment must be at least the interest rate charged by the MFI. So, if a MFI charges 4 per cent interest per month, the borrower's business must give a return on investment of at least 4 per cent per month.

To find out the type of returns microentrepreneurs get, Harper (2001, pages 14 – 16) undertook a study that was conducted in India and Kenya collecting data from 215 enterprises and got similar results to Banerjee and Duflo (2011). These businesses were selected at random. One third of these were owned by women. This was not a representative sample. The investment figure is an estimate of the total investment at the time they were visited. This was adjusted for seasonality. The opportunity cost of labour was estimated based on the work available locally. In 37 cases it was zero because no work was available locally. Failed businesses were not included. There is no allowance for the risk of failure. Many of these businesses had been operating for at least five years but the owners may have had previous failures. The average annual incremental return on investment after subtracting the opportunity cost of labour was 847 per cent. The returns ranged from minus 480 per cent to plus 19,200 per cent. In only 40 cases, where investment was over US$500, was the annual return less than 100 per cent. In 44 cases, the return was over 1,000 per cent. In only 10 cases where the owner would have made more money having a job. These figures do not mean the owners are rich. Because the investments were so small, even those with very large returns amounts to very low earnings that is often below the official poverty line or minimum wage.

Armendáriz and Morduch (2010, page 6, 19) similarly argue that the diminishing returns principle in economics shows that the marginal returns from investment get smaller as investment increases. This results in a poorer entrepreneur getting a higher marginal return on investment than a richer entrepreneur which means that the poor entrepreneur is willing to pay a higher interest rate. But this is only true if everything but capital is held constant. If this is not true, then poor entrepreneurs could have lower marginal returns than rich entrepreneurs. This gives us the paradox that the poor are getting high marginal rates of returns on their investments because of the overall small size of the investment but does not generate enough profits to grow the business.

Bhagavatula and Elfring (2010) show the tendency of the poor is to start low barrier to entry businesses that are vulnerable to competition. Unless the poor entrepreneur does what the trash collector did in Andhra Pradesh, these will tend to be low growth businesses. Khandker (1998, pages 148- 149) agrees that microcredit borrowers tend to have low levels of skills and knowledge and therefore borrow for self-employment in businesses with low growth potential. He argues that unless high growth businesses are started the possibility of long run poverty reduction through microcredit is remote.

Not only do the poor start low barrier to entry, low growth businesses, they tend to open the same low entry barrier business. Spears (2009) asks the obvious question of why do so many poor people maintain identical small businesses? He attributes this tendency to present bias. This bias indicates a tendency to focus on a business that will produce money now rather than wait for a more valuable business to produce money in the future. However, Spears (2009) found an exception to this tendency towards present bias. If the microfinance clients were literate who treat their water before drinking it, who report wanting to cut any category of spending, or who report wanting to cut spending on intoxicants are more likely to have an uncommon, rather than a common, business. These actions also indicate a significant commitment to the business. L. Kumar (2010) has a simpler explanation. She says that these microfinance clients are just emulating the businesses that other women have set up which end up saturating the market.

Banerjee and Duflo (2011, pages 223 – 225) argue that the real problem is that growing the business is too hard for most poor people. They cannot borrow enough to grow the business to a reasonable size and unless the business is extremely profitable, it takes too long to save that amount. This can lead to a lack of commitment to and a lack of enthusiasm for the business.

This is exacerbated by the tendency to run multiple businesses as a risk mitigation strategy. They cannot specialise and become good in one business and cannot commit to one business. Also, the structure of the typical microcredit product encourages not taking big risks. The loan repayments usually need to start soon after the loan is given which means the client needs a business that generates cash right away which leads to the present bias tendency Spears (2009) talked about. Unless you have access to information through literacy, for example, and the discipline to act on it, as Spears (2009) found, the microfinance client will set up a low growth, low barrier to entry business. But, as the trash collector shows, if you access to the appropriate information and have access to a social network that can assist in building the business, it is possible to build a business that can really grow and actually help to reduce poverty.

2.11 Chapter Conclusion

Microfinance, financial services for the poor, has the ideal of doing financially sustainable poverty reduction. The failure of the agricultural development bank model opened the door for microfinance. Microcredit was the initial and still predominant product. The initial success with the pilots freeing poor entrepreneurs from moneylenders led to the expansion of the concept. The most replicated model was that from Bangladesh used by MFIs such as ASA, BRAC and Grameen Bank. The Bangladeshi model eventually represented the victory of the financial systems approach over the poverty lending approach. However, the extent of reduction of poverty achieved by microfinance was nowhere near what was envisaged by the pioneers of microfinance. The early impact studies claiming significant poverty reduction have been shown to be methodologically faulty and the best evidence to date shows that microfinance can work but cannot produced radical transformation. The reason for this is that most microfinance clients start tiny, low growth, low entry barrier businesses that do not make much money. However, examples from this chapter show that if a microfinance client has access to the appropriate information, the ability to act on it and a social network to grow the business, real poverty reduction can occur. This strongly suggests that focusing solely on financial intermediation will not achieve this but MFIs need to do social intermediation in parallel. The next chapter will discuss microfinance in the Indian context and will set up the discussion of how social networks are affected by this context.

3 Chapter Three – India and Indian Microfinance

3.1 Chapter Summary

The chapter will focus on the Indian context. This chapter will first look at poverty in India both its depth and pervasiveness. Another important factor to be discussed is the caste system. The actual experience on the ground shows that it is a complex system that can both hinder and help poor people. As this research is focused on the state of Tamil Nadu, the Tamil culture will be discussed along with the central role kinship ties play in keeping this classical civilisation alive. Next, Indian microfinance will be examined with a spotlight shown on its unique form of microfinance, the self-help group. The Bullock Cart Workers Development Association (BWDA), the host institution of this thesis' field research, use of self-help groups in its microfinance operations will also be discussed. Finally the impact of the Andhra Pradesh microfinance crisis will be discussed.

3.2 Poverty in India

India, the second most populous country in the world with just over 1.2 billion people (UNPOPIN, 2011), is seen as an up and coming world power. However, India's biggest problem remains that of poverty.

Harper (2010b, page 2) argues that India is poor and in absolute terms it is the poorest nation on Earth. He uses the evidence shown in Table 2 and Table 3. In Table 2, which compares the poverty and malnutrition data for China, India and Nigeria, it is shown that India has the most people living under US$1.25 a day. This is around 38% of its population. Table 2 also shows again that India has far and away the most children under five years old who are malnourished. UNICEF (2009) concurs with this and says that the biggest reason for malnutrition is not a lack of food but social such as the low social status of women, early marriage and little gap between the births of children (Pandey, 2006). In another comparison, the BBC (2008) shows that China has 0.0003% of the total population and 0.002% of those between the ages of 0 and 14 die of child malnutrition, By comparison, in India 0.2% of the total population and 0.5% of those between the ages of 0 to 14 die of malnutrition.

Comparative Poverty and Malnutrition Data		
Country	**Numbers Living Under US$1.25 a Day**	**Numbers of Malnourished Children Under Five Years Old**
India	456 million	52 million
China	208 million	6 million
Nigeria	88 million	7 million

Table 2 (Harper, 2010b, page 2)

Table 3 compares the child nutrition data for the four South Asian nations, Bangladesh, India, Nepal and Pakistan. The differences in Table 3 are not as great in Table 2 but it, again, shows that India leads in the percentage of low birth weight babies and the percentage of children under the age of five who are underweight. The impact of poor nutrition will be discussed later but these figures show the immensity of the problem of poverty in India.

South Asia – Comparative Child Nutrition Data		
Country	**% of Low Birth Weight Babies**	**% of Under Five Children Underweight**
India	28%	43%
Pakistan	19%	31%
Bangladesh	22%	41%
Nepal	21%	39%

Table 3 (Harper, 2010b, page 3)

Banerjee and Duflo (2011, pages 29 – 32) disagrees that India is the poorest nation on Earth. They cite Cameroon, Ethiopia, Ghana, Haiti, Kenya, Mozambique, Nigeria, Tanzania and Uganda as being poorer. However, they agree that the child nutrition numbers are devastating. These numbers suggest that children in India are very badly nourished. They are extraordinarily underweight given their height. Half the children are stunted (far below the norm), one fourth is severely stunted (extreme nutritional deprivation) and one in five children under the age of three is wasted (falls below the international definition of severe malnourishment). Sub-Saharan Africa has half the rates of stunting and wasting of India. Undernutrition is associated with lower economic status and lower cognition.

However, it is not clear that the government of India officially recognises the scale of poverty in the country. MicroSave (2011), in a number similar to Harper (2010b) and UNICEF (2009), calculate India's aggregate poverty as 37.2% of the population with 41.8% of the rural population in poverty and 25.7% of the urban population who live below the poverty line. On the other hand, the Government of India (2007) said that in the state of Tamil Nadu and Pondicherry in 2004-2005 16.9% of people in the rural areas are below the poverty line and 17.8% of the people in Tamil Nadu and Pondicherry are below the poverty line. This is a result of setting the poverty line much lower than the international standard. The lowest poverty lines internationally tend to be set to US$1.00 or US$1.25 a day. But, the Indian Planning Commission set the poverty line in Tamil Nadu and Pondicherry as 351.86 rupees per capita per month in the rural areas and 547.42 rupees per capita per month in the urban areas in Tamil Nadu and Pondicherry for 2004-2005. Using historical exchange rates from July 1, 2004 to July 1, 2005 (OANDA, 2011), this rural poverty line equates to US$0.26 per day and the urban poverty line equates to US$0.41 per day.

BBC News (2011) recently reported the debate on the recommendation by the Indian Planning Commission to set the poverty line at 32 rupees a day which equates to around US$0.65 a day. The report showed the results of two young Indians attempt to exist on 32 rupees a day to test the Indian Planning Commission's contention this amount of money represented enough of an income for an individual not to be considered as being poor. They found that they had to drink well water and could not afford any public transport. They also found they could not afford any protein. They could only afford carbohydrate-heavy foods like wheat, rice and plantains. As a result the duo experienced weight loss, fatigue and skewed blood sugar levels over the past month.

One can imagine the impact of these experiences on those who actually live on 32 rupees a day especially if they are doing heavy physical labour, as many of the poor do, or trying to run a business. Therefore, in India, being able to get any significant reduction of poverty becomes important. This is not just for the adults in the family but more importantly for their children. If poverty is reduced significantly, it is possible for the children to receive better nutrition. Banerjee and Duflo (2011, page 39) calculate that the child who gets the proper nutrients in utero or during early childhood will earn more money every year of his or her life.

In 2006, the government of India passed a law guaranteeing each and every rural household in the country one hundred days of work at a basic minimum wage. The law, known as the National Rural Employment Guarantee Act (NREGA), in effect created India's (and probably the world's) largest anti-poverty program in terms of number of beneficiaries. According to official statistics, 45 million households participated in NREGA in fiscal year 2008-09 (D. Johnson et al, 2009).

However, Harper (2010b, pages 5 – 6) says the problem with even well designed programme, such as NREGA, in India is that they are incompletely enforced and delivered. In many places, NREGA is failing to deliver the required 100 days of work for every rural household because of apathy, mismanagement, state level disinterest and corruption. In this way, poverty reduction continues to lag.

3.3 Caste System

Reporting on a credibility crisis of the Indian media, Biswas (2010) remarked that the fact that India remains an intensely hierarchical society also reflects the way journalists behave and interact with powerful politicians and businessmen. It is almost never a professional relationship between equals. The hierarchical nature of Indian society is most evident in its caste system. The word caste derived from the

Portuguese word ‘Casta’ which means a breed, race or a complex of hereditary qualities (Ayyar, 2011). The lack of any mention of caste in the early Tamil literature is an indication to Puthenkalam (1977, page 17) that caste is a comparatively new institution in South India. In addition, the word most often used for caste in South India, jati, is not a word from any of the indigenous languages but from Sanskrit.

Kishor (2011) gives the traditional descriptions of castes based on the Vedas, the ancient Hindu scriptures. He describes the four exclusive, hereditary and occupation based Varnas. The Vedas say that these four Varnas originated from the different body parts of Lord Brahma with the Brahmins coming from the mouth, Khatrivas (Warriors) coming from the hands, Vaishyas (Merchants) coming from the thighs and Shudras (Artisans and Labour) coming from the feet. The Ati Shudras (Untouchables), who were added later, were condemned to all dirty and polluting jobs. Table 4 shows the Varna caste descriptions based on Kishor (2011). Table 5 shows the Indian government caste definitions.

Varna Castes and Descriptions

Level of Pollution	Caste	Characteristics
None ↓	Brahmin	Priestly Class
	Kshatriya	Jati groups with the greatest economic and political power
	Vaisiya	Jati groups engaged in trade that have economic affluence but little political power
	Shudra	Artisan and labourer jatis with neither economic or political power
Total	Untouchables	Jatis that do the ritually unclean jobs

Table 4 (Kishor, (2011)

Indian Government Caste Categories

Category	Description
OC	Other Category – this includes the Brahmins, Kshatriyas and Vaishyas.
ST	Scheduled Tribes – these people claim to be the Aboriginal population of India. Also known as the Adivasi. They are called scheduled tribes because they recognised in a schedule of the Indian constitution.
SC	Scheduled Castes – These are the Dalits, formerly known as the untouchables. They are called scheduled castes because they are recognised in a schedule of the Indian constitution.
BC	Backward Castes – these people come from what the Indian government perceives to be castes that are socially and economically backwards.
OBC	Other Backward Castes – these castes are similar to scheduled tribes but they are not aboriginal and are perceived to be by the Indian government castes that are socially and economically backwards.

Table 5 (Kishor, 2011)

Quigley (1993, pages 1 – 2) says that the popular view of caste consists of three beliefs. First is that the Hindu world is made up of a number of castes. Second is that castes are closed social groups. One may marry within one's caste and the children of the marriage belong to the parent's caste. The system is perpetuated ad infinitum. Third is that castes are hierarchically ranked on a purity-pollution scale according to their traditional occupations. This view contains a certain amount of truth but is also misleading. Quigley's review of the literature makes it is clear that the caste system is nowhere as simple as Kishor (2011) claims it to be.

First, there is the confusion between caste and jati. Quigley (1993, pages 4 – 7) states that caste can be translated into two terms, varna and jati. This can cause confusion because varna and jati refer to two different concepts. The varna classification is based on function. These are Brahmin, Ksatriya, Vaishiya and Sudra described by Kishor (2011) above. However, jati means a collection of people who share a common origin. It could be a common lineage, all the lineages that one can marry, common ethnic heritage or common cultural heritage. Jati is therefore a relative term. One way to get around the confusion is to say that varna is a theoretical category that never actually existed in the real world while jati is the operational unit, the real caste. It is then possible to place each jati into one or more varnas or as an untouchable. Ayyar (2011) takes this view saying that the Portuguese applied this term caste to different classes of people in India known as 'jati'. Ayyar argues that the Varnas were actually name of classes rather than castes in the pre-historic period. For Ayyar, jatis are the real castes. Puthenkalam (1977, page 18) agrees that jatis or sub-castes should be recognised as the real castes. However, Quigley (1993) warns that there are constant arguments about which jati belongs to which varna. There are also arguments on who belongs in which jati. This is because of the jatis can be broken into many different groups and these all may not intermarry because of the differences between them. In other words, they do not perceive that a common origin is shared.

On caste hierarchy, Fuller (1976, page 10) says that in theory, the castes in a geographical area can be ranked into a single hierarchy but in reality there will no way to get universal agreement on it. Quigley (1993, page 10) agrees that there are often arguments about which jati is higher in the hierarchy. The reason for this is that caste hierarchy is determined by the economic and ritual relationship two jatis have with each other. If these relationships do not exist, it will be impossible to determine which jati is higher or lower in the hierarchy (Quigley, 1993, page 166).

There are two popular conceptions of history for caste in the literature. First is the Materialist conception where caste is a rationalisation and legitimisation of inequality using the idiom of purity to obscure the true nature of the social divisions. Second is the Idealist conception where caste is a cultural construct and the result of religious ideas. This is an ideological framework for explaining the universal problems of social order. It transcends local preoccupations and hierarchies because the structure of the caste is found in a system of ideas not in the manifestation of those ideas. Materialists are right about caste regulating inequality but wrong that it obscures inequality. These inequalities are highlighted and perpetuated by the caste system. Idealists are right about caste ideology seeking to provide a transcendent foundation for the social order but are wrong that the manifestation of the caste system requires a kingdom which is not just a system of ideas (Quigley, 1993, pages 2 – 3).

There is no connection between ritual status of a jati and its economic strength and political strength. The reason for this is that economic and political fortunes of jatis can change. The ritual functions a jati performs can change. However, jati affiliations are expressed in the presence or absence of kinship ties and kinship identities are not very changeable (Quigley, 1993, pages 160 – 161).

An example of how ritual status does not equate to political or economic strength is provided by a study done by Pandian. Pandian (1987) did a study on Pulicat Island at the northern end of Tamil Nadu which showed how important context is in jati dominance. Pandian (1987) generated a ranking for each jati in regards to its economic, political, religious and social status on Pulicat Island. Pandian's rankings are approximate because jatis ranked themselves and others in different ways at different times. These rankings are meaningless for interpreting how people use them in different contexts. The status of each jati fluctuates depending on whether you are looking at an economic, political, religious or social context. According to the Varna system, Brahmins should always be on top but this is not true on Pulicat Island in 1987. They are only on top in the religious context but also share that status with the Labbay Muslims. It is the Beri Chettiar jati that seems to dominate Pulicat Island. They do so because they have a monopoly on the sale of rice, groceries and textiles and they give financial credit to a number of low ranking jatis. This means a sari seller on Pulicat Island at this time who belonged to the Beri Chettiar jati could piggy back on the extensive social network built up by her jati throughout the island. A sari seller in the Harijan (Dalit) jati may have the network to sell within her own jati but it is very unlikely that she would have any useful contacts for her business in the higher jatis.

The traditional academic view of the caste system is derived largely from sacerdotal Hindu texts which is very agreeable to members of the upper castes. These texts imply that a person's position is due to his or her karma. The fact that one is born into a certain caste is an outcome of one's past deeds in an earlier incarnation. However, on the ground the view is very different. There is not a single caste hierarchy that is universally acknowledged and accepted by everyone in the caste system. There are probably as many hierarchies as there are castes in India. No caste, howsoever lowly placed it may be, accepts the reasons for its degradation. Different castes have different hierarchical elaborations and those castes which currently find themselves in extremely humiliating and subordinate positions refuse to accept the theory of karma. If they did, they would have to accept the Brahmanical dictum they were made from base substances. The upper castes would like the lower castes to accept this without murmur. However, the evidence points to the contrary. From medieval India until now there have been caste revolts, caste mobility, caste wars, Dalit uprisings and modern demands for preferential politics (Gupta, 2000, pgs. 1 – 3).

If everyone is perceived as equal, then there is no stratification. Stratification and hierarchy require difference. Gupta (2000, pgs. 6 – 8) argues that the caste system not only requires difference but a closed feudal-like social structure. However, not all closed feudal societies give rise to castes.

Stratification systems can be open or closed. In open stratification systems, mobility among the strata is allowed. This is not allowed in closed stratification systems such as India's (Gupta, 2000, pg. 23). An example of an open stratification system is the United States. The reason that it is open is because there is an ideological acceptance of a certain degree of similarity (Lipset and Bendix, 1957), whereas in India there is an enormous investment in keeping differences alive. As differences are emphasised in closed systems of stratification, the group rather than the individual becomes the unit of mobility. Changes in a closed stratification system are a zero sum game. Any change in ranking of a jati would automatically entail that some other group or groups lose status. In an open system of stratification, upward mobility does not mean that somebody else must lose status as a consequence. Open systems of stratification must assume all people are equal and that mobility occurs to the extent that people can realise their potential. On the other hand, closed systems of stratification, assume that people are inherently different which is why the notion of the upstart, the parvenu and the social climber have such pejorative connotations (Gupta, 2000, pgs. 36 – 39). Quigley (1993, page 162) counters that class is a system of social stratification while caste is not. Caste works through the idiom of kinship because it provides order in an unstable political climate. Class benefits from state provided order and oppose the extension of kinship into the political arena beyond the minimum necessary.

Continuing with this theme, Gupta (2000, pgs. 130 – 131) argues that the separation of castes is not only based on matters of purity and pollution but also difference. Differences are observed as strictly as with pollution and purity. He also negates the view that each jati is following its hereditary occupation which has been sanctified in the sacred texts. A larger number of jatis in existence today are not mentioned by the sacred texts. Quigley (1993, page 10) and Fuller (1976, page 10) agree that the modernisation of India has resulted in jati members now doing non-traditional occupations.

The caste system is often seen as something that traps people into roles and helps keep the low castes mired in poverty. However, this is not always the case. Luke and Munshi (2005) look at a group of tea plantations in South India where women are employed in permanent wage labour and where incomes do not vary by caste in order to anticipate the impact of globalization on mobility across social groups in the future. Their main finding is that a relative increase in female income weakens the family’s ties to the ancestral community and the traditional economy, but these mobility enhancing effects are obtained for the low castes alone. The reason for this is that the higher castes have too many ties to the traditional economy to take advantage of the new opportunities offered by globalisation. On the other hand, historically disadvantaged groups may be especially responsive to new opportunities precisely because they have fewer ties to the traditional economy to hold them back.

In another study, Munshi and Rosenzweig (2006) found a case where the caste network both hindered and helped low caste people. This low caste had a traditional occupation for the male lower caste members and the networks of that caste continued to channel boys into local language schools that led to the traditional occupation, despite the fact that returns to non-traditional white collar occupations had risen substantially. On the other hand, the females in the caste did not have a traditional occupation and who historically had low labour market participation rates and so did not benefit from the network. Because this caste network was focused solely on getting the boys into the traditional occupation, it left the females free to pursue other avenues. These females took full advantage of the opportunities that became available in the new economy by switching rapidly to English schools. Munshi and Rosenzweig (2006) suggest that the overall increase in English schooling in recent years, and the growing mismatch in education choices and hence occupational outcomes between boys and girls in the same caste, suggests that the remarkably resilient caste system may finally be starting to disintegrate. Field et al (2010) also found something similar. They found that upper caste Hindu women face significantly more restrictions than Hindu women in the scheduled castes, the lowest group in the caste hierarchy.

Quigley (1993, page 167) agrees with Dumont’s (1980) theory that the emphasis should be put on structure and relations rather than on bounded groups and substantial entities. For Quigley (1993, page 164), caste is both a cultural and structural phenomenon.

The power of a network to both help and hinder low caste entrepreneurs, through its being open or closed, will be explored in later chapters. The good news that Quigley (1993, page 12) states is that the two qualities often associated with castes, unambiguous closure and unambiguous hierarchy, are not always unambiguous. This makes the important point that caste networks do not always put an impenetrable wall around its members and that it is possible to help these entrepreneurs to explore beyond the boundaries of their caste networks in India and access the information they need to grow their businesses. The microfinance literature has not looked at role of network and the strength of the ties in the network to help microfinance clients get the information they need to grow their businesses. This research will be helping microfinance clients get that information.

3.4 Power Distance

Caste may not be unambiguously hierarchical as Quigley (1993) states but it does permeate the culture. As L. Kumar (2010) argues, the hierarchical nature of the culture is ingrained in the people. Therefore, this hierarchy does pose a significant challenge for any poor entrepreneur wanting to explore beyond the boundaries of their caste networks in India and access the information they need to grow their businesses. Hofstede and Hofstede (2005) created a theoretical framework in which to understand the differences between highly unequal and relatively equal societies. Hofstede and Hofstede (2005) conducted groundbreaking research on how values in the workplace are influenced by culture and what differentiates cultures. The data for this study was collected from IBM employees from 70 countries between 1967 and 1973. This dataset was extended based on replications and extensions of the original IBM study on different international populations. Hofstede and Hofstede (2005) found that the differences to the answers to the questions were strongly correlated to the nationality of the respondents. Based on the analysis of this data, Hofstede and Hofstede (2005) created a model that identifies four primary dimensions to assist in differentiating cultures: Power Distance, Individualism, Masculinity and Uncertainty Avoidance. Research in China led Hofstede and Hofstede (2005) to add a fifth dimension called Long Term Orientation.

The power distance index (PDI) is an indication of how a culture handles inequality. The name comes from how the index can show the emotional distance that separates subordinates from their bosses (Hofstede and Hofstede, 2005, page 41). Hofstede and Hofstede define power distance as the extent to which the less powerful members of institutions and organisations within a country expect and accept that power is distributed unequally where institutions are basic elements of society, such as the family, the school and the community and organisations are the places where people work (Hofstede and Hofstede, 2005, page 48). The higher the PDI score, the higher the acceptance of unequally distributed power. The range of scores is from 11 to 104. Great Britain scores 35 and is ranked 63rd to 65th out of 74 nations or regions sharing its score with Germany and Costa Rica. On the other hand, India scores 77 and is ranked 17th to 18th out of 74 nations or regions sharing its score with the West Africa region (Hofstede and Hofstede, 2005, pages 43- 44). PDI scores can vary by occupation within a country. Hofstede and Hofstede looked at the PDI scores among occupations ranging from low skill to professional in France, Germany and Great Britain. They found that within all three countries, lowest status and educational level (unskilled and semiskilled workers) showed the highest PDI scores while those with the highest status and educational level (managers of professional workers) showed the lowest PDI scores (Hofstede and Hofstede, 2005, page 49).

Key Differences Between Small and Large Power Distance Societies: General Norms	
Small Power Distance	**Large Power Distance**
Inequalities among people should be minimised.	Inequalities among people are expected and desired.
Social relationships should be handled with care.	Status should be balanced with restraint.
There should be, and there is to some extent, interdependence between less and more powerful people.	Less powerful people should be dependent; they are polarised between dependence and counterdependence.

Table 6 (Excerpts from Hofstede and Hofstede, 2005, page 57)

India is an intensely social hierarchical society where inequality is seen as a fact of life. The implication is that backward and scheduled caste people, as less powerful people, should be dependent on the more powerful people. (See Table 6) This will impact how these less powerful people establish ties with the more powerful who have the information needed. There is no assumption of equality. They will probably need to approach in a subservient manner (as confirmed by Sinniah, 2010). The implication is that if these less powerful people were living in a relatively low PDI country such as Jamaica with a PDI of 40, they would find it easier to create the ties needed to get the information needed for their businesses. Counterdependence is a psychological term usually defined as dependence with a negative sign. This is usually shown by the subordinate rejecting the dependence entirely **(**Hofstede and

Hofstede, 2005, page 46**).** This may result in the less powerful person rejecting any ties with the more powerful broker because of the implied dependence. A fuller discussion of the theory of how information passes through a network will be discussed in the Theoretical Framework chapter.

Key Differences Between Small and Large Power Distance Societies: The Workplace	
Small Power Distance	**Large Power Distance**
Hierarchy in organisations means an inequality of roles, established for convenience.	Hierarchy in organisations reflects existential inequality between higher and lower levels.
Decentralisation is popular.	Centralisation is popular.
Managers rely on their own experience and on subordinates.	Managers rely on superiors and on formal rules.
Subordinates expect to be consulted.	Subordinates expect to be told what to do.
The ideal boss is a resourceful democrat.	The ideal boss is a benevolent autocrat or "good father".
Privileges and status symbols are frowned upon.	Privileges and status symbols are normal and popular.

Table 7 Excerpts from (Hofstede and Hofstede, 2005, page 59)

Indian society tends to be highly centralised. The implication of centralisation is that any industry in India will be centralised around powerful brokers in a large power distance country such as India. If this is a scale-free network, a network dominated by a few hubs with a large number of connections, it would be important to be able to connect in some way to the central hubs (See Table 7).

The five standard criticisms of Hofstede's approach are (Hofstede, 2002):

1. Surveys are not a suitable way of measuring cultural differences. Hofstede's response is that they should not be the only way.
2. Nations are not the best units for studying cultures. Hofstede's answer is that this is true, but they are usually the only kind of units available for comparison and are better than nothing.
3. A study of the subsidiaries of one company cannot provide information about entire national cultures. Hofstede's reply is that what were measured were *differences between* national cultures. Any set of functionally equivalent samples from national populations can supply information about such differences. The IBM set consisted of unusually well matched samples for an

unusually large number of countries. The extensive validation in the following chapters will show that the country scores obtained correlated highly with all kinds of other data, including results obtained from representative samples of entire national populations.

4. The IBM data are old and therefore obsolete. Hofstede justifies the data by stating that the dimensions found are assumed to have centuries-old roots; only data which remained stable across two subsequent surveys were maintained; and they have since been validated against all kinds of external measurements; recent replications show no loss of validity.
5. Four or five dimensions are not enough. Hofstede says that additional dimensions should be both conceptually and statistically independent from the five dimensions already defined and they should be validated by significant correlations with conceptually related external measures.

Singh et al (2008) cautions that the PDI score for India may not be universally true for all workplaces. In their study, significant differences were found between public, Indian private sector and international private sector workplaces with the international private sector having a significantly lower score than the average for India. While it may be possible for an international private sector company to override prevailing culture inside its workplace, the overwhelming majority of Indians do not have jobs in this environment and none of the respondents in this research have jobs in a low PDI environment. Therefore, establishing a connection with someone more powerful to obtain relevant information for the business remains a significant challenge. However, Singh et al (2008) recognise that India is seeking to modernise, and transform its institutions without sacrificing its commitment to economic progress, socio-cultural heterogeneity and traditional social hierarchical values. How to overcome this challenge in a society holding on to its traditional social hierarchical values will be explored later.

3.5 Tamil Culture

This research takes place in Tamil Nadu. Tamils see themselves as a unique culture within India and so a short discussion will take place on Tamil culture and its impact on how Tamils network among each other.

The total population of Tamil Nadu as per 2011 census is 72,138,958. Nearly 69 percent of the total population of the State belong to Backward Classes, Most Backward Classes and Denotified Communities. Among the Muslim Minorities in Tamil Nadu, nearly 95% of them are in the list of Backward Classes and among Christian Minorities nearly 80% are in the list of Backward Classes and Most Backward Classes (Tamil Nadu, 2011).

Tamil is part of the Dravidian language group which, unlike Sanskrit, is not part of the Indo-European language group. The best evidence points to the Tamils migrating to South India from Baluchistan on the Iranian – Pakistani border (Wood, 2007, page 55).

Wood (2007, Introduction) argues that Tamil Nadu is the last existing classical civilisation. Wood defines a classical civilisation one in which a substantial element of the traditional ways of thinking – in belief, culture, music, and literature – is still alive in the mainstream. The greatest era of Tamil Nadu's civilisation was during the Chola dynasty between the 9^{th} and 13^{th} centuries (Wood, 2007, page 59).

Tamils use kinship ties to keep this classical civilisation alive. Examples of this are the Oduvars, Dikshitars and Cholan bronze sculptors. Oduvars are the traditional poets of the Tamils. The word means he who sings. These are non-Brahmins and from the lower class of people. They are responsible for singing the saints' songs in the temples. These songs are over a thousand years old and have been handed down within the family in a living chain of transmission from ancient times which are a Tamil oral tradition (Wood, 2007, pages 17 – 18). The Dikshithars, the hereditary clan of priests who run the Nataraja Temple in Chidambaram, Tamil Nadu, can only marry endogamously, that is only within their own clan. They can trace their right to administer the Nataraja shrine back to the sixth century AD (Wood, 2007, page 24). Those who still cast Cholan bronzes in Tamil Nadu are the 7^{th} generation of sculptors (Wood, 2007, page 199).

Therefore, it is not surprising, given these examples that Tamils marry within the family (Wood, 2007, page 21). Tamils traditionally have three family units. First is the nuclear family, second is the extended family that includes everyone from grandparents to grandchildren including aunts and uncles that use resources in common and have a common residence and third includes the wife's relations. By custom, wives move to their husband's home. Customs and traditions of each caste keep kin together and these kinship ties are why marriage is within caste (Sahay, 2008, pages 15). Kinship systems in Tamil Nadu encourage cross cousin marriages. Cross cousin marriages involve either marrying your mother's brother child or your father's sister child (McGilvray, 1998, page 46). Since, as Quigley (1993) argues, caste is based on kinship, again it is not surprising that Tamils will look for marriage partners from within the caste. Caste can be seen as a moral system that exemplifies the values of a community which is seen as supportive and enriching. It was a system of mutual support despite oppressive rules such as dowry (Wood, 2007, page 236).

In the towns and cities, modern methods such as caste magazines are used to advertise for suitors (Wood, 2007, page 26). However, in the villages geography can play a strong role which has the tendency to reinforce kinship ties. Sekine (2002, page 97) reports that fifty per cent of Paṟaiyars (Untouchables) of Kinnimangalam in Tamil Nadu get married to partners from within 5 km of the village, seventy five per cent of Paṟaiyars get married to partners within 10 km of the village and eighty four per cent of Paṟaiyars get married to partners within 15 km of the village. It is even stronger for the Kallars, a lower middle jati in the same village. For them, eighty five per cent of Kallars get married to partners within 5 km of the village, ninety two per cent get married to partners within 10 km of the village and ninety seven per cent get married to partners within 15 km of the village

Tamil society, like the rest of India, has a hierarchical structure. This has an impact on how relationships are established and conducted especially if there is a difference in how high two different castes are perceived. If one person is in a higher caste than the other, the tendency is that the higher caste will have more power in the relationship even though Pandian (1987) showed that this is not always the case.

Sinniah (2010) reports that her cousin who runs a family farm outside of Trichy, will consider a business proposal from her lower caste workers. But, these workers will not approach her until she calls for them. It is as if her cousin is the patron for these workers. Patronage can even have a more powerful effect the lower the patron is in the hierarchy. For an untouchable, patronage may give the only improved status available to them. Sekine (2002, page 222) gives the example of government aid to the Paṟaiyars who are a Dalit jati in the village of Kannimangalam in Tamil Nadu. This government aid involves an opaque and complicated application procedure. This results in a more educated and more propertied person being asked to act as a mediator between the government and the poor uneducated applicants. The tendency is that the better off Paṟaiyars are asked to be mediators. The mediator acts as a broker and patron and is able to extract profit from this position.

One case of this is the Kinnimangalam Cooperative Society of Milk Producers which was set up in 1982 to raise the economic conditions of the Paṟaiyars in the village. It was not easy to set up the cooperative as it required filling out the application forms, negotiating with administrative officers, obtaining permission from the higher castes and reaching a consensus among the Paṟaiyars themselves. A talented Paṟaiyar who was able to do all of this and had political connections got put into a position of broker and was able to monopolise the management of the milk cooperative. This makes him a patron to the cooperative members and able to profit from his position. Not surprisingly, this caused problems in the village further down the road as he devoted a tremendous amount of effort to remain in this broker's position (Sekine, 2002, page 304 – 305).

Tamils value their kinship ties especially those that help keep their classical civilisation alive. The tendency is for Tamils to build their social networks around their kinship ties and reinforce these ties by geography, endogamous marriage and simple things such as families living and sleeping together in a single room (Wood, 2007, page 209). However, this tendency leaves them vulnerable to others who are able to act as brokers to networks outside the kinship ties and who may use the power of this position for exploitation. However, as Quigley (1993) stated these networks are not always closed which gives an opportunity to the poor Tamil business owners who are the subject of this research.

3.6 Indian Microfinance History

Similar to other countries after World War II, India started a variety of government schemes to improve access to credit for the rural poor. In particular, the introduction of special credit programmes and the expansion of the banking sector were intended to make the financial system responsive to the needs of small and marginal farmers, landless labourers, rural artisans and other economically active poor. From 1977 until financial liberalisation in 1990, the Indian banking network saw a rapid expansion under the initiative of the central bank, the Reserve Bank of India (RBI). The RBI had mandated that commercial banks could only open a branch in developed areas if four branches were opened in locations with no bank branches. The bank expansion programme resulted in an extensive branch network, which is unparalleled in other countries (Green, 2005).

In addition the RBI required that commercial banks must direct at least 40% of their credit portfolio to priority sectors (including agriculture and allied activities as well as small, cottage and village industries). Moreover, 10% of their loan portfolio must be provided to weaker sections of society, including scheduled castes and tribes, small and marginal farmers, agricultural labourers or rural artisans (Green, 2005).

However, the Indian effort to extend credit to the poor especially farmers suffered the same fate as these efforts did in other developing countries where the financial needs of the rural poor remained largely unmet by the formal financial system. Some schemes were predetermined and could not be modified to the needs of borrowers. As in many other developing countries, the subsidised loans provided resulted in significant losses. Loan recovery of regional rural banks was 56% of amounts due in March 1996. The failure of government credit programmes raised a need to find more viable mechanisms for administering small loans to the rural poor (Green, 2005).

As in other countries, it was the mechanism of microfinance that stepped into the gap. Green (2005) identified three main models of microfinance in India. First was the Grameen model, which is based on the methodology pioneered by the Grameen Bank in Bangladesh. Second, was the cooperative model, in which cooperative societies provide credit and savings services to their members. Third was the Self-Help Group (SHG) model which is unique to India. The SHG model will be discussed below.

After 2005, a fourth model developed in India which was the commercial microfinance model. This model was funded by the capital markets and pursued a high growth strategy which it was able to implement. This model was centred in the Indian state of Andhra Pradesh. The largest of these is SKS. SKS Microfinance Ltd is one of the largest MFIs in India with 7 million clients. It had an IPO in July 2010 that raised US$155 million and valued the company at US$1.5 billion. Existing shareholders sold US$195 million of shares and booked big profits with the share price being four times greater than book value (Maes and Reed, 2011).

India does get significant donor funding for microfinance. The South Asia Region (Bangladesh, India, Nepal, Pakistan, and Sri Lanka) gets the most microfinance funding from the top 20 donors in the world. In the year ending in December 2010, the region got 24 per cent of microfinance funding from these donors. The amount given to the South Asia region grew 12 per cent from the amount given in 2009. When looking at just the 10 largest development financial institutions which are the private sector arms of government owned bilateral and multilateral development agencies such as KfW (Germany) and International Finance Corporation (World Bank) (CGAP, 2009a), South Asia got only 8 per cent of the worldwide microfinance funding available from them in the year ending in December 2010. This represented a 4 per cent decrease in the amount given in 2009 (CGAP, 2011).

3.7 SHG-Bank Linkage

The SHG model is unique to India. SHGs are self-selected groups of ten to twenty persons that mobilize member savings and provide need-based loans out of the pool of funds created. Members determine the rules and norms of the group (e.g. loan size and interest rate) and rely on microfinance institutions for training and support services. Once internal transactions are strengthened, groups are linked with formal banks for supplementary financing, usually through the intermediation of microfinance institutions (Tazi et al, 2006).

The idea for the SHG – Bank linkage programme came from the National Bank for Agricultural and Rural Development (NABARD). NABARD did a research project with the NGO Myrada in 1987 which was the genesis of the idea. This was piloted in 1992 and the SHG-Bank linkage programme was fully operational in India in 1996. The programme was supported by the Reserve Bank of India. The RBI allowed the savings accounts of SHGs to be opened by the formal banking system and classified SHG-lending as priority sector lending for commercial banks, RRBs and cooperative banks (Green, 2005).

Between 2003 and 2004, 361,731 new SHGs were formed and received US$412 million in bank loans in the context of the program. SHGs often organize into federations to obtain external funds in bulk and lower their cost of funds (Tazi et al, 2006).

NABARD's goal in 1998 was to provide access to finance for one third of the rural poor through the SHG-Bank Linkage Programme by linking 1 million SHGs to banks by 2008. This goal was met ahead of schedule in March 2004, banks had cumulatively lent Indian Rupees 39.04 billion (US$860 million) to 1,079,091 SHGs. To achieve this goal NABARD partly financed the cost of SHG promotion, provided 100% refinancing to participating banks and offers revolving fund assistance on a selective basis to NGOs, SHG Federations, credit unions and other organisations providing capital for on-lending. NABARD also provides capacity building support to bank officials, NGO staff, government officials and SHG members (Green, 2005).

NABARD (2008) claimed that the SHG - Bank Linkage Programme could be regarded as the most potent initiative since Indian independence for delivering financial services to the poor in a sustainable manner. The programme has been growing rapidly and the number of SHGs financed increased to 2,925,000 on 31 March 2007.

However, there have been criticisms of the SHG – Bank linkage programme. The first is that the geographical spread of the programme has been geographically uneven. Most SHGs are located in the southern states. But, the states with the high incidence of poverty are not the southern states (NABARD, 2008). The states of Uttar Pradesh, Madhya Pradesh and Bihar have the lowest SHGs to population ratio (<200 SHGs per 100,000 of population) as well as the highest percentage of poor population (>30 per cent). The reason the has been geographically uneven is because of various factors like pro-active role of state governments, presence of well performing NGOs, socio-cultural factors, better performance of SHGs, etc. (MicroSave, 2011).

To even out the geographical spread requires scaling up the SHG – Bank linkage programme. Kamath (2009, pages 86 – 88) says there are challenges in scaling up this model and recommends having SHGs serve a wider set of clients is one option for scaling up.

Arunachalam (2011) says that the self-help group and bank- linkage model has been touted as the panacea for solving the current crisis facing Indian microfinance but this linkage model faces a number of issues that need urgent attention. Arunchalam identified three urgent issues with the SHG-Bank linkage programme. First, there are serious data issues. No one knows the correct number of operational SHGs in the country. No one can say with certainty as to how many SHGs really exist or work in India today. Data on SHG transactions (especially, savings, loans, etc.) is very weak. This means we only know about SHGs being linked but nothing about their day-to-day working and post-linkage performance. Second, there is no accountability among MFIs, SHGs, SHG Federations, Banks for providing good and transparent governance on the ground, minimum systems that function properly during implementation and an overall commitment towards really ensuring low income people gain access to a wide range of affordable and need based financial services. Third, and most importantly, ensuring the larger infrastructure and ecosystem necessary to enable low-income people to get the rewards/returns commensurate with the efforts they put in, investments they make and risks they undertake in their livelihoods. This is a repeat of the argument above that the poor need more than financial intermediation to have successful livelihoods.

NABARD (2008) also recognises this argument. It says that ideally the SHG - Bank linkage programme needs to meet the financial needs of their members and to meet the non-financial requirements necessary for setting up business and enterprises.

Morduch and Rutherford (2003) believe the prospects for the SHG movement are uncertain because they believe that the present system is unsustainable for lack of clarity about who is to play the key role of maintaining quality and how the costs of doing so are to be met. NGOs with their social-development perspective are not ideal candidates for this role and it is not clear who will pay them for this role. Banks will not take on the time-consuming task of helping groups manage the bookkeeping of their internal savings and loan accounts. Without outside assistance, most SHGs will have great difficulty maintaining quality, and the poorer the SHG is, the truer this will be. Just because a group of poor women come together to run a savings-and-loan club, they will be immune from poor management, confused accounting, capture of assets by the leadership, and other kinds of abuse. For Morduch and Rutherford (2003), if the SHG movement is to offer poor people reliable and convenient services on a continuous basis, it needs to undergo a transition into a more stable institutional form, such as the Credit Union system. There is a view that the SHG movement can serve as a quick way to deliver microfinance in an "interim" period, before other institutions can be developed or adapted. The idea is to then graduate SHG members to these other institutions where they can access standard "individual" loans, possibly on a fully commercial basis. The problem with this, they point out, is that there are no obvious lenders for SHG customers to graduate to. No other financial institution is close to offering the reliability, convenience, continuity, and flexibility of good microfinance for low-income customers. Plus, the notion of graduation is not built explicitly into the SHG design. Finally, Morduch and Rutherford (2003) believe that the SHG movement will find it difficult to compete with mass-outreach retailers of the Grameen, should they emerge in India. After 2003, they did emerge and its competition with the state-sponsored SHGs in Andhra Pradesh was one of the sparks of the microfinance crisis there in 2010 that will be discussed later.

3.8 SHGs

Since almost all of the subjects of this research are SHG members, some of the details of how a SHG works will now be discussed. SHGs are informal groups of 10 – 20 individuals formed by people coming together for mutual help and cooperation on various activities including financial matters. They pool in small amounts of thrift money and lend it to group members who need credit. SHGs can be promoted by NGOs, banks, state governments, MFIs or cooperatives. SHGs can have their own savings account with a bank, and often this linkage with a bank is facilitated by an NGO working in the area. The account is operated by the SHG’s authorised signatories, and most banks provide the SHGs with a loan that is in proportion to the savings of the group. Not only has the number of SHGs linked to banks and the savings amount of these SHGs increased over the years, but even the average balance per SHG account increased. There is substantial evidence to suggest that SHG members save only a limited amount in their SHGs because they do not fully trust the mechanism, and would prefer an individual account with a bank, or in a client-responsive post office (MicroSave, 2011).

According to Green (2005), SHGs should be homogeneous in socio-economic terms, have members who are residents of the same area and who have an affinity to each other, have written rules which regulate aspects related to membership, frequency and time of meetings, savings, and credit. They also should hold regular meetings, maintain records (including minutes, attendance register, members’ savings ledgers and a group passbook) to ensure transparency, take decisions collectively, elect leaders democratically, and ensure that loan requests and loan approval as well as payments take place during group meetings to ensure transparency. Finally, SHGs should discuss and try to find solutions to family or community problems during meetings.

In recent years, SHG Federations have been created to improve access to finance as well as to improve service provision to SHGs. These are formal institutions, typically registered under the Societies Registration Act. SHG Federations allow the resources of individual groups to be pooled and thus to channel resources from surplus groups to resource-deficit SHGs. Some federations also act as financial intermediaries between financial institutions and SHGs. A number of federations perform no direct financial function, but instead provide services such as training, marketing, legal advice, advocacy as well as SHG promotion (Green, 2005).

MicroSave (2011) argues that as a community led model, SHGs have an inherent limitation on the quantum of savings that it can mobilise and maintain. This limitation can only be addressed if members also have access to personal savings accounts, outside the group model, where they can save with the confidence that not everyone in the village will come to know of their savings balance and where savings will not be at the risk of group dynamics.

NABARD (2008) recognises the aforementioned challenge and is trying to graduate SHG members into mature enterprises and increase their access to the supply chain, linkages to the capital market and appropriate production and processing technologies. However, NABARD has not actually acted on this yet.

Project Shakti, started by Hindustan Unilever Limited, the Indian subsidiary of Unilever Limited, shows this can be accomplished by connecting SHG member entrepreneurs to an existing multinational supply chain and network. The project does this by helping self-help group members become home sales distributors of its products in villages that have been ignored by its previous efforts. A study done by Xavier et al, (2008) to compare the differences in outcomes between self-help group members engaged in Project Shakti and those not engaged with Project Shakti. The analysis demonstrated that involvement in Project Shakti led to entrepreneurial development resulting in economic empowerment that in turn led to social empowerment.

This research will explore potential of connecting poor entrepreneurs to established value chains and networks in a way that they benefit from the connection. This will be explored in the discussion on value chains and the results.

3.9 BWDA

Figure 1 – BWDA Logo

The respondents involved in this research are clients of the Bullock Cart Workers Development Association (BWDA) and its MFI, BWDA Finance Limited (BFL). BWDA was set up in 1986 by Mr. C. Joslin Thambi in Villupuram, Tamil Nadu and registered as an NGO under the Tamil Nadu Societies Registration Act, 1975 with the primary objective providing improved design for the bullock carts and help in promoting human and animal welfare for the unorganized, illiterate and economically poor bullock cart workers in Villupuram and Cuddalore districts (Yeswanth, 2005; Arora, 2008). Later on BWDA expanded its work to include all poor families (Yeswanth, 2005).

Shortly after NABARD started its SHG-Bank linkage pilot programme, BWDA started to form SHGs. Its microfinance programme started in 1992 in Villupuram under the Women's Development Programme of the Tamil Nadu state government and then expanded in 1996 with the assistance of the Tamil Nadu Women's Development Corporation (Yeswanth, 2005). BWDA worked closely with the banks. However, despite advocacy efforts by Women Development Corporation and BWDA, the banks were meeting only a small proportion of SHGs demand for loans (Arora, 2008).

In response to the unmet SHG demand for loan funds, in 1998 BWDA started lending its own funds to SHGs. There were worries over the lack of skills in delivering financial services and borrowing from financial institutions. Despite these worries BWDA went ahead and in 1999 Rashtriya Mahila Kosh, the National Credit Fund for Women, approved BWDA's application for a Rs. 1.5 million loan. SHGs mobilised savings from its members and used these internal funds together with external loans from the banks to meet the members' loan demand. Only when the loan demand at the SHG exceeded available funds from members and banks did the SHGs approached BWDA for funding the gap. Unlike some MFIs, BWDA was not trying to maximise its control or earning potential, as it manages a small portion of the funds deployed (Arora, 2008).

So, BWDA did microfinance and also continued with its other development activities such as social mobilisation, education, health, sanitation, and vocational training. BWDA eventually concluded that for better management of its microfinance and development programmes, it was important to separate these. In 2003, BWDA promoters and staff mobilised Rs. 3.3 million to purchase an existing Non-Banking Finance Company (NBFC) and expanded the microfinance programme through 'BWDA Finance Limited (BFL)' (Arora, 2008).

To avoid the cumbersome licensing process involved in starting a new NBFC, BWDA took over the Nagercoil Prompt Finance and Investment Pvt Ltd was functioning as an NBFC since 1995 in Nagercoil, Tamil Nadu and renamed it as BWDA Finance Limited (BFL). The process of taking over and renaming NPFIL as BFL was completed in August 2003 (Yeswanth, 2005).

A Non-Banking Finance Company (NBFC) is a company registered under the Companies Act, 1956, and engaged in the business of loans and advances, financial brokering or is in the business of leasing, hire-purchase, insurance or chits. NBFCs are governed by the Non-Banking Financial Companies Prudential Norms Directions, 1998, and regulated by the Reserve Bank of India. However, an NBFC is different from a bank because it cannot accept demand deposits, it is not a part of the payment and settlement system and it cannot issue cheques drawn on it. Furthermore, NBFCs also do not have access to a deposit insurance facility through the Deposit Insurance and Credit Guarantee Corporation (MicroSave, 2011).

BWDA and BFL are separate legal entities. Five of the Board Members of BWDA are on BFL Board. Mr. Joslin Thambi is the managing director of BWDA and BFL. The staffs of both are co-located at the head office and branches in Villupuram.

BWDA does not own any of the BFL shares as a non-profit society in India is prohibited from investing in a for-profit company. BWDA staff organised the SHGs and BFL provided the loan financing. BFL reimburses BWDA for the promotion expenses. BWDA also has schools, a college, a skills training centre, and a programme for children during school vacation (Arora, 2008).

BFL gives loans between 15 and 36 months. The interest is 18 percent per annum on a declining balance basis. BFL charges an upfront fee of 1% of the loan and a membership fee (CRISIL, 2009). BFL largely lends to SHGs. It also does individual loans to SHG members. It also lends to NGOs so that they can on lend to their SHGs. It operates in Tamil Nadu, Pondicherry and the Andaman and Nicobar Islands (CRISIL, 2009).

BWDA was involved in the efforts to recover from the destruction of the Boxing Day tsunami of 2004. Cordaid partnered with BFL, its first partner, and implemented projects within the 25 km radius from the coast in 6 different affected districts of Tamil Nadu. Originally, Cordaid earmarked the grant component to cover the cost of the capacity building of the institution and of the target borrowers. BFL used the grants to cover costs incurred in expanding the operation to tsunami areas, promoting SHGs, and diversifying livelihood skills through courses and training, BFL together with its NGO wing, BWDA organized different vocational courses. BFL succeeded in delivering both humanitarian assistance and reconstruction loans. BWDA did most of the relief delivery while BFL provided loans immediately to its members affected by the tsunami for consumption of Rs 100,000 per SHG (Cordaid, 2008).

In order to develop BFL as a community-owned institution, SHG members were invited to subscribe to the BFL shares. Every borrower taking loan was persuaded to invest 5% of the loan amount in BFL shares. For a short period, the BFL even offered 2% incentive to its field staff to market the shares to SHG members. However, only few SHG members and some staff understand the difference between a deposit and share investment and most of the SHG members, who collectively own 80percent of BFL do not really understand this distinction. Of course, it is possible but a low probability that SHG members could lose their capital investment. This would result in adverse media and political attention. This risk is mitigated by BFL continuing to perform well, keeping average investment size per SHG member below Rs. 1,000 and refunding the share amount to members of disbanded SHGs. Since January 2008, fresh issue of shares to SHG members has been discontinued. BWDA also sold shares to its staff. It took substantial convincing in the beginning to mobilise staff contributions towards share capital, especially as BWDA salaries are quite modest (Arora, 2008).

SHG members save and rotate their savings amongst themselves but this creates challenges. Some SHGs lack the skills, the internal leadership or the group pressure to keep up to date accounts. This increases the risks that members will lose money through error or fraud and adds to the BWDA/BFL responsibility in SHG training and monitoring (Arora, 2008).

The core BFL-BWDA function is to organise, support, and finance self-help groups. The women or men groups, of 20 members each, are led by an animator (group leader) and supported by a group representative. The animator and the representative are members of the SHG and not employed by BFL. The SHG animator is provided with a 6 day formal training within 45 days of SHG formation. Each of the SHG members is provided four days training within the first three months of group formation.

BFL gives the animator various incentives to maintain the group performance. First, the animator is paid 0.5% of the loan principal incentive from BFL, if SHG repays the entire borrowed amount on time. Second, every three to five years, SHGs take stock and twenty per cent of the profits net of savings and expenses are allocated to reserves. Animators usually get 10% of this profit. The rest of the profits are distributed to members (including the animators) in the ratio of savings made over the period. This is estimated at Rs.300 – 400 (US$6 – $8 from OANDA, 2011) per month for an average SHG managing a Rs. 200,000 (around US$4,000 from OANDA, 2011) portfolio. Third, animators are paid for food and other expenses to attend various training programmes sponsored by state government, financing institutions and others. Fourth, some of the animators are motivated by the prospects of being recruited as a BFL cluster coordinator. Fifth, the role of Animator bestows status and profile in the local area. BFL employs 10-12 Cluster Coordinators at each branch. The cluster coordinators are front line BFL field staff and oversee 75-100 SHGs (about 1,500 to 2,000 members). This is much higher than the number of clients covered by loan officers in most other MFIs. The cluster coordinators report to the field monitor, who in turn reports to the Branch Manager. Depending upon workload, number of staff at the branch varies between 13 and 25 (Arora, 2008). Branch managers report to senior managers who are responsible for 3 or more branches.

Women make up a large part of the staff and clientele of BWDA. Seventy four per cent of BWDA-BFL staff and eighty five per cent of the SHG members are women. In addition, many of the field staff was originally SHG members and a number of them were SHG animators before being recruited. This is unusual, as most MFIs have largely male staff from outside the work area, providing financial services to largely women customers (Arora, 2008).

3.10 Andhra Pradesh Microfinance Crisis

BWDA has been affected by the biggest crisis in Indian microfinance centred next door in the state of Andhra Pradesh in 2010-11. Client suicides allegedly connected to the inability to pay back microfinance loans caused the state government to hurriedly pass a microfinance ordinance which severely restricted the operations of microfinance institutions in the state and the collapse of client's loan repayments. This had led to calls for better and more rigorous regulation nationwide mainly through a new microfinance bill to regulate microfinance at the national level and a debate about the efficacy and future of microfinance in India (EIU, 2011). The main impact on BWDA is a credit crunch. It is finding it more and more difficult to borrow money from banks even though it has an outstanding credit rating. Since BWDA mainly finances itself through bank loans, this is a very worrying trend.

Why has this crisis have such an impact? Wright and Sharma (2010) argue that this crisis had three dress rehearsals and Indian microfinance had not managed to learn the lessons from these crises. The first rehearsal was in Krishna District in Andhra Pradesh in 2006, when the local government District Collector, responsible for the administration of the whole district, shut 50 offices of leading MFIs including Spandana, Asmita and Share, and instructed clients not to repay their loans. This was done essentially on the basis that MFIs were charging usurious interest rates, making super-profits on the backs of the poor, co-opting the government self-help groups and being coercive in their collection methods. In short, an abbreviated list of the charges levelled at MFIs in Andhra Pradesh in 2010. The MFIs made voluntary agreements with Andhra Pradesh and promises for MFIs to behave better in Andhra Pradesh were never honoured. Arora and Harper (2011) and Ramanathan (2011) agree that the inability to learn lessons from the Krishna crisis led the state government to conclude that the MFIs in the state could not be trusted.

For Wright and Sharma (2010), the second rehearsal was in Kanpur (and other cities of Uttar Pradesh) in 2009**,** where a local MFI, Nirman Bharti defaulted on the loans it had received from a variety of banks and other financial institutions amid significant portfolio problems. The underlying problem was that Nirman Bharti had not developed the processes, systems of internal control and management information system (MIS) to manage the rapid growth driven by the priority sector lending-based flood of debt financing

For Wright and Sharma (2010), the third rehearsal was in Kolar district in Karnataka in 2009 to 2010, where a repayment strike instigated by the Anjuman committee, a local Muslim group, paralysed repayments for many months affecting most of the major southern MFIs. The underlying reasons for this strike were complex, but what was striking to Wright and Sharma was how few clients resisted the strikes or defended the MFIs. One study concluded that multiple lending was a serious problem with multiple lending with one town in the district having nine MFIs and at least thirty three per cent of the clients have more than one loan and around twenty per cent have three or more loans. In addition, problems in the local silk reeling industry reduced flows of income to service debts, pressure from clients' husbands to cut back on attending weekly meetings and the use of agents by MFIs to drive sales all created an environment that was highly risky for traditional, zero tolerance, group-based lending operations which the commercial MFIs of Andhra Pradesh were.

The Andhra Pradesh microfinance crisis started in October 2010, when suicides by microfinance clients were reported in Andhra Pradesh. The state government responded by passing an ordinance that set a limit on how much MFIs could lend to their clients, required loans to be repaid monthly rather than weekly and that all loan repayments be made at government offices. As a result, microfinance in the state ceased operations. Loan recovery rate went as low as 10 per cent. In November 2010, state supported SHGs reached 17 million clients in the state and MFIs were reaching 6 million. Many clients had multiple loans putting the average microfinance debt in the state at US$1,700 per person compared to US$150 per person in other states (Maes and Reed, 2011).

Several commentators believe that politics and the MFIs competition with the state SHG programme was a key factor in the crisis. As Ballem et al (2011) point out that a majority of MFI clients are members of state SHG programme of the Government of Andhra Pradesh, there is possible conflict of interest between those of the state and those of its SHG members. EIU (2011) believes there is a perception that the rapid growth of microfinance has reduced local politicians' ability to use rural credit as a tool of patronage and has put MFIs in the firing line. Intellecap (2010) said that the state believed that it was serving its poor by providing them low-cost loans in its state SHG programme. However, they saw that MFIs were able to attract clients and achieve a better repayment rate, despite charging higher interest rates. The state believed that it had a better product and lower costs and refused to see any logical or business reason why poor people still borrowed from MFIs. So the state began to believe that the MFIs must be following coercive business practices to achieve such success. But, Arora and Harper (2011) argued that what they called the politicised SHGs did not meet demand which opened the doors for the MFIs. This can be seen in the growing overlap of MFI and SHG clients. Arora and Harper (2011) show that in 2001, the percentage of SHG clients who were also MFI customers was four per cent in Andhra Pradesh. But by 2010, it was up to forty five per cent. Ballem et al, (2011) agree with this saying that over the years, the SHGs have proliferated across

Andhra Pradesh but the state SHGs were not able to meet the credit requirements of the borrowers. In addition, Ballem et al (2011) point out that the state SHG programme had some shortcomings, such as delay in loan sanctioning (more than 2-3 months in most cases), inadequate loan amounts, and no short term credit products. As a result, many of the poor approached moneylenders and daily finance corporations and took loans at exorbitant interest rates because they could not get loans on a timely basis from the state SHGs.

Another key factor in the crisis was overindebtedness. M-CRIL (2011) found that this was caused by excessive lending. M-CRIL found that of the financially excluded families, just over hundred per cent of them had loans from MFIs and 310 per cent had loans from state SHG programme. M-CRIL questions if MFI lending alone was responsible for the crisis. Arora and Harper (2011) say that the combined number of SHG and MFI loans in Andhra Pradesh was 10 times the number of poor households in the state.

Another key factor in the crisis was suicide. However, most commentators could not find a clear statistical link between microfinance and the suicides in October 2010. Harper (2011) says that most of the farmers who committed suicide were heavily indebted. However, in most suicide cases, about 75 per cent of the household's indebtedness was to informal moneylenders rather than formal sources such as MFIs. Ashta et al (2011) have shown that the suicides in microfinance in Andhra Pradesh do not seem to be any greater than the average suicide rate in India. However, suicides by female microfinance borrowers in Andhra Pradesh are higher than the average female suicide rates. Sinha and Sinha (2011) argue that the presumption that overindebtedness had led to the suicides was the cause of the crisis.

A final factor was the rapid expansion of microfinance in Andhra Pradesh. Arora and Harper (2011) point to the annual growth rate of MFIs in Andhra Pradesh between 2001 and 2010 was seventy three per cent while the average annual growth rate for SHGs in the state was forty one per cent for the same period. For Sinha and

Sinha (2011), funding MFI growth by mainly commercial loans, meant that equity was needed as well to grow in order to meet capital adequacy requirements. The equity was obtained at high valuations by promising continued high growth and high returns. To deliver high growth, MFIs concentrated their efforts in the better connected and easier to reach areas of Andhra Pradesh because it was less costly. This led to geographical concentration and multiple lending. The number of microfinance loans exceeded the number of clients by forty per cent in 2010. Four hundred eleven per cent of the eligible population was covered by microfinance loans with three hundred per cent of the coverage coming from SHG loans. This means that in Andhra Pradesh that each microfinance client had on average 4 loans with 3 of those loans coming from SHGs.

The Andhra Pradesh microfinance crisis highlighted the need for effective regulation for microfinance in India. Currently, however, there is no national regulatory framework for microfinance in India. This is why the state of Andhra Pradesh felt the need to rush through its microfinance ordinance in the autumn of 2010. As the above discussion shows, all parts of the microfinance sector needed regulation.

In 2007, a bill to regulate microfinance in India was introduced into parliament. This bill designated NABARD as the microfinance regulator. However, this bill was referred to the standing committee of parliament with no subsequent action being taken. As a result, this bill lapsed (Shankar and Asher, 2009).

In response to the 2010 crisis, the RBI appointed the Malegam Committee to look at the issues in the microfinance sector with the view of recommending to the RBI a regulatory reply. The committee made recommendations for a separate NBFC category for MFIs, interest rate cap of twelve per cent, transparency in interest rate charges, rules to help prevent multiple borrowing and overindebtedness, establishment of a national credit information bureau, establishment of a customer protection code and that microfinance should remain in the priority sector scheme. The committee also said that if the RBI implemented these recommendations, there would no longer be any need for the Andhra Pradesh microfinance ordinance (EIU, 2011; Darshaw, 2011).

The RBI issued new regulations for the microfinance sector in May 2011 which implemented the Malegam Committee recommendations including introducing a margin cap of 12% and an interest-rate cap of 26% for banks' priority sector loans including those by NBFCs (EIU, 2011). In August 2011, the Indian government introduced a Microfinance Bill to have the sector regulated by the Reserve Bank of India (Maes and Reed, 2011).

The key impact of the Andhra Pradesh microfinance crisis was feeling among those both outside and inside of microfinance that microfinance may have lost its way. It also brought to the forefront challenges to the financial systems paradigm that had reigned in microfinance since the turn of the century. More and more, microfinance was asked to refocus on generating social impact and greater reduction of poverty.

3.11 Chapter Conclusion

There is an immensely high level of poverty in India. This especially shows up in the child nutrition figures. Some go as far as to say India may be the poorest country on Earth. There have been a number of anti-poverty efforts in India but these have been compromised by corruption, apathy and mismanagement. The complexity of the caste system allows it to sometime be a help to the poor instead of a hindrance. But, many Indians see the caste system as a system of mutual support despite its oppressive features. The kinship ties that form the core of the caste system is also central to how Tamils keep their classical civilisation alive which is the last classical civilisation on the planet. These close kinship networks are vulnerable to brokers who connect these to the outside world. However, these kinship networks are not unambiguously closed leaving room for members to extend connections outside. Indian microfinance got its start due to the failure of the development bank approach as elsewhere. However, India's unique contribution is the self-help group which is essentially a microbank owned and operated by its clients. BWDA uses mainly SHGs in its microfinance but does not try to completely control them. Unlike other MFIs in India, it uses a mostly female staff. BWDA was impacted by the Andhra Pradesh microfinance crisis by finding it more difficult to obtain capital. However, the main overall impact of the crisis was to challenge the financial systems approach and a growing concern to produce more social impact and greater reduction of poverty. Social network analysis brings a new theoretical tool to microfinance to help its clients to obtain higher levels of poverty reduction. But before looking at its theoretical contribution, the background on social networks will be discussed in the next chapter.

4 Chapter Four – The Importance of Social Networks

4.1 Chapter Summary

The chapter will start by defining social networks and social network analysis followed by a discussion on the importance of the structural view social network analysis provides. Next will be a look at what research has discovered about the rules on how networks work and why the poor's social networks rarely benefit the poor. The chapter ends with descriptions of case studies which connect the poor to a special kind of network, the value chain. The case studies show both the benefit and the risks of connecting the poor to existing mainstream value chains.

4.2 Social Networks and Social Network Analysis definitions

Social networks are defined and measured as connections among people, organisations, political entities (states and nations) and/or other units. Social network analysis is a theoretical perspective and a set of techniques used to understand these relationships (Valente 2010, pg. 3). Christakis and Fowler (2010, pg. 32) say that the science of social networks provides a distinct ways of seeing the world because it is about individuals and groups and how the former becomes latter.

4.3 Importance of Social Networks

Social network analysts view society through a structural lens. The structural view says that the structure of society and the relationships that form them are as important as the attributes of individuals in explaining what happens in society. Why is the structural view of society so important? Why are the relationships that form social networks so important? Valente (2010, pgs. 3 – 7) says that relationships matter because relationships influence a person's behaviour above and beyond the influence of his or her attributes. A person's attributes does influence who people know and spend time with: their social network. Valente quotes Borgatti et al (2009),

"One of the most potent ideas in the social sciences is the notion that individuals are embedded in thick webs of social relations and interactions".

The reason that social networks are so important is because human beings are ultra-social animals that create social networks (Haidt, 2006). Syed (2010, page 110) concurs by quoting Geoffrey Cohen:

"The need to belong, to associate, is among the most important human motives. We are almost certainly hardwired with a fundamental motivation to maintain these associations."

Christakis and Fowler (2010, pg. 214) add that human beings just don't live in groups, they live in networks. Valente argues the traditional social science approach of using random sampling is not adequate for measuring network concepts because random sampling removes individuals from the social context that may influence their behaviour. Valente explains that one primary reason social network research has grown in recent decades is that scholars have become dissatisfied with attributes theories of behaviour. Many attribute theories have not explained why some people do things (e.g. quit smoking) while others do not. Social network explanations have provided good explanations in these cases. Social network analysis concepts and techniques have found wide application across a number of scientific disciplines including anthropology, business, communication, computer science, economics, education, marketing, medicine, public health, political science, psychology and sociology to name a few.

Freeman (2004, page 2) also believes that the unique contribution of social network analysis is its structural approach which looks at the social structure as a whole rather than focus on the individual. For him, the social network approach is grounded in the intuitive notion that the patterning of social ties in which actors are embedded has important consequences for those actors. Network analysts, then, seek to uncover various kinds of patterns. And they try to determine the conditions under which those patterns arise and discover their consequences.

Comparing the structural approach of social network analysis to the traditional random sampling approach of social science, Freeman (2004, page 1) quotes Allen Barton, a Columbia University sociologist,

"For the last thirty years, empirical social research has been dominated by the sample survey. But as usually practiced, using random sampling of individuals, the survey is a sociological meat grinder, tearing the individual from his social context and guaranteeing that nobody in the study interacts with anyone else in it. It is a little like a biologist putting his experimental animals through a hamburger machine and looking at every hundredth cell through a microscope; anatomy and physiology get lost, structure and function disappear and one is left with cell biology..... If our aim is to understand people's behaviour rather than simply to record it, we want to know about primary groups, neighbourhoods, organizations, social circles and communities; about interaction, communication, role expectations and social control".

4.4 Key Social Network Analysis Concepts

Therefore, social network analysis allows one to take a holistic, structural view in addition to the traditional approaches. In order to take a structural view of the businesses owned by microfinance clients, there are several key concepts of social network analysis being used in this research. The first is small world networks. This is defined as a network in which most people have few connections yet the overall distance between any two people in the network is shorter than expected by chance (Watts, 1999). Small world networks are characterised by local clustering which indicates dense pockets of interconnectivity. There are bridges, however, that connected these subgroups and these bridges enable people to connect to seemingly distant others by fewer steps than would occur in a random network (Valente, 2010, pgs. 9 – 19). The jatis described in the previous chapter have the characteristics of a small world network. The dense kinship ties create pockets of interconnectivity with bridges to other dense pockets of interconnectivity inside the jati. There can also be bridges to outside the jati. These bridges are why Quigley's (1993) assertion above that jatis are not unambiguously closed is correct.

Homophily is the tendency for people to affiliate and associate with others like themselves. As a result, a person's social network tends to be a reflection of him or herself because people feel more comfortable being with people like themselves rather than with people who are different. Homophily helps to explain why the small world effect occurs. The set of people from which contacts are drawn are narrowed by homophily and the probability that two people have an acquaintance in common is much higher than random chance alone would dictate. Homophily also explains why new ideas and practices have difficulty in getting a foothold within most social networks because most people talk to others like themselves and usually hold similar attitudes, beliefs and practices and as a result avoid those who do not share their views slowing the spread of new ideas. However, homophily can also speed the diffusion of an idea. Once a new idea does gain a foothold in the social network, the trust generated by homophily causes it to spread quickly (Valente, 2010, pgs. 9 – 19). By their very nature, jatis are homophilous since they share kinship ties. The concept of homophily was developed by Almack (1922) who asked children to name those they would like to invite to a party and then compared the similarities between the choosers and the chosen to study the effect of homophily.

One of the key innovators in social network analysis was Jacob Moreno (1934). Moreno, along with Helen Hall Jennings created sociometry which was an experimental technique obtained by application of quantitative methods which inquire into the evolution and organization of groups and the position of individuals within them (Freeman, 2004, page 37). His work's aim was to investigate how psychological well-being is related to the structural features of what he called social configurations. His major innovation was to devise the sociogram as a way of representing the formal properties of social configurations (Scott, 2000, page 9). The sociogram turned out to be one the most powerful innovations in social network analysis because it allowed the visualisation of social networks. Because human beings are so visually oriented, visualisation is an efficient way to present a lot of network data in a way that is easily understood. The Data Findings and Data Analysis chapter will present a number of visualisations resulting from this network research.

Another key concept is centrality which focuses on who is the most central player in the network. The reason centrality is important is that Alex Bavelas (1948) said that the degree to which a single individual dominates its communication network – the degree to which it was centralised – affected its efficiency, its morale and the perceived influence of each individual actor. Bavelas and the group around him developed a formal model, drew graph theoretic images of social structures, designed an experiment and collected experimental data on efficiency, morale and the recognition of leadership which showed that Bevelas had been correct. As a result, a formal model for centrality was developed (Freeman, 2004, pages 68 – 70). In the data analysis chapter there will be a focus on centrality to identify the central players in the network who would be probably be the best link for new information for the sari sellers taking part in this research.

The Manchester anthropologists were extremely influential in social network analysis in Britain, with their work focused on ego networks. Ego networks are networks that focus on one individual and the individual's connections including connections between the people connected to the individual. The Manchester Anthropologists include John, Barnes, Elizabeth Bott, Max Gluckman, J. Clyde Mitchell and Sigfried Nadel. Alfred Reginald Radcliffe-Brown, who espoused the structural perspective in anthropology, was a great influence on the Manchester Anthropologists (Scott, 2000, pages 26 – 33; Freeman, 2004, page 105). Of all the Manchester anthropologists, Scott (2000, pages 28 -32) considered Mitchell the most important contributor of this tradition. Mitchell, an anthropologist, said that the pattern of interactions that people have among themselves is the sphere of network analysis. These networks are built on a flow of information and the transfer of resources and services. Mitchell's focus was mainly on ego networks. Mitchell's major contribution was to translate graph theory and sociometry into a sociological framework. From this came the concepts of density, the completeness of the network and reachability which measures how easy it is for all people in a network to contact one another through a limited number of steps. This research will measure the density of networks collected.

4.5 Networks Rules

Christakis and Fowler (2010, pgs. 17 – 26) described five rules on networks discovered through research. The first rule is that individuals shape their network. One example they give of how individuals shape their networks is homophily which was described above. Individuals also decide the structure of the network by deciding how many people they are connected to, influencing how densely interconnected their family and friends are and by controlling how central they are to the social network. Individuals also shape their networks through transitivity which is the tendency where an individual has strong ties to two separate people;

those two people will know each other thus forming a triangle. The importance of transitivity will be discussed in the theoretical framework.

The second rule is that the network shapes us. The network shapes individuals because the number of social contacts can affect people, transitivity, or the lack of it, can affect individuals and how many contacts an individual's friends and family have can affect them. How an individual's can be constrained by its network will be discussed in the theoretical framework and the discussion of the results.

The third rule is that friends affect individuals. Due to the human tendency to influence and copy one another, friends help determine the content that flows across the network which affects the individual. This seems obvious and will be shown in the impact of the number of strong ties in the collected ego networks.

The fourth rule is that our friends' friends' friends affects individuals. Two examples of this rule are described. First is hyper dyadic spread which is the tendency of effects to spread from person to person to person beyond an individual's direct social ties. The second example is Milgram's famous sidewalk experiment (Milgram et al, 1969). In this experiment, researchers would stop and look up at a window and record how many other passers-by also looked up. The more researchers that looked up, the more passers-by that looked up. This illustrated the importance of a threshold in influencing a network.

The fifth rule that the network has a life of its own or to put it another, a network is more than the sum of its parts. Christakis and Fowler give two reasons why the network has a life of its own. First, networks combine properties and functions that are neither controlled nor perceived by its members. They can only be understood by studying the whole network. Second, networks also have emergent properties. Emergent properties are new attributes of a whole that arise from the interaction and interconnection of the parts.

One question that comes up is how far does an individual's connections and influence reach into the social network? Christakis and Fowler (2010, pgs. 26 – 30) give different answers to the question for connections and influence.

For connections, they point to Milgram's famous six degrees of separation experiment. In this experiment (Travers and Milgram, 1969), Milgram gave a few hundred people who lived in Nebraska in the USA a letter addressed to a businessman in Boston more than 2300 kilometres to the east in the USA. These people were asked to send the letter to someone they knew personally. The goal was to get the letter to someone they thought would be more likely to have a personal relationship with the Boston businessman. The number of times the letter changed hands was tracked and it was found that on average it changed hands six times. Dodds, Muhamad and Watts (2003) repeated Milgram's experiment using e-mail instead of letters. This time 98,000 subjects were recruited. Each subject was randomly assigned a target from a list of eighteen targets in thirteen countries. The subjects sent an e-mail to someone the subject knew who might in turn know the targeted person. Again, it took roughly six steps to get the e-mail to the targeted person replicating Milgram's results. Therefore, Christakis and Fowler conclude that an individual reach extended six steps or degrees into their networks.

For influence, Christakis and Fowler conclude that the reach of an individual's influence is much shorter. They promulgate the three degrees of influence rule. This rule states that an individual's influence through the network gradually dissipates and ceases to have a noticeable effect on people beyond the social frontier that lies at three degrees of separation. They give three reasons for this. First is the Intrinsic Decay Explanation. This explanation says that influence eventually peters out as information loses it fidelity. Second is the Network Instability Explanation. This explanation says that links beyond three degrees have a tendency to become unstable as the network evolves. Third is the Evolutionary Purpose Explanation. This explanation says that humans evolved in small groups in which everyone was connected to everyone else by three degrees which constrains influence going beyond three degrees.

4.6 Visualisations

One of the key advantages of social network analysis is the ability to use software to visualise the network. Features not readily apparent looking at the numbers become very apparent when looking at the visualisation. The software used to do the network calculations was UCINET (Borgatti et al, 2002) and NetDraw (Borgatti, 2002) was used to visualise the network. NetDraw uses a spring-embedded algorithm where the edges in the network behaves as springs and does not like long lines.

During the first field trip, each respondent was asked to identify which members of the SHG who did the most work. In looking at the visualisation, it is important to note that direction is important. In this case, the base of the arrow is at the respondent and the arrowhead points to the people the respondent thinks are important. The more arrowheads a person has, the more important the person is within the SHG.

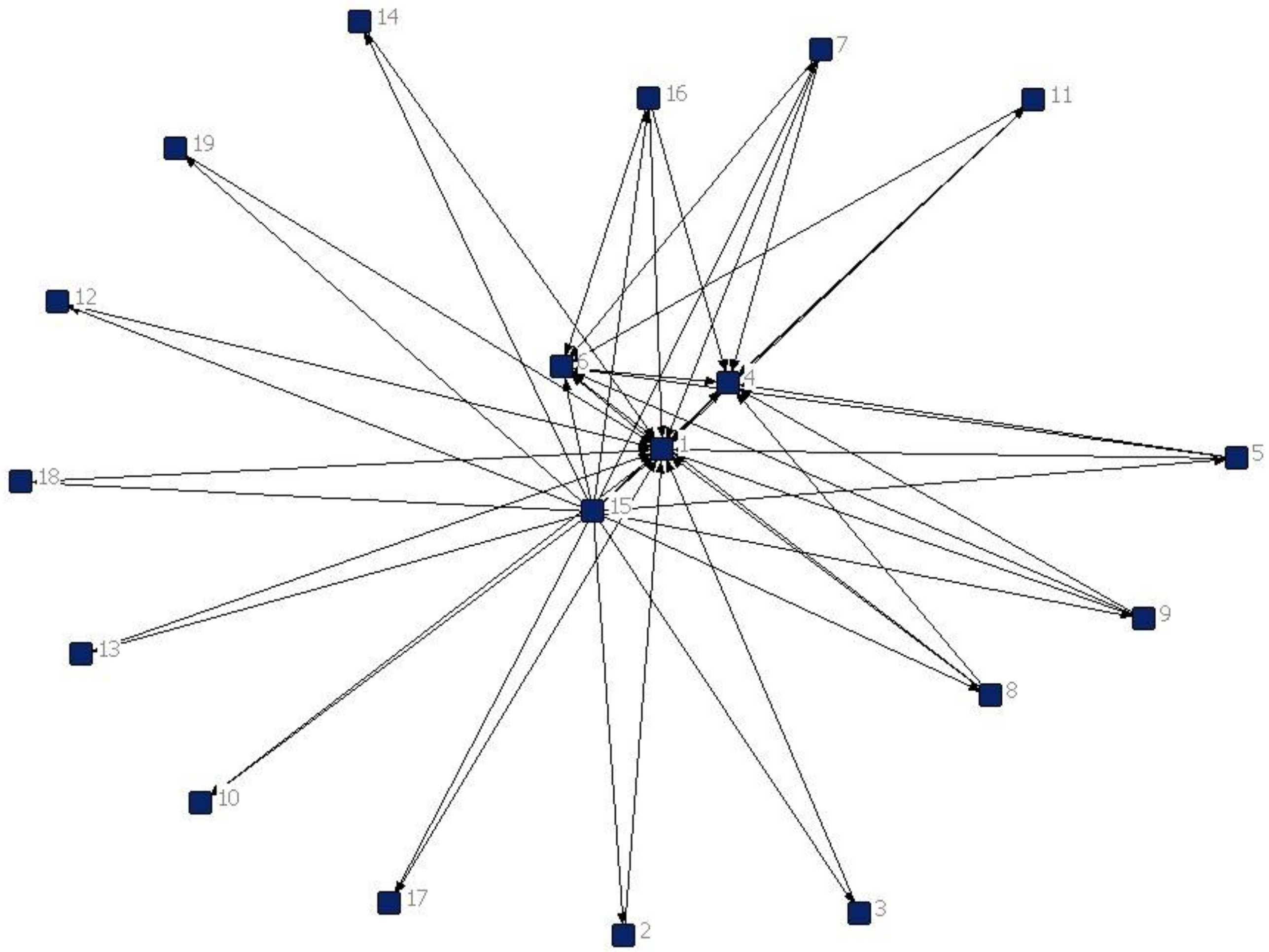

Figure 2 – Male SHG: Who Does the Most Work?

In Figure 1 above is the visualisation of the answers for the male SHG and Figure 2 below is the visualisation for one of the female SHGs.

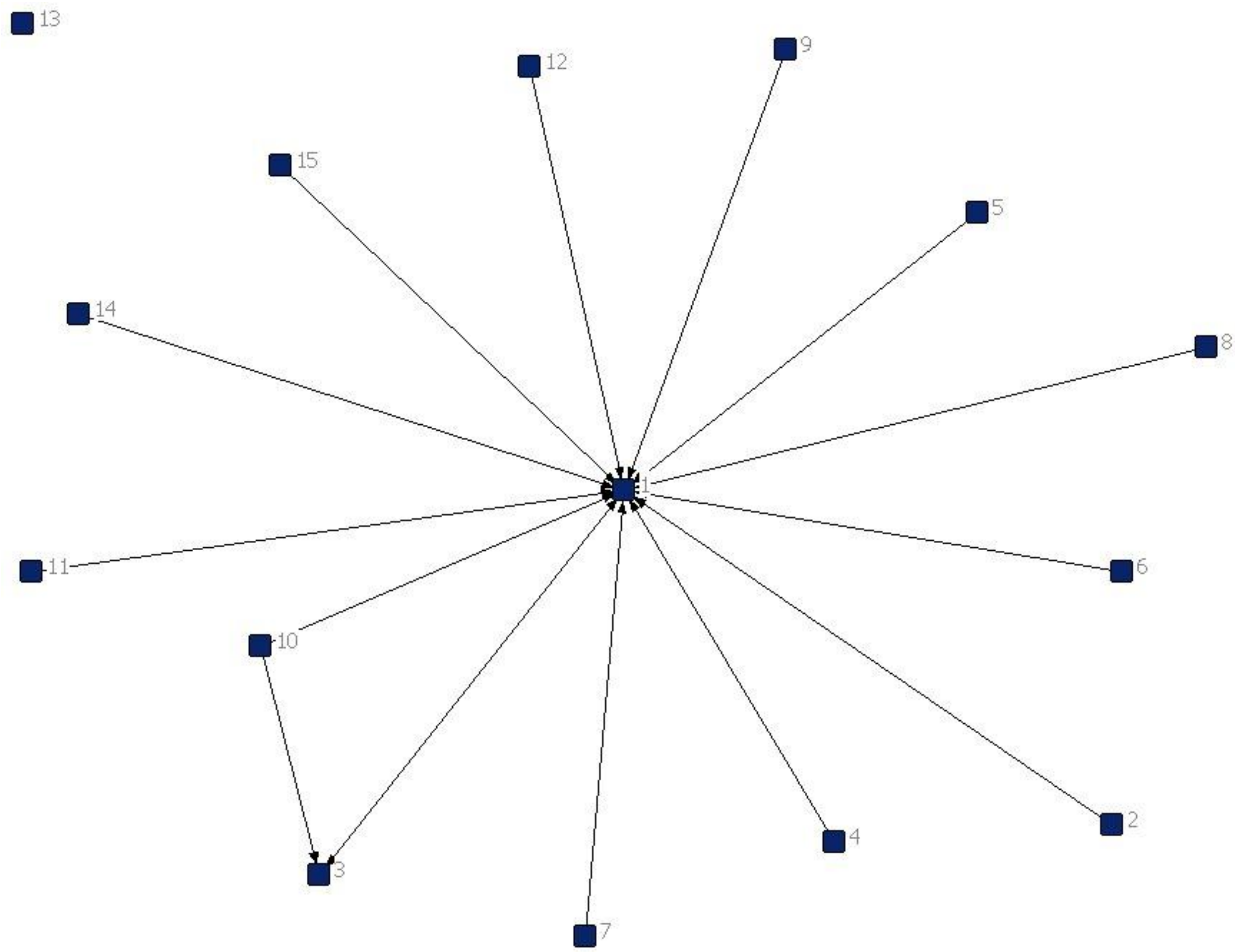

Figure 3 – Female SHG: Who Does Most of the Work?

In Figure 1, most of the arrows point to the animator (SHG leader) and the two representatives (deputy SHG leaders). In Figure 2, almost all of the arrows point to the animator. In one sense, this is not surprising that the leaders would have the most arrows pointing at them. However, another way to interpret these is to say that if anything happened to the leader of the male SHG, there are two ready replacements. The female group, on the other hand, could be in considerable difficulty if their leader disappeared. These two figures show the power of visualisation in social network analysis.

4.7 Networks and the Poor

So, how do the dynamics of the network affect the poor? Price (1976) was the first to apply the process of cumulative advantage or preferential attachment to networks. For Price, preferential attachment explains why the millionaire gets income faster than the beggar. This is now known as the rich get richer effect. This produces what is known as a scale-free network. A scale-free network, as a result of a power law distribution, is one where a few nodes have an overwhelming number of the connections. Networks that follow the power law are ones where the number of nodes having a certain number of connections is found to vary as a power of the number of connections. Barabási (2003, pg. 87 – 92) argued that scale-free networks occurred because people want to connect to networks at its most central locations. This would result in those in the most central locations in the network retaining their central positions. Barabási also called this the rich getting richer dynamic. This describes the situation that many of the poor find themselves as the rich maintain themselves at the centre of the most important networks in the nation and the poor find themselves on the periphery. Christakis and Fowler (2010, pg. 31 – 32) argue that the rich get richer dynamic of social networks can reinforce two different kinds of inequality. First is situational inequality where some are better off in socioeconomic terms. Second is positional inequality where some are better off in where they are located in the networks. Christakis and Fowler (2010, pg. 167) also argue that the rich get richer dynamic means that the positive feedback loop between social connections and success could create a social magnifier that concentrates even more power and wealth in the hands of those who already had it.

For Christakis and Fowler (2010, pgs. 301 – 302), the ability of network inequality to create and reinforce inequality of opportunity comes from the tendency of people with many connections to be connected to other people with many connections. This distinguishes social networks from neural, metabolic, mechanical and other nonhuman networks. The reverse holds true as well: those who are poorly connected usually have friends and family who are themselves disconnected from the larger network. They argue that to address poverty, the personal connections of the poor must be addressed. To reduce poverty, the focus should not merely on monetary transfers or even technical training; the poor should be helped to form new relationships with other members of society. When the poor on the periphery of the network are reconnected, the whole fabric of society benefits and not just any disadvantaged individuals at the fringe.

Huda and Simanowitz (2008) in an impact assessment of the Haitian replication of BRAC's Targeting the Ultra Poor programme, mentioned in chapter two, found a correlation between the depth of poverty and the strength of the social networks of the poor. The social networks of the poor are formed from relationships with family, neighbours and community members. However, they found that being poor is inextricably linked to being marginalised. The poorer the person, the thinner the social networks they can depend on. They also compared those who climbed out of extreme poverty the fastest with those who climbed out the slowest. The key difference was the strength of their social network. The fast climbers often had a strong social network to rely on to get them through emergencies. On the other hand, slow climbers had little or no social network to rely on. Being extremely poor exacerbates the social exclusion and marginalisation. The extremely poor reported that the biggest destroyer of their social networks is buying on credit and being unable to repay. This leads to broken relationships and ostracism. As a consequence, the poverty is associated with being poor in people. The result is that being financially poor and having poor social networks seem to perpetuate each other. Of course, this means that the rich would tend to have strong social networks but they found that the poor are hesitant to approach the rich because of the power dynamics at play.

Huda et al (2005b) found power dynamics at work in an experiment to connect the ultra-poor to village elites in order take advantage of the networks of the elite. While there was some success, they recognised the risk that their experiment could risk reinforcing the dependency of the ultra-poor on the elite. Wood (2003, page.456) says that securing any kind of longer term future for the ultra-poor requires support of these elites but this comes at the price of dependency. Implicit here is the unwillingness or inability of the ultra-poor to support one another during distress. This sense of powerlessness leads to an expectation that those who are better off should or will provide them charitable assistance (Huda et al, 2005b). This power dynamic between rich and poor could also apply to Tamil mainly low caste members who are the subjects of this research.

4.8 Networks and Microfinance

How do networks affect microfinance's efforts to reduce poverty? Christakis and Fowler (2010, pgs. 168 -170) point to the fact that microfinance uses the social networks of the poor that consist of their friends and family as a form of social collateral. They point to Grameen Bank as an example of this approach. Yunus (2003, pg. 62) attributes the success of Grameen Bank to features of the social network:

"Subtle and at times not so subtle peer pressure keeps each group member in line."

Christakis and Fowler also state that ROSCAs are another manifestation that capitalises on the power of social networks.

However, network theory points to a much stronger role that microfinance can play in reconnecting the poor to the larger networks around them. The concepts of weak ties and brokerage discussed below show how being better connected to the larger network can help the poor using microfinance to create and sustain their microenterprises to improve their businesses and reduce their poverty. The structural argument of social network analysis points to the importance of social structure and social context in the lives of microfinance clients and that just focusing on the individual misses some crucial information. However, taking advantage of the structural outlook this requires that microfinance institutions focus more on social intermediation to help their bridge the structural holes around them.

There has been some research that has looked at the impact of networks in microfinance. Hasegawa (2009) argues that those excluded from microcredit may not be the poorest but the socially weakest. In a result that confirms this, Karlan (2007) in a study of FINCA Peru found that those with strong social ties to the group are less likely to be forced from the group than those with weak ties if the default was beyond the borrower's control. For Armendáriz and Morduch (2010, pages 119 – 120) the problem is that it is hard to determine if this is due to trust or due to the fact that those who are similar and live closer to each other have an easier time monitoring each other. However, Hermes and Lensink (2007) argue that Karlan is able to circumvent this endogeneity problem by making use of a natural experiment, which allows him to rule out the possibility that the nature social connections correlates with other group characteristics influencing repayment. FINCA Peru randomly creates groups. If a person wants to obtain a loan, she is put on a list, without taking into account where she lives or whether she knows the other persons who are already on the list. Once the list contains 30 persons the group can start. This process of group formation exogenously creates groups with different levels of initial social ties, which enables the actual measurement of the impact of these social ties on monitoring and enforcement efforts within the group.

Nelson (2004) says that entrepreneurs use networking for different purposes at different stages in the life cycle of their businesses. New entrepreneurs need access to peers for information, advice and support. Entrepreneurs with growing businesses require advice to meet new challenges. Finally, entrepreneurs with maturing businesses need strategic alliances. Eastwood (2004) says that one of the barriers women face in setting up businesses includes access to networks to get help to manage the business. Lack of access to business networks can have a detrimental effect on the success of a business. Shaw et al (2001, page 13) quote Aldrich and Zimmer:

“Networks are known to assist in business start-up and growth by providing access to information, advice and finance as well as much needed business contacts.”

However, Armendáriz and Morduch (2010, page 272) argue that measuring an attribute such as access to valuable social networks is harder than measuring attributes like age, education and experience. However, as this chapter shows, it is possible to measure the social networks and access to networks of microfinance clients.

4.9 Value Chains

Bhagavatula and Elfring (2010) showed that most microfinance clients start low growth, low barrier to entry businesses that are very vulnerable to competition and that social networks may be the only asset these clients have to fight the competition. But, could these clients profit from joining the networks of larger firms as suppliers? This has been the focus of value chain research to see if the poor can benefit from joining existing value chains that include these networks of larger firms. However, the poor are not generally part of these existing value chains. L. Kumar (2010) arguing why microfinance had not empowered women said that one of the reasons why is that the women in the village of study are not in any of supply chain initiatives and the village is not integrated with other villages. It should be noted that these women may be part of local value chains but these tend to be small or have a one link to outside networks which tends to lead to exploitation.

Shah (2010) shows how federations managing milk collection and processing centers, has helped link small farmers to value chains and receive better prices for their produce. For the OECD (2004), the effect of business networks on pro-poor outcomes is that they spread knowledge of how to improve productivity across the private sector, including the poor as seen by Shah's example. The development of business networks, in the form of horizontal and vertical clusters, and the strengthening of business organisations have an important role to play in innovation and increasing productivity. However, such linkages are based on trust and so it is difficult to establish clusters where they do not exist organically (OECD, 2004).

The important thing is not so much whether a cluster exists, but how well it performs in boosting systemic innovation and competitiveness and reducing transaction costs throughout the value chain. The competitiveness of the cluster depends on competitive performance and therefore innovation at all levels of the value chain (Ernst, 2004).

But, the poor do not always benefit from joining value chains of larger firms. The benefit the poor get from a value chain depends where the market power lies in value chains. They may either be producer or consumer driven. In consumer-driven supply chains, the balance of market power lies with the consumer. These tend to be commodity or undifferentiated markets with low barriers to entry in which producers receive a small share of the total value created in the market. Agricultural commodities such as coffee, tea and palm oil are examples. On the other hand, producer-driven value chains tend to be those in which products are differentiated by technology, design and/or natural attributes and with barriers to entry. In these markets, the balance of power tends to lie with the producer (OECD, 2004). Because microfinance clients tend to start low entry barrier businesses, these tend to be linked to consumer-driven value chains where they get a small share of the total value created in the market.

Another problem is that markets work in social space and the social networks in the space may be a source of conflict that prevents access. There are numerous examples of markets in which one ethnic or social group predominates and where others are excluded. In the extreme, there may be conflict over market participation, which disrupts their functioning entirely (OECD, 2004).

Is there a way for the poor to be involved in value chains of larger firms that include rather than exclude them? Or value chains where the poor get a fair value rather than exploitation? Harper (2010b) looked at possible ways of answering these questions. He presents a series of case studies in India where interventions were made to include poor people and have poor people benefit from inclusion. There are two that are relevant to this research.

The first case study involves connecting potato farmers with the value chain of a giant multinational. BASIX, a MFI and livelihoods promotion agency, was interested in contract farming model as a strategy and proposed to link the Kolkata potato crisp factory of Frito-Lay subsidiary of PepsiCo with very poor small scale farmers in the Indian states of Jharkand, Orissa and Bihar. BASIX saw an opportunity match the potato harvest in October and November from these farmers with PepsiCo’s shortage of potatoes in these same months. After a year of negotiations, PepsiCo, BASIX and the farmers entered a partnership. BASIX aim was to create a sustainable revenue model that would be profitable for all three parties. PepsiCo supplies the seeds with BASIX providing credit and technical services. BASIX helped form the Growers Association which included all of the potato farmers. BASIX made sure that PepsiCo’s instructions were followed by the farmers through the planting and growing seasons through constant monitoring of the farmers. PepsiCo would occasionally monitor the farmers. At the harvest, the farmers would grade the potatoes in the presence of BASIX staff. The rejected potatoes would be taken home for consumptions. PepsiCo would transport the remaining potatoes to the factory in Kolkata where they would be subjected to a final grading at the factory gate. In the first year, the farmers benefited from this project by getting guaranteed prices for their crops. These prices were slightly higher than the ones the farmers normally got. This, plus the saved transport costs, meant the farmers made more profits. They got higher yields from by following PepsiCo's instructions. They learned the importance of grading and quality. BASIX made a surplus of Rs. 45,036. In the second year, serious problems developed in the relationships. This had several causes. PepsiCo's standards seemed to vary according to the availability of the potatoes. When supply was scarce, almost any potato was accepted. When there were plenty of potatoes, the quality standards were very stringent. The more checks at the factory were done without the presence of representatives from BASIX and the Growers Association. PepsiCo would pay a higher rate in the open market for the same type of potato the farmers were growing enticing the farmers to break the contract by selling significant amounts of potatoes on the open market. The Growers Association took much longer to build as an institution than BASIX estimated. As a result, the Growers Association, which was supposed to take care of all the logistics, was actually run by BASIX. Farmers came to the conclusion that logistics was BASIX's responsibility. BASIX did not account for the cost of this and in addition the farmers blamed BASIX for all of the negative outcomes. Not surprisingly, an atmosphere of distrust developed between all three parties (Mishra, 2010).

The second case study focused on connecting SHG members directly with retailers. PRADAN, a livelihood NGO working in the same states as BASIX, took a different approach. After years of experimentation, it created a value chain centred on home based SHG members farming chicken broilers. It is a scaled down version of the modern industrial broiler value chain. Unlike BASIX, PRADAN does not provide finance but SHG members get finance from government schemes. The farmer's margin is 60% higher because of the low to negligible labour costs. The cooperative aggregates the production of several small households into marketable lots. The cooperative's costs include administration, veterinary and management support but this is offset by the increased margin of selling directly to the retailers without intermediaries. The cooperative provides their members with the food and medicine they need giving them an advantage over non-members using traditional methods (A. Kumar, 2010).

There are several key learning points from these case studies. First, is that there is always a risk in connecting poor people to value chains especially ones belonging to giant multinationals. The BASIX case study seems to bear out the OECD argument that the poor have little power in consumer driven value chains such as the one for potato crisps. PepsiCo knew the farmers could do little to challenge their decision on what potatoes to accept. So the key learning point is the need to understand how the business actually runs so the poor can be protected from the vagaries of the business. On a positive note, the BASIX case study showed the importance of access to the latest information and techniques. Building a network of potato farmers through the Growers Association shows the benefits of working collectively because none of the farmers could have individually negotiated a deal similar to the one BASIX got for the farmers. Another key learning point is that building cooperative organisations takes skills that an MFI may not have. Therefore, it is important that capacity building is done in this area to improve the needed skills. It is possible that BASIX could have learned from the experiments that PRADAN did since both organisations were working in similar states. The PRADAN case study shows the importance of experimentation. PRADAN did make many mistakes over the years but it learned lessons and applied them until it got a successful working model. The good corporate governance in its cooperatives is a direct result of the years of experimentation. PRADAN was able to help its SHG members to override the disadvantage they normally would have had in a consumer driven value chain like chicken broilers by directly selling to the retailers. If BASIX continues experimenting with value chains like PRADAN, BASIX will eventually get it right. The PRADAN case study again shows the importance of gaining access to inputs and information through the network PRADAN had setup.

4.10 Chapter Conclusion

The important contribution that social network analysis makes is the structural view it provides. What determines what an individual does is not just his or her attributes but also the societal structure the individual finds him or herself embedded in. The network has emergent properties as it is more than the sum of its parts. The social network analysis concepts of homophily, where people connect to people similar to themselves, and the small world networks, which is a network of groups of closely connected people connected by a handful of ties describes the world of the jati discussed in the previous chapter. While connections can have six degrees of separation, influence's spread to only three degrees of separation implies that influence involves more trust.

The poor often find themselves on the margins and periphery of the social networks around them. For the poor, it is very important to have strong social networks to help with the emergencies the poor often suffer from but the poorer they are, the less likely they will have a strong social network surrounding them. There is the problem for the poor of connecting to those more powerful than them in a network and not become dependent on the more powerful person. Social network analysis can measure the social networks of the poor and the technique of ego networks, which focuses on the individual, to understand and measure the networks of the microfinance clients who are at the centre of this research. As was said in a previous chapter, most microfinance clients start low entry barrier businesses in which the only asset to fight off the competition may be the client's social network. One brand of social network that can assist these microfinance clients are value chains of larger firms. Connecting to a value chain can bring the poor business owner access to key information and inputs. But, especially with consumer driven value chains, there is a strong risk that the poor find themselves at a power disadvantage. The case studies in this chapter show how collective action can help address the power disadvantage. The PRADAN case study shows how experimentation and careful thought about the design of the value chain, in this case the disintermediation of the middlemen, that even the poor can benefit from a consumer driven value chain.

The next chapter will set out the theoretical framework for this research. This chapter will look at the microfinance, social network analysis and social capital theories driving this research. Most importantly, it will identify the gap in microfinance theory that the structural view of social network analysis can fill.

5 Chapter Five – Theoretical Framework

5.1 Chapter Summary

This chapter will set out the theoretical framework for this research on how to improve the businesses of and the poverty reduction for poor entrepreneurs who own low growth, low barrier to entry businesses. It will be broken into three main sections. In the first section, microfinance theory will be discussed. A detailed look at the joint liability theory will show that this theory does not provide convincing case of how microfinance groups work. Social capital theory will be explored next discussing what social capital is, how social capital works and how it impacts microfinance. This implies that financial intermediation is not sufficient and that social intermediation is required. However, most social intermediation literature focuses on it as a prerequisite to financial intermediation. Social capital is important because social networks can generate it. It is network theory that will be used to fill the gap in microfinance theory to help these poor entrepreneurs improve their businesses. Descriptions of how the strength of weak ties, structural holes, brokerage and network spillover will help these poor entrepreneurs improve their businesses. The chapter will conclude with two research questions to be answered.

5.2 Microfinance Theories

Much of the theoretical work in microfinance in the past has been focused on giving a theoretical explanation of the success of Grameen Bank and other early microfinance institutions. These explanations used the concept of joint liability. Joint liability group contracts make group members jointly liable for each other's loans. If a member does not repay, the other members must repay the loan (Ghatak, 1999). If the loan is not repaid, there will be no new loans to any borrower until all loans are repaid (Diagne, 2000).

Armendariz (1999) analysed the optimal design of collective credit agreements with joint responsibility. She demonstrated that these agreements can potentially induce peer monitoring, reduce the incidence of strategic default and enhance the lender's ability to elicit debt repayments. The resulting benefits in terms of extended credit should, however, be weighed against the higher monitoring effort that such agreements impose upon participant borrowers. She also showed that the relative benefits from peer monitoring are maximized when risks are positively correlated across borrowers and the size of the group is neither too small due to a ‘‘joint responsibility’’, ‘‘cost sharing’’, and ‘‘commitment’’ effects nor too large due to a ‘‘free riding’’ effect.

The joint responsibility effect is the same as joint liability. The cost sharing effect tends to increase the peer-monitoring effort: as the size of the group becomes larger, the cost of monitoring another borrower becomes smaller, given that such a cost is shared among an increasingly large number of peers. A free riding effect is where a larger group size discourages individual monitoring effort. Indeed, with a larger number of peer borrowers, there is an increased probability that at least one borrower will be fortunate, and will therefore be able to repay for a borrower who defaults strategically. Hence, the reduced incentive for individual borrowers to monitor their peers. She found that peer monitoring institutions’ restricted attention on the standard mutual structure of monitoring (whereby each borrower in the group is being simultaneously monitored by all of her peers) may also be misleading, as other structures such as the rotating pyramid structure (where a different borrower ‘‘at the top’’ of the pyramid monitors her peers ‘‘at the bottom’’ of the pyramid) are potentially more efficient.

Banerjee et al (1994) constructed a simple model of an optimal credit cooperative. Using the historical German experience, they examined some implications of the peer monitoring view of credit cooperatives. They find qualified support for this model in the 19th century German data. However, the most important extension needed to be added to the model is to introduce heterogeneity in the cooperative's membership.

Ghatak (1999) analyses how group lending programs use joint liability to utilize local information that borrowers have about each other’s projects through self-selection of group members in the group formation stage. These schemes are shown to lead to positive assortative matching in group formation. Faced with the same contract, this makes the effective cost of borrowing lower to safer borrowers: because they have safer partners, conditional on success their expected dues to the lender are lower than that of riskier borrowers. The resulting improvement in the pool of borrowers is shown to increase repayment rates and welfare. However, Ghatak argues that the empirical work on joint liability mechanisms has lagged behind the theoretical work. This empirical work could tell us whether joint-liability-based mechanisms can work only in very cohesive 'rural' environments, or whether they can work in more 'urban' environments where even though social enforcement mechanisms are weaker, people still might have a lot of information about their neighbours or co-workers.

Stiglitz (1990) says that, first, the members of the peer group must be provided with incentives to monitor the actions of their peers. In the Grameen Bank, this is provided by the fact that members of the peer group are jointly liable for repayment of loans, and by the fact that they cannot gain access to credit until the debts of the group are discharged. The denial of access to further credit can be an effective incentive device. The Grameen Bank employed small groups. The small size increased the risk from a single member's default but increased the incentives for peer monitoring. The impact of a single member defaulting in a small group is much greater than a single member in a large group. It is the risk of this impact that incentivises the small group to engage in strong peer monitoring in order to mitigate this risk. With large groups there is a free rider problem – each would prefer that others expend the energy required to monitor and incur the ill will that would result from reporting offenders who have misused the funds lent to them. Moreover, the costs to each as a result of a default by any member are sufficiently small that incentives to monitor –even apart from the free rider problem – would be minimal.

There are strong incentives for groups with similar risk characteristics to form. Because the group acts as a cooperative, if some individual is more prone to default than others, he is being subsidized. When groups are identical, there is no subsidy. Of course, those with high risks of default would like to join groups with a low risk of default. The assortative grouping comes about as those with the lowest risk of default recognize their mutual interest in grouping together; then those with the lowest risk among the ones remaining group together; and the process continues until the individuals with the highest risk are forced to group together. Villagers have an informational advantage over formal credit institutions not only in monitoring but also in selection. Having groups which are self-formed may thus be an important ingredient in the success of the Grameen Bank.

Diagne (2000) found that microfinance institutions targeted to poor people can operate successfully and achieve high loan recovery rates if they develop lending technologies that do not rely on collateral, but instead cultivate borrowers' expectations for higher and continuous access to credit, and establish an effective screening and monitoring system using their field staff

Karim (2010) uses mechanism design theory to examine the role of joint liability and cross-reporting mechanisms in the loan contract designed by microfinance institutions. Doing this simplified the joint liability mechanism proposed by Ghatak (1999, 2000) and the cross-reporting mechanism by Rai and Sjostrom (2004). Karim says that through the joint-liability mechanism, the microfinance lender can minimize or avoid the adverse selection problem in the credit market through peer selection and peer screening. Adverse selection refers to a situation in which the MFIs lack good information about the riskiness of the borrowers' business projects. Therefore, the MFIs are unable to discriminate against the risky borrowers (Batabyal and Beladi, 2008, footnote 5). In the meantime, the joint liability mechanism is better than individual lending in terms of increasing the social welfare among poor borrowers, charging lower interest rates and generating high repayment rates.

In contrast, Rai and Sjostrom (2004) argue that joint liability alone is not enough to efficiently induce borrowers to help each other. The cross-reporting mechanism is also important for lenders in order to minimize the problem of asymmetric information in the credit market. Rai and Sjostrom identify asymmetric information is the cause of adverse selection. The seminal paper by Stiglitz and Weiss (1981) show how asymmetric information can cause credit rationing. The cross-reporting mechanism is also efficient because it can influence the borrower to be truthfultelling about the state of the project and subsequently can minimize the deadweight loss (punishment) among the borrowers. In comparison, without cross-reporting, the lending mechanism is inefficient because the borrower will be imposed harsh punishment from the bank and the bank can undertake auditing or verify the state of the project and punish accordingly. However, the focus of the Rai and Sjostrom paper was more on how efficient Grameen Bank was at lending than explaining how joint liability worked.

Ahlin and Townsend (2005) tested four models of joint liability using data from a survey of 262 joint liability groups of the Bank for Agriculture and Agricultural Cooperatives in Thailand and 2880 households in the same villages. Two of the models highlight moral hazard problems which joint liability lending and monitoring can mitigate: Stiglitz (l990) and Banerjee et al (l994). One focuses on an environment of limited contract enforcement and the remedy of village sanctions: Besley and Coate (l995). The fourth shows how adverse selection of borrowers can be partially overcome by joint liability contracts: Ghatak (l999). The data suggest that repayment rates are affected negatively by the rate of joint liability, outside credit options, and social ties, and positively by the strength of local sanctions, group productivity, and correlated returns. They also found that the Besley and Coate model (1995) stressing unofficial sanctions is supported in the low-infrastructure northeast region, while the Ghatak (1999) model of adverse selection does best in the central region, closer to Bangkok, where commercial bank presence is more salient.

Conning (1996) looks at making joint liability groups work better by solving for the terms of an optimal joint liability contract as the solution to a multi-task, principal multi-agent problem with moral hazard and limited liability. Conning argues for the use of social collateral to replace missing physical collateral can be created through group loans but only under particular circumstances. He argues that Stiglitz's (1990) results are limited somewhat by the fact that he proceeds under the full side-contract assumption that monitoring within a group is achieved perfectly and without cost. Besley and Coate (1995) examine the related but different question of how joint liability contracts can be used to create incentives for group members to apply social penalties on each other to alter each member's *willingness* to repay a loan *after* the project outcomes have been observed (ex-post moral hazard or costly state verification). Conning's focus, on the other hand, is to find an incentive structure that deters hidden actions *before* outcomes are observed and which therefore affect the borrower's *ability* to repay (ex-ante moral hazard).

The ability of the group to create social collateral rests on a version of collateral diversification effect identified previously by Diamond (1984). The economic principle is this: the total collateral requirement on two less than perfectly correlated projects will in general be set lower than on two perfectly correlated projects (or on single project twice the scale) because funding two projects simultaneously the lender in a sense allowing the borrower to pledge the expected returns from one project for the missing collateral for the other project and vice-versa. A successful project outcome from one project can cover the losses from a potential failure on the other project so the lender has effectively increased the expected returns he can capture in the failure state on any given project without increasing the physical collateral requirement.

In another paper, Conning (2000) analyzes the conditions under which joint liability loans to encourage peer-monitoring would be offered and chosen ahead of monitored individual liability alternatives on a competitive loan market when production and monitoring activities are subject to moral hazard. In contrast to other analyses, the case for joint liability loans does not rest on an assumed monitoring or information advantage by borrowers but instead relies on an incentive diversification effect that cannot be replicated by outside intermediaries.

Another looking at joint liability through the lens of moral hazard is Guttman (2006) which a model of the strategic interaction of borrowers in the framework of group lending, in an environment characterized by moral hazard. Unlike previous papers, monitoring by one group member of his or her peers is not a crucial feature of the model. Even without monitoring, repayment performance under group lending can compare favourably to such performance under individual liability.

Guttman found that the repayment rate for the group was about the same as if each member took an individual loan and there was no joint liability.

Van Eijkel et al (2007) investigated the strategic monitoring behaviour within a group lending setting. They developed a theoretical model, showing that monitoring efforts of group members differ from each other in equilibrium, as a result of the asymmetry between these members in terms of the future profits they generate with their project. In particular, they show that the entrepreneur with the project that generates the highest future profits also puts in the highest monitoring effort. Moreover, monitoring efforts differ between group members due to free-riding: one member reduces her level of monitoring if the other increases her monitoring effort. This effect is also at play when they introduce a group leader in the model. The individual who becomes the group leader will supply more monitoring effort than in the benchmark case, because of the reduced per unit monitoring costs related to becoming the leader. They empirically test the model using data from a survey of microfinance in Eritrea and show that the group leader attaches more weight to future periods than non-leaders in group lending and that this may explain why a large part of total monitoring is put in by the leader.

However, a number of researchers have found problems with the joint liability concept. Rahman (1999), using an anthropological approach which compared public and hidden transcripts, found great pressure being applied to borrowers for timely repayment rather than raising collective responsibility and borrower empowerment. Copestake et al (2001) found that group lending approach might be a simple shift of costs (screening, monitoring and enforcement costs) from the microfinance institutions to the clients.

Kono (2006) found that microfinance institutions employ various kinds of incentive schemes but estimating the effect of each scheme is not easy due to endogeneity bias. He conducted field experiments in Vietnam to capture the role of joint liability, monitoring, cross-reporting, social sanctions, communication and group formation in borrowers' repayment behaviour. He found, in contrast to those above, that joint liability contracts cause serious free-riding problems, inducing strategic default and lowering repayment rates. When group members observe each other's investment returns, participants are more likely to choose strategic default. Even after introducing a cross-reporting system and/or penalties among borrowers, the default rates and the ratios of participants who chose strategic default under joint liability are still higher than those under individual lending. He also found that joint liability lending often failed to induce mutual insurance among borrowers. Those who had been helped or who had repaid a little in the previous round were more likely to default strategically and repay a little again in the current round and those who paid large amounts were always the same individuals.

Besley and Coate (1995) found both positive and negative effects for joint liability lending. The positive effect results from the possibility that successful borrowers may repay the loans of partners who obtain sufficiently poor returns to make repayment profitable. On the other hand, the negative effect arises if the entire group defaults when at least some members would have repaid had they not been saddled with the weight of liability for their partners' loans.

Diagne (2000) found that joint liability as an explanation for high repayment rates does not hold up universally. Empirical findings also suggest that joint liability can have a negative impact on loan repayment. This calls for microfinance institutions such as the Malawi Rural Finance Company (MRFC) to reconsider their inflexible *full* group joint liability policy (no new loans to any borrower until all loans are repaid), an arrangement generally disliked by the majority of its borrowers. It is recommended that MRFC adopt a *limited* group joint liability policy in which defaulters are excluded from the groups and non-defaulters are issued new loans when they pay a reasonable monetary penalty not tied to the total amounts of the defaulted loans.

This more flexible group joint liability policy has the potential to yield both lower delinquency rates while retaining most of the cost-saving advantages of lending through groups. Diagne says it is important to note that the proposed *limited* joint liability policy is different from a simple relaxation of the *full* joint liability in that it does not penalize non-defaulters in defaulting groups. Such simple relaxation—which usually takes the form of a policy of issuing new loans to non-defaulters in groups with repayment rates above some threshold value—has been experimented with in Malawi under the SACA program during the late 1980s and early 1990s with poor results (Diagne, 2000).

For Hermes and Lensink (2007), while joint liability group lending stimulates screening, monitoring and enforcement of contracts among borrowers which reduces or erases the agency costs of the lender, there has been surprisingly little empirical evidence of whether and how microfinance actually helps to reduce existing information asymmetries.

Of course, the biggest problem with the joint liability theoretical approach as an explanation why the group methodology was successful, as was stated in the microfinance chapter, is that the very MFIs in Bangladesh that inspired this theoretical work say they no longer enforce joint liability contracts. Some researchers have noticed this and reported it.

Van Bastelaer (1999) points out in his literature review that the claims of the viability of the joint liability theoretical explanation have been challenged. Jain (1996) has also raised the question about the enforcement of joint liability, pointing out that the Grameen Bank's acclaimed policy of replacing physical collateral with group guarantees is not necessarily enforced. In addition, Jain does not believe the group guarantee actually exists. Instead, he explains Grameen's good financial performance in terms of a managerial culture that helps enhance morale in the administrative sector and the borrowers' motivation to repay (Ito, 2003). Ito's (1999) own field study in the Patuakhali District in Bangladesh in 1995–1996 also revealed that the Grameen Bank staff as well as the Bank's borrowers generally shared the assumption that it is more natural for members of the kinship group, and not of the solidarity group, to be held responsible for a borrower's default.

ASA did away with joint liability as soon as it found it was ineffective, and developed more practical methods to ensure good collection rates on loans. ASA had discovered that the idea behind joint liability was flawed. The ASA managing director was the first microcredit leader to go public with this truth. Rutherford (2009) suggests that as a relative newcomer to microcredit, ASA had less institutional prestige and it cost it less to admit that what it had taken to be one of the very foundations of the industry had fatal cracks. ASA set joint liability aside and figured out more practical ways of making sure it collected on its loans. It was very much helped by the fact that microcredit clients usually want to make their repayments. They value the service and look forward to further loans. As a result, ASA harnessed peer pressure (Rutherford, 2009, Chapter 7, pages 1 – 8).

Matin (1998) agrees with Rutherford that ASA no longer practices the principle of Grameen-style solidarity group arrangements. They still organise borrowers into groups, but none of the group members is held responsible for another member's repayment problems. This reflects the belief that what ensures timely repayment is not necessarily the threat of social or financial sanctions associated with the solidarity group arrangements, but rather the incentive of continual access to credit.

Some of the claims based on joint liability have not been borne out in experience on the ground. For example, Karim (2010) claimed that based on joint liability theory, joint liability groups are better than individual lending in term of high repayment rates, lower interest rates and an increase social welfare. However, this has not always been the case on the ground. Ito (2003) points to the work of *Safe*Save, which operates in the slums of Dhaka, who has completely done away with groups. *Safe*Save has deposit collectors visit individual clients door to door every day. Ito agrees with Matin, Rutherford and others that continual access to credit, rather than the threat of social and/or financial sanctions associated with groups, may be the strongest incentive for timely repayment.

5.3 The Importance of Social Relationships in Microfinance

A number of researchers have pointed to the importance of social relationships among group members and others to theorise why groups in microfinance are successful. Marr focuses on the group dynamics and argues that microfinance can cause damage to social relationships when these dynamics are ignored. Marr (2003) argues that microfinance not only has failed to solve the original problems of information asymmetries between borrowers and lenders, it is disrupting the social fabric of communities, creating more poverty, and excluding the poorest and most vulnerable from any given group. Marr (2002) argues that group dynamics has been neglected in studying the impacts of microfinance and it is important to understanding how being part of a group impacts a member in their households, enterprises and communities. Marr (2006) discusses how tensions between financial and organisational sustainability can cause instability within groups and recommends actions to minimise these tensions. Incentives to strengthen groups are also recommended since the attainment of financial sustainability and reducing poverty is dependent on the sustainability of the groups themselves.

Johnson et al (2009) found that one of the key reasons for belonging to informal groups was to provide social contact and networks. EDA Rural Systems Pvt. Ltd. & APMAS (2006) found that the SHG mobilisation of a number of women through village or cluster networks, or federations, was a significant feature of effective community action. Baland et al (2008) argue that informal networks, social capital, trust and other similarly vague concepts can encourage exchange in the presence of weak legal systems. They use theory and survey data to give content to the notion of social capital in the context of credit groups and distinguish it from other group characteristics that influence their functioning. M.P. Associates Pvt. Ltd. (2005) reported in a case study that the institutional strength of the SHG they were studying was augmented by linkage of the group to various government and NGOs. The concept of social capital will be discussed in detail below.

Kugler and Oppes (2005) argue that the extent that rural communities tight knit hierarchical structures of information about borrowers is accessible and the enforcement of sanctions via social networks makes collateral superfluous for default mitigation. As stated above, Ahlin and Townsend (2005) affirm that their data suggest that repayment rates are affected negatively by the rate of joint liability, outside credit options, and social ties, and positively by the strength of local sanctions, group productivity, and correlated returns. Ghatak (2002) reports that Karlan (2001) finds that groups whose members belong to the same social network are significantly more likely to repay their loans.

Besley and Coate (1995) have shown how group lending may allow a bank to harness "social collateral". Under group lending, a borrower who defaults may incur the wrath of other group members. If the group is formed from communities with a high degree of social connectedness, then this may constitute a powerful incentive device and hence may serve to mitigate any negative effects from group lending. Conning (1996) also refers to "social collateral" using it to replace missing physical collateral. This can be created through group loans but only under particular circumstances. Conning proposes that "social collateral" is created by the loan contract and the collateral diversification effect identified by Diamond (1984).

The use of the term social collateral by Besley, Coate and Conning appears to be very similar to the concept of social capital referred to above. However, with Conning it seems to refer to mechanisms such as loan contracts and collateral diversification rather than social relationships.

As was stated in the microfinance chapter, many microfinance clients start low growth, low entry barrier businesses that hard to grow and do not generate enough poverty reduction. It is clear more than financial intermediation is needed. It is also clear that joint liability in microfinance has seemingly reached a theoretical dead end. In addition to financial intermediation, social intermediation is needed. The previous paragraphs indicate the importance of social relationships including the concepts of social collateral or social capital. So, what is social capital, how does it work and how does it impact microfinance?

5.4 Social Capital Theories

This section will address three questions on social capital:

1. What is social capital?
2. How does social capital work?
3. How does social capital impact microfinance?

5.5 What Is Social Capital?

There does not seem to be consensus on what social capital is. Dowla (2006) says that despite wide acceptance of its value in solving numerous problems, there is no consensus as to what is a generally acceptable definition of social capital. Burt (2005, pg. 5) says that,

"Clear-thinking observers can be frustrated with the vagaries of social capital left as a metaphor. Social capital is the Wild West of academic work. There are no skill or intellectual barriers to entry. Contributions vary from rigorous research to devotional opinion, from carefully considered to bromide blather. Research and theory in economics, political science, and sociology are distributed across loosely related perspectives and specialties, each a group of connected experts purporting to have a productive view across groups. The variety is as interesting and exciting as it is corrosive to cumulative work."

An example of this, Falk and Kilpatrick (2000) quote Putnam et al (1993) that trust is an important dimension of social capital. Trust is variously described as the critical component of any social cohesion. They also say Coleman (1990) provides a way of viewing trust as comprising the three components of a developing system of action: mutual trust, intermediaries in trust and third-party trust. They also say that social capital is defined as an accumulation of the knowledge and identity resources drawn on by communities-of-common-purpose.

However, Dowla then chooses to use the definition of Putnam et al (1993) "features of social organization, such as trust, norms and networks that can improve the efficiency of society by facilitating coordinated actions". Others use trust in their definition of social capital. Anderson et al (2002) focus on the role trust plays in social capital. Becchetti et al (2009) say that social capital is a multifaceted concept which includes at least five dimensions: trust, trustworthiness, willingness to pay for public goods, civic sense and trust on institutions. Larance (2001) suggests that, by attending weekly Grameen Bank centre meetings, members now have the opportunity to gradually change their social situation by building the trust and networks that will form their social capital.

Others form their definition of social capital around the concepts of networks and linkages. Anderson et al (2002) say that social capital can be conceived of as networks of horizontal and vertical linkages. Horizontal linkages are generally those positive social networks that contribute to the overall productivity of a community, such as volunteer associations. They quote the World Bank (1988) that social capital is "the institutions, the relationships, the attitudes and values that govern interactions among people and contribute to economic and social development". Woolcock (1998) says that social capital encompasses the norms and networks facilitating collective action for mutual benefit. For Huda and Simanowitz (2008), social capital is a measure of the quality of social networks and relationships which enhance people's productivity and capacity to collectively resolve problems.

Continuing with the focus on social capital enhancing people's ability to solve problems, Huda et al (2005b) drawing from relevant social capital literature, have defined effective social capital as constituting both access by the poor to individuals with the ability to catalyse change, as well as solidarity among the poor in order to mobilise and voice demands as a collective unit. Thus, while relationships of solidarity (horizontal relationships) among individuals of similar socio-economic standing is an important form of social capital, its effectiveness is limited by the ways such horizontal solidarity can be harnessed to then make demands of relationships with local elites (vertical relationships). Karlan (2005) also says that individual-level social capital can be defined as the social skills and networks that enable an individual to overcome imperfect information problems and form contracts with others. Trust and trustworthiness are two critical traits encompassed by individual social capital.

According to Portes and Mooney (2002), social capital became defined as a source of social control, a source of family mediated benefits and a source of resources mediated by non-family networks. The last usage of social capital, exemplified by the personal connections that facilitate access to jobs, market tips or loans comes closest to Bourdieu's (1979) original definition of the concept. They also state that the definition of social capital as the ability to secure resources by virtue of membership in social networks or larger social structures is the most widely accepted definition of the term in sociology at present. This definition is not without problems. First, there is a common tendency to confuse the ability to secure resources through networks with the resources themselves. Second, the literature on this topic tends to emphasise the positive consequences of social ties to the exclusion of their less desirable consequences.

5.6 How Does Social Capital Work?

Falk and Kilpatrick (2000) say that social capital cannot be built unless opportunities for this to occur exist, or are provided and that if social capital originates in micro interactions which are in turn embedded in a macro social order, then these processes and connections should be observable.

Anderson et al (2002) state it takes effort and energy to create social capital. So how is it created and how does it work? Anderson et al show that group meetings and group lending techniques in microfinance produce social capital. Feigenberg et al (2010) argue that since economic theory suggests that repeated interactions among individuals can help build and maintain social capital encouraging interaction could be an effective tool for development policy. Social capital does not just exist innately in developing countries, but can be created through repetitive and cooperative group effort (Cassar and Wydick, 2009). Portes and Mooney (2002) claim there are two sources of instrumental social capital, simple reciprocity and enforceable trust. Coleman (1990) reminds us that social capital can produce negative as well as positive associations, depending on its function; a given form of social capital that is valuable in facilitating certain actions may be useless or even harmful for others.

Cassar and Wydick (2009) suggest that, particularly in communities that are relatively homogeneous and close-knit, social capital may facilitate a general sense of trust and goodwill surrounding economic exchange. Social capital may also facilitate the flow of information, serving a screening function that curtails adverse selection. Further, it may help hold people more accountable for their actions, mitigating moral hazard as economic decisions are placed within the context of long-term relationships. Karlan et al (2008) propose a model where the social network influences how much agents trust each other. Cassar and Wydick say that sociologists such as Granovetter (1985), Coleman (1988) and Putnam (2000) have long argued that social networks play an important role in building trust.

But how does the social network influence trust, one of the key components of social capital? The literature suggests through social structure and context. Tonkiss (2000) suggests that social networks cannot simply create physical or financial capital where this does not already exist. Strong social ties become useless under domination of 'mainstream' economic and social networks. Brata (2004) says that 'network poverty' in this sense refers not to the absence or weakness of social network, but to the difficulty of accessing opportunities or resources through these networks. He also suggests that the implementation of formal credit program in rural areas should consider not only the existing social capital but also the social structure of the rural society.

5.7 How Does Social Capital Impact Microfinance?

Cassar et al (2005) say that economists have developed numerous theories that seek to explain the high repayment rates frequently associated with group lending in developing countries. These theories can be roughly divided into three categories: 1) those that view the relational aspects of social capital as key to the performance of group lending; 2) those that view the informational aspects of social capital as key to the performance of group lending; and 3) those that view the merits of group lending (relative to individual lending) solely through its innate properties as a joint-liability contract, where social capital plays little or no role.

Both Anderson et al (2002) and Dowla (2006) mention that social capital generation is not the primary activity of microfinance but a by-product.

The common impact of social capital on microfinance cited in the literature is the high repayment rates on loans despite no collateral. Examples of this are Narayan and Prittchett (1997), Cassar and Wydick (2009), Karlan (2001), Feigenberg et al (2010) and Hasegawa (2009). However, there have been those who have questioned this. Dowla (2006) shows that long-term borrowers of Grameen have lower repayment rates and cite this as an example of negative social capital. Ito (2003) argues that inasmuch as all microfinance programmes that are implemented by external agents inevitably involve some form of vertical structure, the social capital that is thought to reside in this structure is bound to have some impact, either positive or negative, depending on the nature of the relations embedded within it. Seen in this light, social capital is neither positive nor negative in itself and may or may not operate to strengthen borrowers' credit discipline. Cassar et al (2005) argues that the traditional idea is that group lending is able to yield high repayment rates in part through its ability to leverage local information in forming self-selected groups of more-or-less socially homogenous borrowers. In the context of other research they believe that these factors merely enhance repayment rates, but may be insufficient in and of themselves to generate high repayment rates.

Yunus (1994) says that social capital allows well-functioning joint liability groups and Bowles and Gintis (2000) state that social capital allows well-functioning community groups. Anderson et al (2002), Van Bastelaer (1999) and Brata (2004) all show how group meetings create social capital. Ostrom (1994) shows how social capital lowers the cost for MFIs. Cassar et al (2005), Cassar and Wydick (2009), Dowla (2006) and Karlan (2001) show that trust has a positive effect on group performance. On the other hand Cassar et al (2005) and Cassar and Wydick (2009) found only mild evidence that homogeneity improved group performance. Dowla (2006) indicates that Grameen created social capital by creating trust among the commercial banks, the Central Bank, Ministry of Finance, Islamic clerics and poor women. Dowla (2006), Larance (2001), Todd (1996) and Huda et al (2005b) show how microfinance can create social capital by expanding their client's networks vertically and horizontally.

In the case of Tanzania, Narayan and Prittchett (1997) found that a larger fraction of households in villages with higher social capital report using credit for agricultural improvements. In the case of Indonesia, Grootaert (1999) concludes that households with higher social capital are better able to obtain credit. However, Cassar et al (2005) warns that social capital and its various components are notoriously hard to measure.

There are those who doubt the benefit of social capital in microfinance. Tonkiss (2000) argues that social capital does not guarantee poor people to access formal credit. Forms of social capital are not simply or necessarily conductive to economic development, in two respects. The first has to do with inequality, the second with questions of capacity. According to Tonkiss, where resources of social capital are unevenly distributed, social networks can be a basis for corruption, cronyism, or other forms of rent seeking behaviour.

As Grootaert(1999) has mentioned, the role of specific village leader or other influential individual in the internal dynamic of community is acknowledged. In this situation, one may expect that social capital does not automatically increase the access to economic opportunities and resources such as formal credit.

Cassar and Wydick (2009) state that the ability of people to monitor one other in group lending environments, and possibly in other situations such as work in teams, can yield negative as well as positive effects on individual behaviour. When information is imperfect, non-contributions of capital (or effort) are not as contagious within a group because other may attribute them to unavoidable shocks. However, with perfect information, such behaviour may trigger either retaliation or optimal defections by other agents, quickly unravelling group trust and performance.

Directionality is very important when looking at social capital. For Huda and Simanowitz (2008), constituting effective social capital generally means combining two basic forms of relationships. First are horizontal relationships between members and peers. Second are vertical relationships with elites and those of a higher socio-economic status. Coleman (1988) also recognises both vertical and horizontal social structures as constituting social capital. Ito (2003) locates social capital in the vertical social relationship between lenders and borrowers. Ito concludes that the presence of vertical social capital, negative or positive, has little to do with the group-based design of these microfinance programmes and that almost all financial transactions, successful or otherwise, involve some elements of vertical social capital. How poor microentrepreneurs, who tend to be marginalised, can use the few vertical links they have to access the relevant information and the networks of those above them in order to benefit their businesses will be explored later.

Nelson (2004) states that networking is at the core of social capital – one of its principal sources or tools – because networking of all types "grows" social capital. For Nelson, social capital is important for entrepreneurs because it is the intangible asset that helps entrepreneurs to close the gaps in knowledge and experience, to find potential partners and pursue new ideas. At the very least, social capital saves time by facilitating access to information but it also can lead to innovation and growth. This especially important for microentrepreneurs who are often tentative and isolated and have less social capital than business people with mature businesses particularly relationships that will help them build a business.

In summary, while there is no definitive definition of social, the consensus seems to view social capital as a resource created via social relationships. These social relationships may be used to apply social pressure mentioned in the microfinance theory section of the chapter as an explanation for the high repayment rates. Burt's (2005) argument on closure, discussed later in this chapter, builds on this by showing how social capital can bring a group together and limit innovation.

Networks were mentioned several times as way to gain and transmit social capital, access individuals who are catalysts for change and a way to secure resources needed for change. Nelson says that networking is critical for the microentreprenuers often created using microfinance. The example of the trash collector from Banerjee and Duflo (2011) in the microfinance chapter illustrates these points. But, in order to help clients gain social capital in connection with networks, MFIs will need to do more than financial intermediation. They will also need to do social intermediation.

5.8 Social Intermediation in Microfinance

Until recently, however, social intermediation was seen in microfinance as primarily a way to prepare clients for financial intermediation. For some, the most important element of social intermediation is that it helps to build social capital. Edgcomb and Barton (1998) define social intermediation as the process through which investments are made in the development of both human resources and institutional capital, with the aim of increasing the self-reliance of marginalized groups and preparing them to engage in formal financial intermediation. They also say that social intermediation involves the building of social capital in the form of groups that can generate an "information asset" for their members. They see as the capacity building component of financial intermediation. Ngehnevu and Nembo (2010) also agree that social intermediation is the process of building social capital needed to create sustainable financial intermediation for the poor. For Ledgerwood (1999, pg. 76 – 77) social intermediation prepares clients to enter solid business relationships with MFIs and can also be understood as the process of building the human and social capital needed for sustainable financial intermediation with the poor. According to Singh (2003) micro-finance is an intervention based on social intermediation in which poor people can mobilize their savings, link it with credit and finally become self-employed. It results in building social capital.

For Szabo (1999), microfinance can contribute to social capital through social intermediation. Interaction within MFI groups can create cooperation and trust that also contribute benefits beyond loan access itself. Such benefit may include a greater sense of community, trust and reliance on the group in time of crisis, sharing of valuable social and market information, more positive social practices, etc. The networks and norms created by groups are thereby said to be a positive form of social capital, which in turn, can lay building blocks for other social capital development in a community. These forms of social capital, moreover, are accessible to those generally excluded from or disadvantaged by existing norms and relationships.

Hans (2009) argues that MFIs by releasing the true potential of its members through social intermediation can ensure building an inclusive society. Hans calls for a symbiotic relationship between financial intermediation and social intermediation, to remove the economic and socio-cultural barriers to empowerment, inclusion and development. Inclusive growth requires not only physical, natural and human capital, but also social capital. He also states that through social intermediation MFIs can ensure a certain minimum of social capital in the first phase of economic growth, and enhance its quantity and quality subsequently and sequentially. He says that social intermediation is unlikely to be financially sustainable.

Hulme and Mosley (1996) say social intermediation is the process which combines the functions of social organisation and financial linkage carried out through an NGO, or local government organisation, though self-help groups or through individuals, as locally appropriate. Ledgerwood (1999, pages 76 – 77) says that in addition to financial intermediation, some MFIs provide social intermediation services such as the formation of groups, development of self-confidence and the training of members in that group on financial literacy and management which prepares clients to enter solid business relationships with MFIs. Jain (1996) argues that it is social intermediation's creation of a social mechanism that instils a credit repayment culture that ensures high repayment rather than the much-discussed contractual element of joint liability.

Edgcomb and Barton (1998) says that there are two strategies, which they call "linking" and "parallel", that a microfinance institution can follow in social intermediation. A linking strategy may involve one institution providing the social intermediation services, linking the organized poor to a mainstream bank or other formal financial institution providing the financial intermediation services. "Parallel" systems are so-called because they create alternative financial systems to the formal ones. Parallel models are often group-based.

Others focus on the benefits that social intermediation can bring to MFIs and clients. Cohen et al (2000) state that social intermediation also may contribute to an increase in social assets, such as networks, group memberships, relationships of trust, and access to wider institutions of society. Sa-Dahn (2002), the Indian microfinance network, says that the most significant reasons SHG/federations delinquencies were low was because of peer pressure and good social intermediation. Legerwood (1999) describes some microfinance institutions provide services such as skills training, marketing, bookkeeping, and production to develop enterprises. Social services such as health care, education and literacy training are also provided by some MFIs and both enterprise development and social services can improve the ability of the low-income earners to operate enterprises either directly or indirectly.

Zohir and Matin (2002) recognise that the wider impact outcomes of social intermediation by a MFI may thus involve much more than preparing the poor for formal financial intermediation. Zohir and Matin say that the impacts of social intermediation to result in social mobilization however would require the leveraging power of groups and is predicated on the idea that through their groups and its linkages with higher bodies, members have a greater ability to enact change due to their co-operation and strength in numbers. They argue that the sustainability of social intermediation impacts at the levels of culture, creating information networks or spurring social mobilization is another important issue that needs addressing under the theme of wider impacts pertaining to the social intermediation role played by microfinance.

Outside of the recognition by Zohir and Matin on the importance of creating information networks, most of the discussion on social intermediation focused on using it as preparation for financial intermediation or the benefits it can bring by building social capital. If the Banerjee and Duflo (2011) example of the trash collector shows the importance of access to relevant information and networks, then social intermediation should be helping microfinance clients to do these things. However, microfinance theory has a gap on how clients can access information relevant to their businesses, use existing networks and build networks that will improve their businesses and help reduce their poverty. In order to fill this gap, this research will turn to the theories of social network analysis to make its original contribution.

5.9 Social Network Theories

It is Granovetter's (1973) theory of the strength of weak ties is the theoretical contribution to microfinance that points the way to how poor microentrepreneurs can access the relevant information they need to improve their businesses and reduce their poverty. However, the problem is, as Granovetter recognises, that poor people tend to rely on strong ties. This means that microfinance institutions will need to socially intermediate to assist their clients in establishing weak ties. In addition, Burt's (1992) theories on structural holes, brokerage and closure will also be explored. The poor in India get closure from their families, jatis and possibly their SHGs but because of the hierarchy and power distance problem makes it difficult for the poor to establish a position of broker. In fact, Krackhardt (1999) argues that this broker's position could be ties that torture for the broker if there is a misalignment of interests among the alters in the ego network. For the poor in the Indian context, especially with large power distance index, these could also be ties for torture for the poor in a similar position of broker. However, Burt's network spillover effect working when a network insider presents an outsider as another insider points to another way MFIs can socially intermediate for their clients.

5.10 The Strength of Weak Ties

Granovetter's main focus on the role of social networks is on the role of weak ties. In a seminal paper, Granovetter (1973) identified the strength of weak ties in a network. The key strength of weak ties is that weak bridging ties are transmission routes for non-redundant information. The important point is only weak ties that are bridges, connections that carry information, add strength to a network. Before Granovetter, the work of Wirth (1938) saw weak ties as a source of alienation (Granovetter, 1983). Granovetter (1983) points to research done by Coser (1975) that suggests that bridging weak ties, since they do link different groups, are far more likely than other weak ties to connect individuals who are significantly different from one another

Granovetter (1973) conducted a thought experiment to show why strong ties do not serve as transmission routes for non-redundant information. If there is a triad of people called A, B and C, if A has strong ties to both B and C, then it is very likely B and C has a strong tie between them. This is because the stronger the tie between A and B or A and C, the more similar A and B or A and C will be. The logic then leads to B and C being similar and they having a strong tie between them. Granovetter (1973) says that this is confirmed by Heider's (1958) thesis of cognitive balance where non-similarity among people with strong ties would introduce stress into the relationships. This is also shown by the transitivity of interpersonal choices where if P chooses O and O chooses X then P chooses X. This is most likely where the ties between P and O are strong and O and X are strong. The more similar people are, the more probable it is that these people have the same or redundant information. Therefore, except in unlikely conditions, strong ties are not bridges. It is for this reason that Granovetter (1973) says that the removal of an average weak tie will do more damage to transmission probabilities than the removal of an average strong tie.

Granovetter (1973) found empirical evidence for the strength of weak ties from a random sample of technical, professional and managerial job changers who found jobs through contacts. By using the number of times the job seeker saw the contact recently as a measure of the strength of the tie, Granovetter (1973) found that most of the job seekers found jobs through their weak ties. The reason for this is that those to whom we are weakly tied are more likely in circles different from our own and will thus have access to information different from that which we receive.

Granovetter (1973) argues that weak ties have a special role in a person's opportunity for mobility that there is a structural tendency for those to whom one is only weakly tied to have better access to job information one does not already have. Acquaintances, as compared to close friends, are more prone to move in different circles than oneself. Those to whom one is closest are likely to have the greatest overlap in contact with those one already knows, so that the information to which they are privy is likely to be much the same as that which one already has.

Interestingly, Granovetter (1983) points to research done by others which shows that poor people rely more on strong ties than others do. Ericksen and Yancey (1980, pg. 24) found that less-well-educated respondents were those most likely to use strong ties for jobs. They also found that in a study of Philadelphia in the USA, that the:

> "structure of modern society is such that some people typically find it advantageous to maintain strong networks and we have shown that these people are more likely to be young, less well educated, and black" (Ericksen and Yancey, 1977 pg. 23).

Two ethnographic studies demonstrate the same point: Stack (1974) studied a black, urban American, Midwestern ghetto, Lomnitz (1977) a shantytown on the fringes of Mexico City. Both found the poor relying on networks of strong ties with a focus on reciprocal relationships. Granovetter (1983) concludes that this pervasive use of strong ties by the poor and insecure is a response to economic pressures; they believe themselves to be without alternatives, and the adaptive nature of these reciprocity networks is the main theme of the analysts. He also suggests that the heavy concentration of social energy in strong ties has the impact of fragmenting communities of the poor into encapsulated networks with poor connections between these units; individuals so encapsulated may then lose some of the advantages associated with the outreach of weak ties. This may be one more reason why poverty is self-perpetuating.

Granovetter (1973) argues that when a man moves jobs, he is not only moving from one network of ties to another, he is also establishing a link between the two networks. This and the previous idea of strong ties fragmenting the communities of the poor lead to Burt's ideas of structural holes and brokerage.

5.11 Network Brokerage and Closure

Network structure can also impact the creation of social capital. Burt (2000b) says that there are two network structures that have been argued to create social capital. The closure argument is that social capital is created by a network of strongly interconnected elements. The structural hole argument is that social capital is created by a network in which people can broker connections between otherwise disconnected segments. Burt draws from a comprehensive review elsewhere (Burt, 2000a) to support two points: there is replicated empirical evidence on the social capital of structural holes and the contradiction between network closure and structural holes network can be resolved in a more general network model of social capital. Brokerage across structural holes is the source of value added, but closure can be critical to realising the value buried in bridging structural holes. Burt also argues that network closure creates advantage by lowering the risk of cooperation.

Network closure also facilitates sanctions that make it easier for people in the network to trust one another. Brokerage across structural holes creates advantage by increasing the value of cooperation.

Burt (2005) goes into greater detail on how network brokerage, network closure and social capital are related. Burt explains that social capital is the contextual complement to human capital in explaining advantage. Social capital explains how people do better because they are somehow better connected with other people. Therefore, one's position in the structure of these exchanges can be an asset in its own right (Burt 2005, pg. 4).

Four facts describe the mechanism and returns to network brokerage, which is about the value of increasing variation in a group. Informal relations form a small world of dense clusters separated by structural holes. The first fact is that brokers do better. The second fact is that improved vision is the mechanism responsible for returns to brokerage. Information is more homogeneous within groups such that people who bridge the holes between groups have the benefit of having creative ideas and more likely to see a way to implement ideas. The next two facts describe the mechanism and returns to network closure, which is about the value of decreasing variation in a group. Third, closure increases the odds of a person being caught and punished for displaying belief or behaviour inconsistent with preferences in the closed network. In so doing, closure reinforces the status quo. Fourth, closure protects against decay in new relations between friends of friends, and amplifies strong relations to extremes of trust and distrust. Facilitating the trust and collaborative alignment needed to deliver the value of brokerage, closure is a complement to brokerage such that the two together define social capital in a general way in terms of closure within a group and brokerage beyond the group (Burt, 2005, pg. 7).

Informal organization consists of dense social clusters, or groups, between which there are occasional bridge relations when someone in one group has a friend, acquaintance, or former colleague in another group. Opinion and practice vary more between than within groups due to structural holes in the flow of information across groups. A person whose network spans structural holes has contacts in multiple groups, and that contact across holes can be an advantage in terms of breadth of knowledge, early knowledge, and opportunities for strategically coordinating across groups. A hole-spanning network that provides these advantages is social capital. The social-capital advantage of brokerage is manifest in recognition and resources (Burt, 2005, pg. 55).

Brokerage impacts creativity and learning. Ways of thinking and behaving are more homogeneous within than between groups, so people connected to otherwise segregated groups are more likely to be familiar with alternative ways of thinking and behaving, which gives them the option of selecting and synthesizing alternatives. Vision is the active ingredient in brokerage. It exposes the individual to variation; variation in his/her own work, and variation in related kinds of work (Burt, 2005, pg. 90).

Burt associates brokerage with good ideas and offers four pieces of evidence to support this association. First, there is anecdotal and aggregate evidence of the association. Second, the association is apparent at the level of individuals in an example supply-chain organization he cites. Managers whose networks more often spanned structural holes were more likely to express their ideas, less likely to have their ideas dismissed by senior management, and more likely to have their ideas evaluated as valuable. Third, bridge relations are the channels through which discussion changes opinions and behaviour. Ideas are more contagious across bridge relations than they are through relations inside a group (peer pressure within the group makes ideas contagious whether or not peers talk directly to one another). Fourth, brokerage can facilitate adaptive implementation. Established ideas have constituency and budget. New ideas typically have neither. Network brokers help to implement new ideas by mobilizing support from people who will benefit from the idea despite those people having allocated their budget to other tasks (Burt, 2005, pg. 91).

Burt says that trust is the Achilles heel to the brokerage argument. You trust someone when you commit to a relationship before you know how the other person will behave. The more unspecified, take-for-granted, the terms of a relationship, the more trust is involved. The social capital of structural holes depends on trust in as much as the value created by brokers involves new, and so incompletely understood, combinations of previously disconnected ideas. The trust issue is moot if brokers confine themselves to trusted contacts, but that would limit brokerage to long-standing networks, which would leave the bulk of brokerage value untapped (Burt, 2005, pg. 162).

Closure is manifest as a dense network (in which the two people are surrounded by interconnected third parties) or a hierarchical network (in which the two people share a strong connection with the same central figures). The more closed the network, the more likely that misbehaviour will be detected and punished. Not wishing to lose reputation accumulated in a long-term relationship, or built up within a group of colleagues, people cooperate with other people in the network. Their reputation incentive to cooperate lowers the risk otherwise associated with trust, and so increases the probability of trust. Trust is more likely in a strong than a weak relationship, especially if the strong relationship is embedded in a closed network (Burt, 2005, pg. 162 – 163).

Closure is at once contradictory to, and interdependent with, brokerage. The social capital of structural holes depends on trust, but trust is a feature of closed networks, precisely the condition that brokers rise above. There are three elements to the brokerage – closure tension. First, in closure's reputation mechanism, third parties create social capital by improving information flow, making it possible to detect and punish bad behaviour, thereby facilitating trust. In brokerage, social capital is created by bridge relations that coordinate across groups with complementary resources, knowledge, or practice. Network bridges are defined by the lack of third parties. Second, brokerage creates value by exposing people to variation in information. Closure's value comes from driving variation out of the closed network. In the brokerage argument, information is valuable when it is non-redundant. That is what constitutes access to variation. In the closure argument, information is valuable when it is redundant. Third, in brokerage, the object of action is the person; improving the person's vision and helping the person escape the demands of other people. Brokerage forces the person to see alternatives by exposing the person to the diversity of opinion and practice across groups. The conflicting demands of multiple groups free the person from excessive demands in any one group. Closure, on the other hand, is about forcing other people to behave in prescribed ways. Closure's control potential is the reason for closure's use in contemporary organizations as a replacement for, or complement to, traditional vertical chains of command in a bureaucracy. Network closure forces people to collaborate by linking reputation to alignment with others in the network (Burt, 2005, pg. 163).

Closure's tendency to detect and punish misbehaviour identifies the mechanism that generates the peer pressure that several commentators believe is responsible for the high repayment rates within microfinance groups (Arora, 2008; Manan, 2009; Rahman, 1999; Rutherford, 2009, Chapter 7, pages 1 – 8; Sa-Dhan, 2002; Yunus, 2009; page 62). Closure's tendency to value redundant information and forcing people to behave in prescribed ways limits innovation and as a result would limit a poor person's potential to escape from poverty.

Burt proposes three options to deal with the brokerage-closure tension. The first option is to reject the mechanism less supported by empirical evidence. Burt argues this would mean choosing brokerage over closure as social capital. However, where a set of people are cross-cut by numerous differences, any of which could function as a structural hole, closure could give them an advantage in coordinating despite their differences, whereupon closure would be the proximate cause of advantage – even though the substance of the advantage is closure's bridge across the pre-existing structural holes. In terms of proximate cause, closure can be the more accurate definition of social capital, so it would be inaccurate to reject closure in favour of brokerage.

A second option is to hide from the brokerage-closure tension by segregating the mechanisms, saying that they are equally valid but different. For example, one could say that closure defines when it is safe to trust, while brokerage defines when it is valuable to trust. Safety and popularity notwithstanding, the segregation option is in its own way inaccurate in light of evidence supporting the third option. A third option is to integrate the mechanisms in a broader model, which is the option, proposed in the concept of structural autonomy. Brokerage is about coordinating people between whom it would be valuable, but risky, to trust. Closure is about making it safe to trust. The key to creating value is to put the two together. Bridging a structural hole can create value, but delivering the value requires the closed network of a cohesive team around the bridge (Burt, 2005, pg. 164).

Burt (2005, pg. 244) argues that the equilibrium image that emerges is one of local balance, between closure pulling groups in on themselves, and brokerage pulling them apart into new combinations. Closure is the more obvious force. People advantaged by barriers between insiders and outsiders have no incentive to bring in outsiders. People too long in their closed network have difficulty coordinating with people different than themselves. Echo within closed segments of the structure reinforces boundaries between us and them, deepening the structural holes that segregate groups. The echo hypothesis – based on the social psychology of selective disclosure in informal conversations – says that closed networks do not enhance information flow so much as they amplify existing opinion (Burt, 2005, pg. 214) Burt says that brokerage is the source of endogenous change.

However, there is one weakness in Burt’s argument. Burt assumes a person can select the type of network, flat or hierarchical, they are involved with. This may be true in the context of American multinationals and banks among which Burt did his research but this is not true of poor entrepreneurs in India (Burt, 1992, pg. 157 – 163). The poor entrepreneurs of India will need assistance in bridging the structural holes in their networks and escape the clutches of network closure.

Portes and Mooney (2002) cite the negative aspects of closure noting that under certain conditions, community closure may prevent the success of business initiatives by enforcing excessive claims on entrepreneurs. They also note that Burt has yet to describe how one finds the connection that will bridge the structural hole.

Portes and Mooney (2002) try to reconcile the network closure vs. network brokerage argument by focusing on asset value. They say the social collateral model can reconcile these views by identifying a trade-off between trust and access, which implies that the relative benefit of high or low closure depends on the value of the assets being transacted. Closure is more attractive when agents tend to exchange valuable assets, because it maximizes trust among a small number of individuals. In contrast, when the network is mainly used to exchange small favours such as giving information or advice, large and loose neighbourhoods are better because they maximize access to these resources. These results also provide foundations and network-based measures for Putnam's (2000) concepts of bonding versus bridging social capital, and have implications for the design of organizations.

The other way network structure can influence the operation of social capital is if its orientation is horizontal or vertical. Putnam et al. (1993) state that networks can be horizontal, connecting agents of the same status and power as well as vertical, connecting unequal agents in uneven relations of hierarchy and dependence. Putnam also noted a critical difference between horizontal and vertical networks:

"A vertical network, no matter how dense and no matter how important to its participants, cannot sustain social trust and cooperation. Vertical flows of information are often less reliable than horizontal flows, in part because the subordinate husbands information as a hedge against exploitation" (Putnam et al., 1993, p. 167).

This will certainly be true of the poor entrepreneurs in microfinance. Dasgupta (1999) agrees by saying that information about new economic opportunities is more likely to be shared among members of horizontal networks.

Another example of the effect of orientation is Granovetter's (2002) analysis of Locke's (1995) work on Italian textile industry to understand why the widely heralded success of small-firm networks in Italy seemed subject to sharp regional variations. These networks failed in some areas while flying high in others. Locke says it depends on its compatibility with the local social and political networks. It turns out that polarised and hierarchical networks are much less fertile ground than polycentric areas. Granovetter then looks at "social capital" but the puzzle from the point of view of the Putnam et al (1993) argument is that all these cities had a rich associational life, supposedly the progenitor of the norms, networks and trust that compose this capital. The difference was that Turin's and Prato's associations were structured vertically with few ties across to other types of association but with further vertical ties reaching out of the region to national parties or other organisations. Milan and Biella, by contrast, were richer in horizontal ties of the sort that mute conflict in the one case and facilitate the myriad details of inter-firm cooperation in the other. So, it is not just the density of associational life that matters for economic (or political) outcomes but the structure of its ties.

Another important factor in how social capital works is context. Cassar and Wydick (2009) found that the effects of different types of social capital are highly contextualized. For example, acquaintanceship with other members of the group and the number of years subjects lived in an area had strong effects in some countries, and weak or even negative effects in others. Furthermore, much of the evidence from their study points to the danger of over-generalizing about the nature of social capital in developing countries and its effect on economic behaviour. That different aspects of social capital appear to exhibit diverse effects across cultures suggests that the external validity of work in behavioural economics and social capital carried out in a single context may be quite limited. Falk and Kirkpatrick (2000) suggest that trust is only understandable in its socio-cultural situation. Trust inheres in the situated, observable and accountable reciprocity of every micro interaction. They also say that historicity and futuricity are shown to have a fundamental role in the processes that transmit social and cultural norms which is a part of social capital. Their study makes clear how past learning needs to be reconciled with the present, in the context of the knowledge and identity resource of a future gaze or 'vision', and that the results of that reconciliation need to be passed on to the next generation.

Portes and Mooney (2002) say there are three key aspects of social capital as bonds of solidarity and trust within a community. First, in conjunction with other factors, this economic and political mechanism can lead to successful, grassroots-led outcomes. Second, it is quite difficult to bring about. Third, unexpected consequences often emerge in the process of building the required preconditions. For the most part, the research literature has not found successful attempts at "social engineering" that seek to build solidaristic networks when few or none exist.

Therefore, in the Indian context of the present research, the microentrepreneurs in their SHGs are probably generating social capital with their frequent meetings and lending. They are definitely generating closure within their family and jati networks. However, does the social structure around them impede or assist in the creation of social capital and accessing opportunities? Theory indicates the importance of both closure and brokerage in creating social capital. The question is if what the business is selling is a low or high value asset. If it is low value then theory predicts brokerage is more important in creating social capital than closure. Theory seems to suggest that getting information from vertical links in the network is difficult. Does this mean that the poor entrepreneur who needs to bridge the structural holes around her in the network using vertical ties because they live in a hierarchical society face a near impossible task? Especially if there are few or no solidarity networks exist in their area? These are key questions especially if what Gomez and Santor (2001) posit is true that social capital is essential for microentrepreneurial success. They also recognise that the neighbourhoods they live in play a role.

Burt (2010, pages 192 -218) offers a way out of this theoretical conundrum. Burt argues that normally there is no such thing as second hand brokerage or network spillover. In other words, one cannot connect to a network broker and then passively wait for the network to deliver the benefits. It requires personal engagement to get the benefits of network brokerage. However, Burt says there is one exception. This happens when a network insider presents an outsider as another insider. In this case, the outsider will benefit from second hand network brokerage. It is unlikely that a poor entrepreneur running a low growth, low barrier to entry business will be able to connect vertically to a broker in their industry network to be presented as an insider. But, a microfinance institution is much more able to connect to these industry network brokers and represent their clients as industry insiders and therefore gain second hand brokerage.

Theory now presents three ways to help microfinance clients, who run low entry barrier businesses to establish weak ties in order to get relevant information on things such as finance, suppliers, market information and information on potential customers that will improve their businesses and help reduce their poverty. First, following Burt, a MFI can act as a broker between the clients and the industry they are involved in to produce a network spillover to benefit the clients. Second, following Granovetter, the MFI can help these poor entrepreneurs to establish weak ties among other poor entrepreneurs in the same industry. The tendency of the poor to depend on strong ties has the effect of fragmenting networks. Helping these people to connect horizontally bridging the structural holes in their networks using weak ties will be much easier than trying to establish vertical weak ties in the Indian context. Finally, if as Granovetter says, insecurity is the reason the poor depend on strong ties then reducing their insecurity will make it more likely for them to start establishing more weak ties and gain access to more non-redundant information. But, the biggest cause of their insecurity is their poverty. Therefore, reducing their poverty reduces their insecurity leading to more weak ties giving more access to relevant information that improves their businesses. In this way, it is hoped that a virtuous circle will be established rather than the vicious circles the poor usually find themselves in.

5.12 Research Questions

This leads to two research questions that this research will attempt to answer to verify empirically if this theoretical framework of the strength of weak ties, brokerage and network spillover holds for microfinance clients who are poor entrepreneurs who own low growth, low entry barrier businesses in the Tamil context:

1. How does a MFI help its clients bridge structural holes?
2. How can MFIs socially intermediate to help clients establish weak bridging ties?

5.13 Chapter Conclusion

This chapter has described how various network theories around the strength of weak ties, structural holes, brokerage and network spillover can help poor entrepreneurs who own low growth, low barrier to entry businesses can find the non-redundant information needed to improve their businesses and reduce their poverty. These theories also explain how the needed vertical connections can be established despite the obstacles the poor face in doing so in the Tamil context. There is currently no theory in microfinance that can explain how to do this. The next chapter will describe the methods used to answer the research questions.

6 Chapter Six – Methodology

6.1 Chapter Summary

This chapter will describe the methodology used to answer the research questions. First, the research population will be defined as sari sellers who are BWDA clients and the reasons given for the choice. To give context, the sari industry will be described along with what BWDA has done for the sari sellers in the past. The social network mapping method will be described along with the software used to analyse the networks. The reverse small world method that will try to make the reported networks more complete will be described. After describing how data on network spillover, finance and caste, the choices on poverty level measuring will be and the decision to use Progress Out of Poverty Index will be explained. All of this is for the first two research field trips.

The third research field occurred during May 2011. The purpose of this field trip was to collect higher quality network data that would establish a baseline for the network intervention. This allowed a comparison to be done before and after the network intervention.

In order to set this network baseline, the key questions this chapter answers were there any sari sellers with more weak than strong ties in their networks? How did that affect the probability of poverty? What did the data show about the sizes of the sari sellers' ego networks? What did the data show about the strength of the ties in the sari sellers' ego networks? What did the data show when comparing the sari sellers' ego networks by location, sari seller type, leadership type and caste? Can all the ego networks collected be combined into one whole network? If so, who were the most central players in this network? Did this vary by the type of centrality used? Who were the most central players in each BWDA branch and did this answer the question of whom best to connect a weak bridging ties in the branch? How fragile were the whole and branch networks and if fragile, what role could weak bridging ties play in strengthening these networks?

Finally, this chapter describes the network intervention into the social networks of the 111 BWDA sari sellers in order to try to add weak bridging ties to these networks with the aim of improving their businesses by increasing the Diwali sari sales of 2011 over 2010. This will be followed by the limitations and ethical consideration of this research.

Trip	Population	Focus	Findings
1st July 2009	178 members of 10 SHGs, 9 female SHGs, 1 male SHG	Exploratory research on the businesses of SHG members	While a majority (53.45%) had started agricultural businesses, sari selling offered the most interesting case because of the gap in the literature and the potential of interesting value chains
2nd Oct. 2010	111 sari sellers, all female	Mapped the ego networks used for their businesses by identifying links to suppliers, financiers, customers and market information. Also, collected PPI, financial information on business and caste	Sari sellers overwhelmingly relied on their strong ties for their businesses. Structural holes were also identified in their networks.
3rd May 2011	83 of the 111 sari sellers interviewed in Oct 2010	Acquired better network data using the technique Hogan by identifying person-to-person links only to suppliers, financiers, customers and market information and then placed these on a target diagram to indicate how close they were and show the links, if any, between the alters. Also setup the network intervention.	Almost all of the networks were small and most relied on strong ties. When the ego networks are combined into a whole network, it is shown that this network is fragmented and contains a number of structural holes. Weak ties should be able to bridge the structural holes and help stabilise the network
4th Oct. 2011	51 sari sellers, all female with 30 from the original 83 interviewed in May 2011	Mapped the social networks, financial information and PPI to see if there were changes after intervention and to see if there was any correlation to the introduction of weak bridging ties.	Only 8 members of the treatment group responded this time. No financial data was captured. One case of increased sales due to weak bridging ties was observed and a case of a group of sari sellers establishing weak bridging ties to obtain bulk discounts.

Table 8 – Summary of Field Trips

6.2 Research Population

The Bullock Cart Workers Development Association (BWDA) based in Villupuram, Tamil Nadu in India agreed in 2009 to participate in the research project. The associated MFI BFL has over 400,000 clients and over 200,000 have loans out at any one time. There were over 21,000 SHGs associated with BWDA.

In July 2009, during the first research field trip, which was mainly exploratory, 178 members of 10 SHGs were interviewed individually. This method was chosen because the answers to the network questions were believed to be more honest than using the more traditional focus group approach. There were 9 female SHGs and 1 male one. The SHGs were both rural and urban. The goal was to identify the most popular businesses started by SHG members so that the research would have impact on a significant number of clients. For the interview questions, see Appendix A – SHG Member Questionnaire.

The interviews took place in the Villupuram District in the state of Tamil Nadu and the Union Territory of Pondicherry. The reasons for choosing this area were the difficulties with travel in India and by limiting the research to this area made it possible to reach all of this area in a day trip from the BWDA's headquarters in Villupuram.

The respondents were asked if they had started a business since joining the SHG and what type of businesses they were. Over 80% had started businesses. In Table 9, the top five types of businesses started are listed.

Businesses Started By SHG BWDA Members	
Business Type	**Number**
Dairy Animals	58
Tailoring	36
Farm	35
Food Products	23
Sari	22

Table 9

As can be seen from Table 9, all of these businesses had low barriers to entry. These businesses also tended to be low growth. According to Banerjee and Duflo (2011), these were typical of the businesses started by microfinance clients.

The purpose of identifying which businesses were started and the number was to identify a business where the strength of weak ties could be used to improve the businesses of a significant number of BWDA's clients. The other purpose was to identify a business that could help this research make an original contribution to knowledge. While the most popular, a lot of research was already being done on agricultural networks and value chains of dairy and agricultural farming. These businesses were not chosen because it would be harder to make an original contribution to knowledge here. Tailoring and food product sales had very short value chains and were not very interesting from a network point of view. Saris, on the other hand, potentially had very interesting value chains and networks and additionally not much research has been done on the sari industry in India. One sari seller verified that sari selling is a low entry barrier business by complaining that her sales remained flat because three new sari sellers were now operating on her street.

Because of the portability of saris, sari sellers had the potential to develop rich and interesting networks that were able to test the theoretical framework. For these reasons, the decision was made to focus the research on sari sellers who were clients of BWDA.

BWDA was asked to identify all SHG members who sold saris in the Cuddalore and Villupuram Districts in the state of Tamil Nadu and the Union Territory of Pondicherry. Again, the reason for choosing this area were the difficulties in travel in India and limiting the research to this area made it possible to reach all of this area in a day trip from the BWDA's headquarters in Villipuram. A very large percentage of these were expected to be interviewed. So there was a good chance that all key members of the network were captured even if some peripheral players were missed.

BWDA has assisted their sari seller clients by offering training including sari selling, sari embroidery, sari painting (adding designs to plain saris), business development, accountancy and set up a sari exhibition 5 years ago to help the sari sellers to increase sales. This came as a response to BWDA noticing in 2002-03 that SHG members had high expenditure around various local festivals. Members increased their borrowings at that time but felt short changed as everyone rushed to buy similar material at the same time and the demand pushed up prices in local markets. BWDA introduced and distributed different packages of commonly purchased materials. Due to bulk purchase and advance orders (up to two months before the festival), BWDA used advance bulk purchasing to supply these packages at prices no local trader could match. For example, BWDA charged Rs.500 for the package, which would cost Rs.550-620 in the local market. When the logistics of this became onerous, BWDA started exhibitions for the SHGs members to sell and buy their products including saris. To ease transactions, a Rs. 30,000 credit limit was set for each SHG and SHG members could purchase from any seller in the exhibition. The seller was able to increase his/her sale and either took cash from BWDA at 5% discount to sale value or took payment after 15 days. The buyers either repaid the credit availed within 10 days without interest or paid 24% annual interest on borrowed amount. During November 2004, seven such exhibitions generated sales of Rs. 3.44 million. But BWDA discontinued this product as sellers sensing monopoly arrangements started over charging borrowers and BWDA was worried about the risks to its reputation (Arora, 2008).

Figure 4 – Woman Wearing Sari

6.3 Sari Background

(Sari Photos from Google Images)

But, before going further, it would be helpful to provide some background to the sari industry in India.

A sari was a strip of unstitched cloth, worn by females, ranging from four to nine yards in length that was draped over the body in various styles. The most common style was for the sari to be wrapped around the waist, with one end then draped over the shoulder baring the midriff. The sari was usually worn over a petticoat with a blouse known as a choli forming the upper garment (Banerjee and Miller, 2003, pp. 4 and 24). Because it was unstitched cloth, a sari was a one size fits all garment (Banerjee and Miller, 2003, page 72).

In Indian culture, saris were more than just clothing. Saris were kept in a steel almirah wardrobe in the cities and in the villages the equivalent is the steel trunk or box. The saris that were kept in these trunks and almirahs reflect a web of kin relationships and emotions (Banerjee and Miller, 2003, pages 47 – 48). The trunks could be objects of power struggles. There was a story of woman leaving the village of her husband whose own clothes remained under the control of her mother-in-law who held the key to her trunk (Tarlo, 1996).

Cultural norms helped determine which saris were bought and how they were worn. For this reason, market researchers and anthropologists saw the women's sari preferences as highly predictable given the women's social positions and educational backgrounds (Bourdieu, 2010). In rural areas, many rules applied to sari wearing. For example, in a village in Madhya Pradesh the women of one jati wore only printed saris, a variety forbidden to all other jatis. There were rules that dictate colours, patterns and materials of saris worn for ceremonial occasions such as weddings or prayers. Middle class women abided by conventions and family traditions (Miller, 1985).

Figure 5 – Silk Sari

Weddings were one of the most important reasons to buy saris. Traditionally, Indian marriage was an alliance between two families that was marked by a mutual exchange of many gifts. The bride herself was the precious climax of these exchanges. Cloth, which was held in great esteem in India, was a vital part of the exchange. For this reason, weddings were engulfed in a cascade of sari giving and receiving (Bayly, 1956, Pages 285-321, Cohn, 1986, Werbner, 1990). For example, a groom's father in a Muslim village had to buy a sari for the bride's mother, one for the maid and five for the bride. He had to buy a shalwar kamiz, a traditional dress consisting pyjama-like trousers and a tunic (Banerjee and Miller, 2003, pg. 267), for the bride's unmarried sister. He had to buy saris for his mother and aunt and clothing for his father. This was so expensive that he could not buy a gift for his wife or his sister's family because he had run out of money. Other major occasions for sari gift giving are major religious festivals (Banerjee and Miller, 2003, pages 96 – 99). In Tamil Nadu, these would be Diwali, the Hindu festival of lights, and Pongal, the harvest festival tied to the winter solstice.

Figure 6 – Sari Shop Owned By BWDA Sari Seller

Generally, sari buyers had three retail options. First was the peddler or door-to-door salesperson, second was the high street sari shop and third was the sari emporium with its well-lit showrooms. The skills of shopkeepers and the larger personal relationship between buyers and sellers remain important since in this still largely unregulated and unbranded market, issues of trust and persuasion remain the critical factors in linking the industry with its consumers (Banerjee and Miller, 2003, pages 173 – 186). The BWDA sari sellers were either peddlers or own high street sari shops (See Figure 3).

On the production side, textile production has been the second largest sector of the Indian economy after agriculture. It was hard to verify but it was believed it employs somewhere between 20 million and 25 million people. Handlooms were the most traditional means of sari production. The skilled weaver used pre-prepared cotton yarn usually cotton spun in cotton mills. The majority of weavers worked for middlemen. After World War I and the lifting of British restrictions on Indian textile production, large mills grew up in Bombay and Western India. These were integrated production units which bought raw cotton, spun it into yarn, wove it into fabric, printed it and cut it up into finished saris. From the 1960's, mills began importing synthetic yarn from Japan. In the 1970's, migrated from spun yarn to 100% polyester filament which allowed for much sharper printing and high colour saturation and combined a low maintenance wash and wear practicality with silk look-alike dressiness (Banerjee and Miller, 2003, pages 195 – 198).

The mass market was now dominated by the power loom. These use electric power to run the loom faster producing more saris in the same time as handlooms and mills do. The government preferred handlooms and mills but with the textile import barriers being lifted in 2004, there were fears India's weavers would have struggled to compete in world markets. Today handlooms have 10% of the market and mills only 5% of the market. The rest belong to power looms. The power loom sector has both extremely large operations with hundreds of modern machines and small rural houses containing just two machines. The power loom sector was anarchic but extremely flexible able to quickly respond to market trends and demand. It was subject to little regulation and often exploited its workers. All manner of networks of production were being created by diverse entrepreneurs who cut their own deals linking spinning, designing, weaving and dyeing. No one was able to hold or enforce copyright or patent (Banerjee and Miller, 2003, page 199).

Kanchipurum in Tamil Nadu was a town renowned for its heavy traditional silk saris worn at ceremonial occasions such as weddings. The industry here was centred on house weavers who had large hand looms in their houses. The power loom threatened the Kanchipuram weavers (Banerjee and Miller, 2003, page 202).

The Tamil Nadu state ran the textile corporation Co-optex. The firm had software that with the press of a button and a click of the mouse allowed a woman to design the sari of her dreams. The customer was able to sketch her own design in a centre in Chennai and Co-optex weavers weaved it to her specifications. In London, many shops now offer this bespoke design facility with garments made up in India (Banerjee and Miller, 2003 page 208).

On the marketing side, the entry of beauty queens into Bollywood cinema meant they served as advertisement for designers and their films served as fashion shows. One-off designer pieces worn in films were quickly and illicitly copied and then mass-produced by the power loom operators (Banerjee and Miller, 2003, page 205). Film stars used to drive sari sales but no longer do. In terms of mass sales of everyday wear, it was the television soaps that now exert the dominant influence. Nim Sood, who selected the clothing for the major Star TV soaps (*Kyunki Saas Bhi Kabhi Bahu Thi (KSBKBT), Kahin Kissii Roz)* which had the highest viewing figures on Indian television, put her into a position of determining the sari designs that were the most popular. KSBKBT had a strong influence on the retail market. For example, a character on the show was wearing Bandani saris and caused them to sell out (Banerjee and Miller, 2003, pages 222 – 227; Sinniah, 2010).

6.4 Social Network Mapping

The question was what methods to use in order to answer the research questions among the population of BWDA sari sellers. The first decision was whether to pursue a qualitative or quantitative approach to the research. In order to do proper quantitative research good quality quantitative data was required. However, at the beginning of the research there was a suspicion that that would be a problem with obtaining good quantitative data from these low growth, low barrier to entry sari businesses. Later interviews with the sari sellers showed that these fears were justified. Most of the sari sellers did not keep good business records and therefore had little idea of their turnover and margins, making it very difficult to correlate any financial improvement in the business with changes to their networks. Therefore, the decision was made to pursue a qualitative approach. The emphasis for this research is that it will be interpreting a broad range of partial evidence rather than seeking to test a formal model.

Obviously, the social networks of the sari sellers needed to be mapped. Because structural hole measurements were only for ego networks, only the ego networks of the sari sellers were mapped. Ego networks were from the point of view of the respondent and contain links to the respondent and the connections between those linked to the respondent that the respondent was aware of. It was not the global network around the respondent.

The sari sellers were asked about connections to their suppliers, financial sources, market information sources and customers. The sari sellers were asked the questions in Appendix B – Questions for Sari Seller Interviews.

A popular SNA software package UCINET (Borgatti et al, 2002) was used to map and analyse the networks of the sari sellers. Its companion software component NetDraw (Borgatti, 2002) was used to visualise the networks.

6.5 Defining Strong and Weak Ties

To quantify the strength of the relationship, those relationships based on a large amount of trust were considered strong while those that were not will be considered weak. This was based on the discussion on trust developed in the theoretical framework. For financial sources, if collateral was required for loans, this implied a lack of trust and therefore was identified as a weak tie. Non-collateral loans were an indicator of trust and therefore were identified as strong ties. For suppliers, the provision of credit to the sari sellers, whether or not it was used, was an indicator of trust and was identified as a strong tie. Therefore, ties to suppliers that do not offer credit were identified as weak ties. For market information sources, links to family members were identified as strong ties because of the emotional attachments. Using the distinction of Granovetter (1973), market information sources that were identified as friends were marked as strong ties while those identified as acquaintances were marked as weak ties. For customers, an arbitrary time of a year of service was used to distinguish strong versus weak ties.

6.6 Reverse Small World Technique

It was often the case that respondents may not remember all of the relevant connections when asked. In order to get a more complete ego network other methods were used. One such method was the reverse small world method (Killworth and Bernard, 1978 and Bernard et al, 1990). In this technique, respondents were asked to name people who can carry information to persons outside their network. This was conceived as a way to estimate the number and type of people known to the respondent. While it was conceived as a way identifying the global network of the respondent, the work of Freeman and Thompson (1989) made it clear that reverse small world techniques only captures part of the global network.

In this research, reverse small world questions were asked about market information sources, obtaining more customers, improving the business and selling a very expensive sari. These were framed around the question of who would you talk to first? There was the risk that they could mention the same ties as before.

For market information, the respondents were asked who they would talk to first to find out about weddings, festivals or to contact a professional auntie. An auntie was a form of kindly address to an older woman to whom one was not related (Dictionary.com, 2011). A professional auntie was an older woman who serves as an advisor to younger woman on how to tie and wear saris. Many of them can be found running beauty parlours (Banerjee and Miller, 2003, pg. 77-78). These women served as natural sources of market information.

The very expensive sari the question refers to were those made in Kanchipuram, Tamil Nadu in India. Kanchipurum was a town renowned for its heavy traditional silk saris worn at ceremonial occasions such as weddings. The industry here was centred on house weavers who have large hand looms in their houses (Banerjee and Miller, 2003, pg. 77-78). The question assumed the price was 25,000 Indian rupees which was significantly above the yearly income of those earnings average US$1 per day. It was highly unlikely the sari sellers would have anyone in their ego networks that would be able to afford a Kanchipuram silk sari therefore forcing them to go outside their network to find someone to sell this sari to.

The reverse small world network information was obtained through questions 7, 8, 9 and 10 in Appendix B – Questions for Sari Seller Interviews.

6.7 Measuring Network Spillover

To see if the sari sellers were taking advantage of any network spillover effect (Burt, 2010), respondent were asked if the person they were linked to had any special influence in the sari business to determine if this person was considered to be an insider or outsider to the Tamil sari business network. See questions 2 and 4 in Appendix B – Questions for Sari Seller Interviews.

6.8 Financial Status of Business

To understand the financial status of each sari seller, the seller was asked how many saris they have sold in the past year, what the price range was and what margin they made on each sari. This made it possible to get understand the financial side of the business of those women who did not possess good business records. However, there was a high risk of inaccurate data. See question 11 in Appendix B – Questions for Sari Seller Interviews.

6.9 Caste

To measure social status of each sari seller, they were asked what jati or caste the sari seller's family was in. The respondent was also asked to place the nodes of her network on a 5 layer pyramid that represents the Tamil social structure. See question 11 in Appendix B – Questions for Sari Seller Interviews.

6.10 Poverty Level Measurement

One of the key measurements needed to be taken was the level of poverty of the respondents. This will establish a baseline poverty level. A network intervention, to be described in Section 6.13, was done and this allowed the measurement of any possible change in the poverty level as a result.

There were several poverty impacts tools available to use. Comim (2007, pages 53 – 54) describes five of these. First was the CGAP Poverty Assessment Tool. This used observable household characteristics that correlate well with levels of income to create a score to infer the poverty status of individuals using target and control groups. This had the advantage of establishing rigour with target and control groups but the target and control groups mean it was too expensive and time-consuming for this research.

The second tool was the Prizma Poverty Scorecard. This tool used eight non-monetary indicators such as education, residence, employment status, family size, consumption of meat, consumption of sweets, household assets (such as TV or CD player) and possession of family vehicle. The score determined the relative and absolute poverty of households. However, most of this scorecard's power came from a single indicator which specified how often a client ate meat. This had a tendency to overstate the client's poverty (Schreiner et al, 2005).

The third tool was the Index of Fulfilment of Basic Needs. This was developed in Bolivia and uses 10 indicators that focus on four characteristics of households such as housing, education, access to health services and access to public services. Proxies are used to determine access to public services. The issue with this tool was that it used subjective decisions on the welfare value of each component of the tool (Falkingham and Namazie, 2001).

The fourth tool was the CASHPOR Housing Index. It used three characteristics to classify housing: size, physical condition and building or roofing materials. It made the assumption that housing characteristics had a strong correlation to poverty. If the area had government housing schemes for the poor, this assumption no longer holds. Tamil Nadu had government housing schemes for the poor. There have been studies that have shown that this tool had a poor correlation between the index and poverty (Falkingham and Namazie, 2001).

The fifth tool was Freedom from Hunger Food Security Survey. This tool assessed absolute poverty by using four food security scales. It used a 17 question survey to determine the level of food insecurity. USAID did not use this tool because it was not a reliable proxy for daily expenditure which was a standard measure of poverty (USAID, 2011).

To measure the poverty level of each sari seller, the decision had been made to use the Progress out of Poverty Index (PPI), an instrument created by the Grameen Foundation (Schreiner, 2008). Using data from the national household surveys of India, PPI created an easy to use scorecard that estimated the likelihood that a household in India had expenditure below a given poverty line. The PPI scorecard used 10 simple criteria. If there was a major change in household conditions in India such as through natural disasters or war, the PPI would have been invalid. Political programmes could have also interfered with the validity of the PPI. In Tamil Nadu, the state government had recently given away televisions and liquefied petroleum gas (LPG) stoves to the poor as a result of an election promise. To mitigate this, respondents needed to be asked if the television or LPG stove came from the state government and then not given that respondent the score for those two criteria. For PPI scorecard questions see question 13 in Appendix B – Questions for Sari Seller Interviews. All of these questions were asked at the respondents' home to verify the answers. Appendix E holds the PPI Probability Table.

6.11 Change in Methodology Due to Problems with Sari Seller Social Network Data

Because of problems with the network data collected during the second field trip to be described in the next chapter, the methodology was changed. The problem was caused by the inclusion of organisations in the ego networks. Sari sellers could have relationships with different people in the same organisation. The implication is that these sari sellers shared a relationship when in fact none existed. Ego networks were designed for recording relationships between people. Therefore the change was to collect only those network ties that connected named person to another named person.

6.12 Methodology for Third Field Trip

The purpose of the third field trip was to obtain better network data by focusing on person-to-person links. If the sari seller identified an organisation as a link on the second field trip, she was asked to name a person in that organisation that she usually worked with. If she was unable to name an individual, the link was dropped. This left the individuals identified during the second research field trip and individuals from organisations identified during the third research field trip. Using the technique created by Kahn and Antonucci (1980) and also used by Hogan (Hogan et al, 2007), respondents were asked to place these individuals or alters they were linked to on a target diagram indicating how close they were to them by the distance they were placed from the central circle which represents the sari seller. They were then asked to connect those alters who know each other by drawing a line between them. An example of a target diagram is shown in Figure 7.

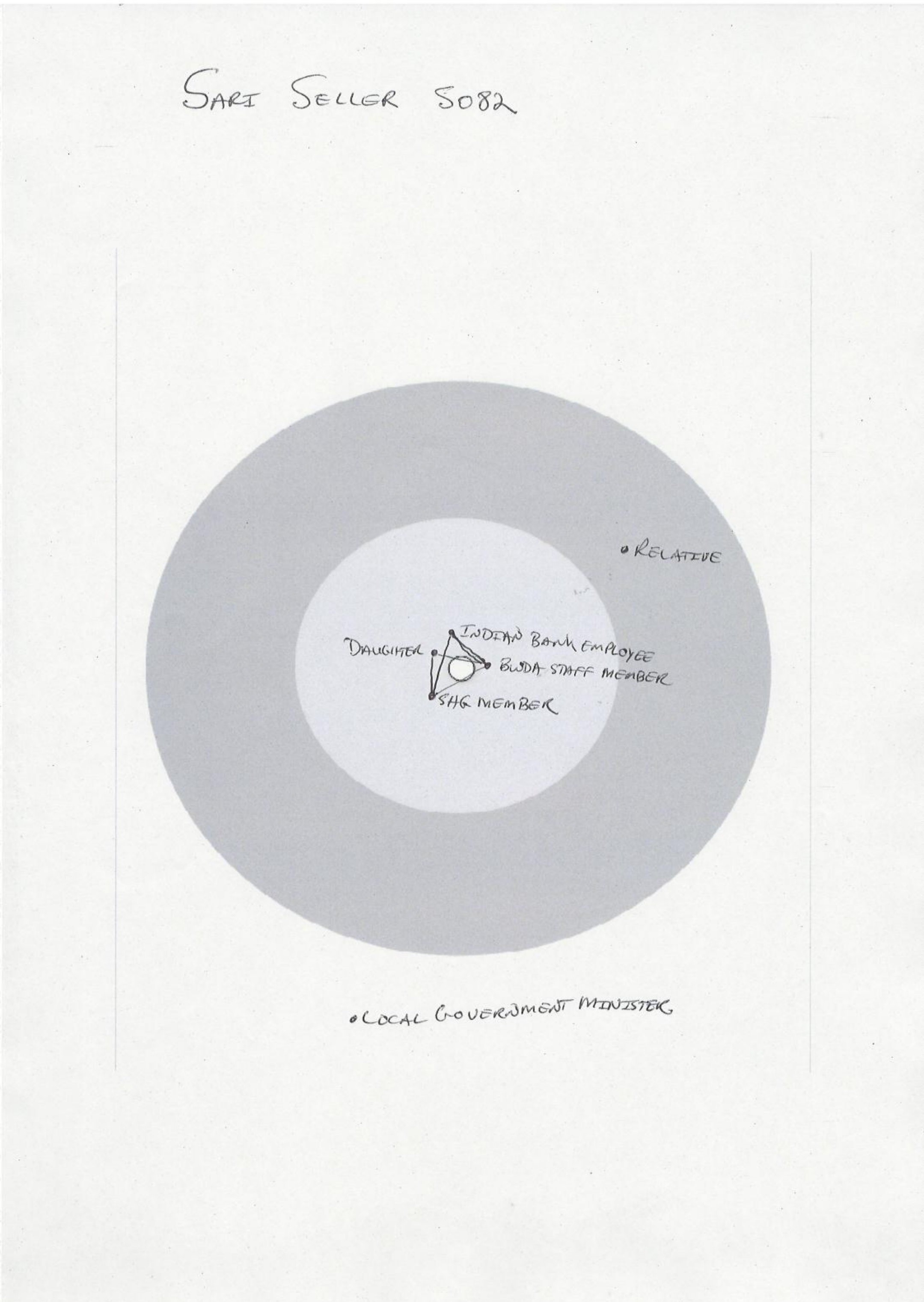

Figure 7 – Example of Sari Seller Target Diagram

The target diagram was generously provided by Dr. Paola Tubaro of the University of Greenwich. For interview questions, see Appendix C – Sari Seller Questionnaire II.

6.13 Description of Intervention

The network data collected during the third research field trip suggested that a network intervention could possibly have introduced weak bridging ties to the social networks of the sari sellers. So, how could a MFI do social intermediation to help their clients develop the weak, bridging ties they needed to improve their businesses and reduced their poverty? This research investigated two approaches in order to answer this question with this case study.

First, the MFI could have acted as a broker between the sari sellers and the sari industry. One suggestion consistently made by the sari sellers was for the MFI to buy the saris for them in bulk. This would have generated a large discount on the price of the saris. This discount would be passed onto the sari sellers which would have increased their profits. The MFI could have brought the latest market information and how-to information from sari industry insiders to the sari sellers. This would require MFI to establish its own weak ties with the sari industry. This task would be made much easier if the sari industry was a small world network or a scale free network. Small world networks were characterised by local clustering which indicates dense pockets of interconnectivity. There are bridges, however, that connected these subgroups. A scale free network was a network that was dominated by a few hubs with a large number of connections. If the sari industry was a small world network, BWDA could link to any subgroup with the knowledge that bridging would allow it to connect to any other subgroup in the industry in a relatively few steps. If the sari industry was a scale free network, BWDA would only need to establish weak ties with hubs to be able to reach most of the sari industry.

It was important for all of the above that the MFI has someone who knew the sari business negotiating on its behalf. The reason for this was shown in a case study from Malcolm Harper's book *Inclusive Value Chains: A Pathway Out of Poverty* (2010). In the case study, an Indian MFI formed a partnership with a large multinational to provide potatoes grown by the MFI's clients to its potato chip factory. While initially successful, the partnership suffered serious strains because the MFI did not understand how the multinational conducted its business. Inside knowledge of the sari industry is needed if the MFI was to build a successful inclusive value chain that included its sari seller clients.

If the MFI was successful in building sustainable weak ties to the sari industry, it would be able to take advantage of Michael Porter's (2006) ideas on how NGOs can sustain themselves. The basic idea was that NGOs should choose commercial partners whose business strategy was compatible with its purposes. For example, the sari industry could have paid for training the MFI's sari sellers and create a loan fund for the sari sellers. Why would they have done this? Because both of these actions would help the sari industry make more money by the sari sellers selling more saris.

The second approach was for the MFI to help its sari seller clients establish weak ties with each other inside the MFI's network. The basic idea here was that the MFI established a mechanism where sari sellers can find each other in order to share information and knowledge. Sari sellers identified information and knowledge they were willing to share and information and knowledge they wanted to learn. Ideally it would have worked like a classified section that will allow the sari sellers to contact each other and negotiated with each other. The assumption was that BWDA provided a safe and secure place to do an intervention like this. As Granovetter (1983) said, the main reason the poor people rely on strong ties is insecurity.

The MFI identified those sari sellers that were willing to train and connected them with those who want training. The MFI could have encouraged mentorship relationships where sari sellers were experts in a particular area could mentor another sari seller in this area. BWDA has agreed to do an intervention.

6.14 Purpose of intervention

The intervention tested the second approach to see if weak bridging ties among the sari sellers can be established and as a result the sari sellers see an improvement in their business. All the sari seller clients of BWDA in the Cuddalore and Villipuram Districts in Tamil Nadu and the Union Territory of Pondicherry were asked if they were willing to share information and/or skills with other BWDA sari sellers. They were allowed to put constraints on who they were willing to share information with. For example, they may not have wanted to share with sari sellers that were nearby because they may have been seen as competitors. However, they may have been more willing to share with those further away. This information was collected during the 3rd research field trip in May 2011.

A list of all those sari sellers willing to share along with their contact details was assembled. This list was given to the sari sellers in the Villipuram District only. Villupuram was chosen because BWDA's head office was there and it would be relatively easy for them to keep an eye on the sari sellers here. The sari sellers in the other districts effectively served as a control group. Because what was being offered were information and skills, contacts should have formed weak bridging ties. It was also assumed that the typical social hierarchy issues will not come up. Of the 111 sari sellers, only two were Brahmin. The overwhelming majority of the sari sellers were in the backward castes, other backward castes or most backward castes.

6.15 Intervention Details

During the 3rd research field trip in May 2011, the sari sellers were asked the questions to create the list needed for the intervention. The BWDA sari seller clients in the Villupuram District of the state of Tamil Nadu and in the Union Territory of Pondicherry were asked if they are willing to pass on their knowledge to other BWDA sari sellers on how to find more customers, the latest information on sari designs, the most popular saris and who the best sari painters and embroiderers are. Sari painting did not mean actually painting the sari but adding already made patches and designs to relatively plain saris as a way to increase the sari's value.

The sari sellers were asked if they were willing to train other BWDA sari sellers on any of the skills below:

- How to successfully negotiate with sari shops
- How to buy saris in bulk with other sari sellers and still be competitors
- How to set up your own sari shop
- How to be successful in running a sari shop
- How to get customers into your sari shop
- How to price saris to maximise your profit

- How to use embroidery to increase your profits
- How to create a successful business strategy
- How to develop the business
- How to do marketing
- How to hire and manage employees
- How to successfully get credit from sari shops
- Accountancy training
- General sari seller training
- How to sell silk saris
- How to do sari painting and sari embroidery

For all of the sari sellers who answered yes to the above questions, there was a need to find out if these sari sellers had any restrictions on passing on knowledge or training. For example, they may have been willing to do this for sari sellers further away but not those who live in the same neighbourhood because they may have been potential competitors. There was also be a need to get the contact details for these sari sellers. See Table 10 below for an example of document.

Name	**Contact Details**	**Information Offered**	**Skills Training Offered**	**Restrictions**

Table 10 – Sari Sellers Information and Training Offer Document

This document was written in Tamil and distributed to the 47 sari sellers in or near the city of Villupuram interviewed in 2010. If the sari seller cannot read, arrangements were made to have the document read to that sari seller. The 47 sari sellers were told they could contact any sari seller in the document, without violating the restrictions, who had information or training they want.

In order to improve the quality financial information on the sari sellers, a financial diary sheet was provided to each of the 111 sari sellers. The sari sellers were asked to record their sari sales on it. See Table 11 below to see the details captured. The financial diary sheet was also written in Tamil.

Sari Type (Silk, Non-Silk)	Sari Price	Sari Cost	Customer Jati	Date of Sale

Table 11 – Financial Diary Sheet

The sari seller information and training offer document and financial diary sheets were prepared during the 3rd research field trip in May 2011. BWDA was instructed to distribute the financial diary sheets to all 111 sari sellers in early July 2011. BWDA was also instructed to send sari seller information and training offer document to the 47 sari sellers in the Villupuram branches.

6.16 Fourth Research Field Trip Questions

The purpose of the 4th research field trip starting in late October 2011 after Diwali was to remap the social networks of the sari sellers, to see if there were any changes to the PPI score and to see if the sari sales for Diwali in 2011 were higher, lower or the same as the sari sales for Diwali 2010 as a result of the intervention. The financial diaries were also collected.

While not directly connected to the intervention, the opportunity was taken during the 4th research field trip to collect additional data. In order to understand how important the sari seller income was to the family, the sari seller was asked what percentage of household income is sari selling. The sari sellers were also asked how optimistic they felt about the future of their sari selling business. See Appendix G – Network Intervention Questionnaire.

6.17 Limitations

One of the main limitations of this methodology was the researcher's inability to speak Tamil which is the language of Tamil Nadu. Translators needed to be used to communicate with the respondents. The main weakness of using translators was that a lot of the conversations were lost because the translators used did not translate word for word. The translator for the first research field trip was a Tamil researcher also doing research at BWDA. For the second, third and fourth research field trips BWDA employees were used. The main translator was a lawyer for BWDA assisted by a finance clerk and a new employee running a water project. It should be noted that the sari sellers felt free to criticise BWDA to the translators and the translators translated these criticisms.

6.18 Ethical considerations

Borgatti and Molina (2003) identify the key ethical issues using social network analysis in research. First, it was not possible to have anonymity at the data collection stage because it was necessary to know who the respondent was. Second, a person who did not participate in the research could still be included because they were named by other respondents as part of their social networks. Borgatti and Molina stress that respondents did have the right to their own perceptions of their relationships to others. It was these perceptions that were being reported by respondents. Third, in an employment setting, questions on how employees socialise with each fall into a grey area between scrutiny and spying. Fourth, visualising the networks showed raw data that displayed who was linked to whom. One can make the respondents anonymous by replacing their names in the visualisations but there was still the risk that the names can be deduced from the network position. Finally, since social network analysis was a relatively new way of doing research for most people there was the possible risk that respondents will not realise the consequences of identifying the people in their social networks.

The sari sellers did report non-participants in their social networks but they were being asked about their perceptions of their relationships. Since this was not an employment setting, Borgatti and Molina's concerns did not apply here. When reporting results to BWDA, no personal names were used. Anonymised sociograms were presented to only the top management of BWDA. While it was possible that respondents could have been identified by network position, it was felt to be very unlikely that BWDA top management would be able to do so from among their 400,000 clients. All of the visualisations used in this thesis have been anonymised. Finally to get informed consent, all interview sessions started with the translator explaining to respondents what was be asked and explaining the research to them based on the information sheet. (See Appendix J – Information Sheet for Microfinance Beneficiaries)

This research received ethical approval from the University of Greenwich Research Ethics Committee in May 2009.

6.19 Chapter Conclusion

This chapter has explained how the research questions were answered. Sari sellers were chosen as the focus because they represented the low growth, low entry barrier businesses typical of microfinance clients (Banerjee and Duflo, 2011). The focus was on mapping and understanding the social networks of the sari sellers. To verify if Granovetter (1983) was correct that poor people depend on strong ties, the strength of the network ties were measured with trust as the measure. Financial information was collected to see if sari sellers who had access to weak bridging ties had stronger businesses. To see if any sari seller was taking advantage of Burt's (2010) network spillover, sari sellers were asked about connections to sari industry insiders. The reverse small world method was used to make the reported social networks were as complete as possible. The Progress Out of Poverty Index was used to measure the poverty level of the sari sellers. In the next chapter, the data on the sari sellers and their social networks from the second, third and fourth research field trips will be described and analysed along with a major problem with the network data. The results of the intervention will also be described and analysed.

7 Chapter Seven – Data Findings and Data Analysis

7.1 Chapter Summary

This chapter will analyse the data collected on the second, third and fourth research field trips and identify the key findings. It will look at the sari seller attributes revealed and what the network data says through various analytical techniques. This analysis is able to confirm Granovetter's (1983) argument about the poor and strong ties. The analysis also reveals a serious problem with the network data. But, this problem presents an opportunity to answer the question of how poor sari sellers can build weak bridging ties in a highly hierarchical society using an intervention.

This chapter will then look at the ego networks collected from the sari sellers in May 2011 and then analyse the whole networks formed from the combination of the ego networks. For the ego networks, first the average size of the networks and the number and strength of ties will be examined. It will be shown that on the whole sari sellers have small ego networks and rely on strong ties. The ego networks will be compared by location (urban, suburban, rural), sari seller type (shop owners, full time sari sellers, part time sari sellers), leadership type (animators, non-animators) and by caste. It will be shown that shop owners are the only type of sari sellers who have more weak ties than strong ties and it can also be shown that these weak ties could be weak bridging ties. The data to show that businesses outperform those of the other types leading to a much lower probability of poverty is missing.

The chapter will also show how all the ego networks can be combined into a whole network using the connections to BWDA staff. The same technique is used to create a network for each branch. Given there is only one link connecting each branch to the BWDA headquarters in the centre, the whole networks turns out to be very fragile and easily fragmented. The Girvan-Newman technique is used to analyse the fragility of the networks and optimum network fragments are identified. As a result, there are a number of structural holes in the network which opens opportunities for weak bridging ties to connect the BWDA branches and make these networks more robust. Betweeness, degree and eigenvector centrality is calculated to identify the network nodes that would be the best anchors for the weak bridging ties transporting new information about the sari business to the sari sellers in each BWDA branch.

The intervention mentioned above identified sari sellers who were willing to offer information and training to other sari sellers. Despite the low response rate, there were two cases that gave indications that weak bridging ties not only brought non-redundant information but that information increased Diwali sales. This indicates that Granovetter's (1973) strength of weak ties can fill the social network gap in microfinance theory.

7.2 SHG Data Description (First Field Trip)

As was described in the previous chapter, in July 2009, during the first research field trip, 178 members of 10 SHGs were interviewed individually. There were nine female SHGs and one male SHG. The SHGs were rural, urban and areas that were neither rural nor urban that will be designated suburban. As a result, the decision was made to focus on sari seller among the five most popular businesses started by SHG members as an example of the low growth, low barrier to entry businesses typically started by microfinance clients.

7.3 Sari Seller Data Description (Second Field Trip)

During the second research field trip, lasting from October to December 2010, 111 sari sellers were interviewed in their homes. These sari sellers were all BWDA clients from the Cuddalore and Villupuram Districts in the State of Tamil Nadu and the Union Territory of Pondicherry. They lived in urban areas such as Villupuram and the city of Pondicherry, rural areas and in towns and built-up areas along major highways that were neither urban nor rural.

One interesting result was the number of animators among the sari sellers (see Table 12). In BWDA, each SHG has one animator (group leader) and one or two representatives (deputy group leader) with the rest of the SHG consisting of members. Each SHG holds around 20 members. Therefore, one would expect that animators would be around 5% of the sari seller sample, representatives a little more than 5% of the sample with the rest just being SHG members. However, the breakdown of the sample of sari sellers by SHG role is as follows:

SHG Roles	Number	%
Animator	**60**	**54.1**
Representative	**6**	**5.4**
SHG Member	**43**	**38.7**
Non-SHG Member	**2**	**1.8**

Table 12 – Breakdown of Sari Sellers by SHG Roles

The big surprise is that that 54.1% of the sample were animators. No definitive explanation has been found yet to explain why so many animators are in the sample. BWDA says that what sets animators apart from the other SHG members is the amount of training they receive. As described in the BWDA section of the microfinance chapter, animators play a key role in the SHG. They manage the SHG and its finances, the relationship with the bank and the relationship with BWDA. Also, as described before, the role of animator brings additional stature to the individual in the role. This may result in animators being approached to help with problems in the community. One animator told of being approached to organise and lead the demonstration every time the village had a problem with the government in addition to her SHG and family duties. Therefore, one possible explanation for why there are so many animators in the sample is that animators find sari selling a rather easy business to fit into their busy lives since they determine when they need to sell. In addition, some reported that they had no interest in growing the business because they couldn't handle any more customers.

The number of representatives in the sample is about the expected number. The number of SHG members in the sample is down because of the number of animators. Of the two non-SHG members, one was the animator of a just disbanded SHG who had an individual loan from BWDA and the other is a member of a joint liability group. A joint liability group, unlike a SHG, is run by the MFI and has only five members. This is a new microfinance methodology for BWDA. This is very similar to the methodology used by ASA, BRAC and Grameen in Bangladesh.

Jati	#	Avg. PPI	Prob. Below $2/day
Hindu Brahmin	2	89	12.9%
Chettiar	2	65.5	50%
Hindu Raddiar	4	83.25	15.5%
Yadava	4	73.5	42.9%
Hindu OC	2	76.5	27.3%
Avg. BC	26	73.19	42.9%
Avg. OBC	5	79.67	27.3%
Avg. MBC	44	73.83	42.9%
Avg. SC	7	64.125	55.2%
Avg. Muslim	10	68.25	50%

Table 13 – Average Sari Seller Attributes by Jati

Table 13 shows the breakdown of the population by jati. There are seven jatis with only one sari seller that have been admitted. The overwhelming majority of the sari sellers are in low caste jatis such as backward castes (BC), other backward castes (OBC), most backward castes (MBC) and scheduled castes (SC) which include Dalits. Muslims are technically considered part of the scheduled castes but have been broken out because they are a distinct community. The Brahmins and Raddiars in the sample do not have a significant probability of living below the US$2/day poverty line. The Hindu OC (Other Castes) and OBC sari sellers have a slightly significant probability of living below the US$2/day poverty line. All of the rest of the sari sellers have at least a significant probability of living below the US$2/day poverty line. This indicates these sari sellers do need significant amount of poverty reduction.

Figure 5 shows the distribution of PPI scores in the research population. The average PPI for the population is 72.05 which have a 42.9% probability of the sari seller living below the US$2/day poverty line. As can be seen, this sample does not, for the most part, include the poorest of the poor, with the bulk of the population being between the PPI scores of 60 and 94.

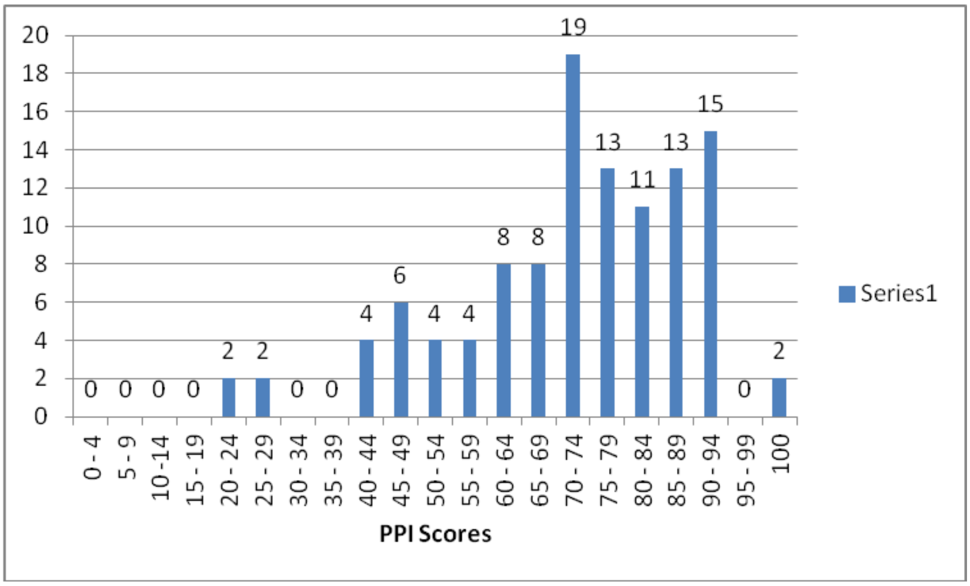

Figure 8 – Distribution by PPI Scores

Type	#	Avg. PPI	#Saris Sold / Year
Shop Owners	12	76.25	570.00
Full Time	55	70.23	706.23
Part Time	45	73.64	185.30
Urban	70	74.91	426.55
Suburban	22	71.86	676.67
Rural	19	61.68	444.21
Urban No SO & PT	36	73.69	570.28
Sub. No SO & PT	10	63.20	1164.00
Rural No SO & PT	9	56.22	577.78
Saris Only FT	15	68.33	1392.00
Saris & Maybe FT	19	70.63	1327.895
All Others	92	72.34	297.59
Animators	60	71.68	465.50
Non-Animators	51	72.47	501.54

Table 14 – Sari Seller Attributes

Table 14 analyses the sari sellers by organising them into several categories. The first trio compares sari shop owners, full time sari sellers and part time sari sellers. It should be noted that full time here means that sari selling is the only business they own. It does not mean they spend the entire time sari selling. Household and animator duties may take up considerable time. There are only 12 shop owners but their probability of living below US$2/day is significantly less than the full time and part time sari sellers even though on average they sell 135 saris a year less than the full time sari sellers. Two shops on the main road between Villupuram and Pondicherry on the border between the state of Tamil Nadu and the Union Territory of Pondicherry have the bulk of the shop sales because of the large amount of traffic they receive. If these two shops are taken out, it shows that the other 10 shops are not selling very much. It is no surprise that the part time sari sellers have sold the least. It should also be noted that because very few sari sellers had good records, they were asked to estimate how many saris they sold in the past year. If they gave a range, the mean was used. Needless to say, the accuracy of these numbers leaves a lot to be desired.

The next trio of categories compares urban, suburban and rural sari sellers. The overwhelming majority of the sari sellers are urban. The suburban sari sellers sell 250 more saris a year due to the two shops on the main road to Pondicherry. The PPI scores of the urban and suburban are similar probability of 42.9% of living below the US$2/day poverty line. However, the rural sari sellers have a 55.2% probability of living below the US$2/day poverty line. This matches what Harper (2010) said about rural India being much poorer.

The next trio of categories compared urban, suburban and rural full time sari sellers by stripping out the shop owners and part time sari sellers. The number of saris sold for the suburban is too high because it includes the two shops on the main Pondicherry road. Again, the overwhelming number of sari sellers is urban. However, this time the PPI scores show the poverty worsening as one goes from urban to suburban to rural. Urban full time sari sellers have a 42.9% probability of living below the US2$/day poverty line, suburban full time sari sellers have a 55.2% probability of living below the US2$/day poverty line and rural full time sari sellers have a 69.9% probability of living below the US2$/day poverty line. Once again, the rural area is much poorer than the urban areas.

The next trio of categories tries to isolate those who spend most of their time sari selling and compare them to the others. The "Sari Only FT" sari sellers are those who spend most of their time selling saris. The "Saris & Maybe FT" also includes those who are likely to spend much of their time selling saris but cannot be confirmed from the data. There is an overlap between these two categories. There is no surprise that the "Sari Only FT" sari sellers sell overwhelmingly more than the others. However, it is surprising that the "Sari Only FT" sari sellers have 50.0% probability of living below the US2$/day poverty line while the others have a 42.9% probability of living below the US2$/day poverty line. This illustrates the point that Banerjee and Duflo (2011) make about the small profits made by businesses started by microfinance clients.

Since animators form a significantly large part of the sample, the last comparison in Table 14 compares animators against non-animators. There are no significant differences found between the two.

7.4 Sari Seller Social Network Data Analysis

A key finding is that the sari sellers relied mostly on strong ties (For an example, see Figure 6 below). These are ties to people they have strong emotional bonds with. In Figure 6, all of the financial sources for the sari seller (coloured black) are providing non-collateral loans which indicate a high degree of trust making these strong ties. Both sari suppliers (coloured blue) are providing credit which again indicates a high degree of trust making these strong ties. While this sari seller does not get credit from the supplier in Surat, Gujarat in India, she depends on the connection with her husband and his good friend to get the saris from Gujarat. Both of these links are based on strong emotional bonds which are indicators of strong ties. This sari seller gets her market information from family, friends and customers which she has strong emotional ties with. The strong tie with customers is based on serving her base of 50 customers for at least 5 years. She depends on the strong ties with BWDA, her self-help group and her family and the link through her husband to his friend in Gujarat to help get more customers.

Granovetter (1983) showed how the poor often rely on strong ties. If the sari sellers are depending on mostly strong ties, then Burt predicts that they are surrounded by structural holes. A structural hole is a gap between nodes in a network that represent lost opportunity. This will tend to lead to exploitation as the poor have few ties and options around these. This research has found what appears to be a number of structural holes within MFI's network. For example, a group of sari sellers in one part of town who do not buy saris together because they are competitors do not know that another group of sari sellers in another part of town have figured out how to buy in bulk together and still be competitors. There are sari sellers who want to open sari shops who do not know sari sellers not far away who operate sari shops. Almost all sari sellers buy the saris in large sari shops. They do not know about a sari seller who used to work in a large sari shop who could pass them the tricks of the trade. A lot of sari sellers want training but do not know that there are two of them who want to train them.

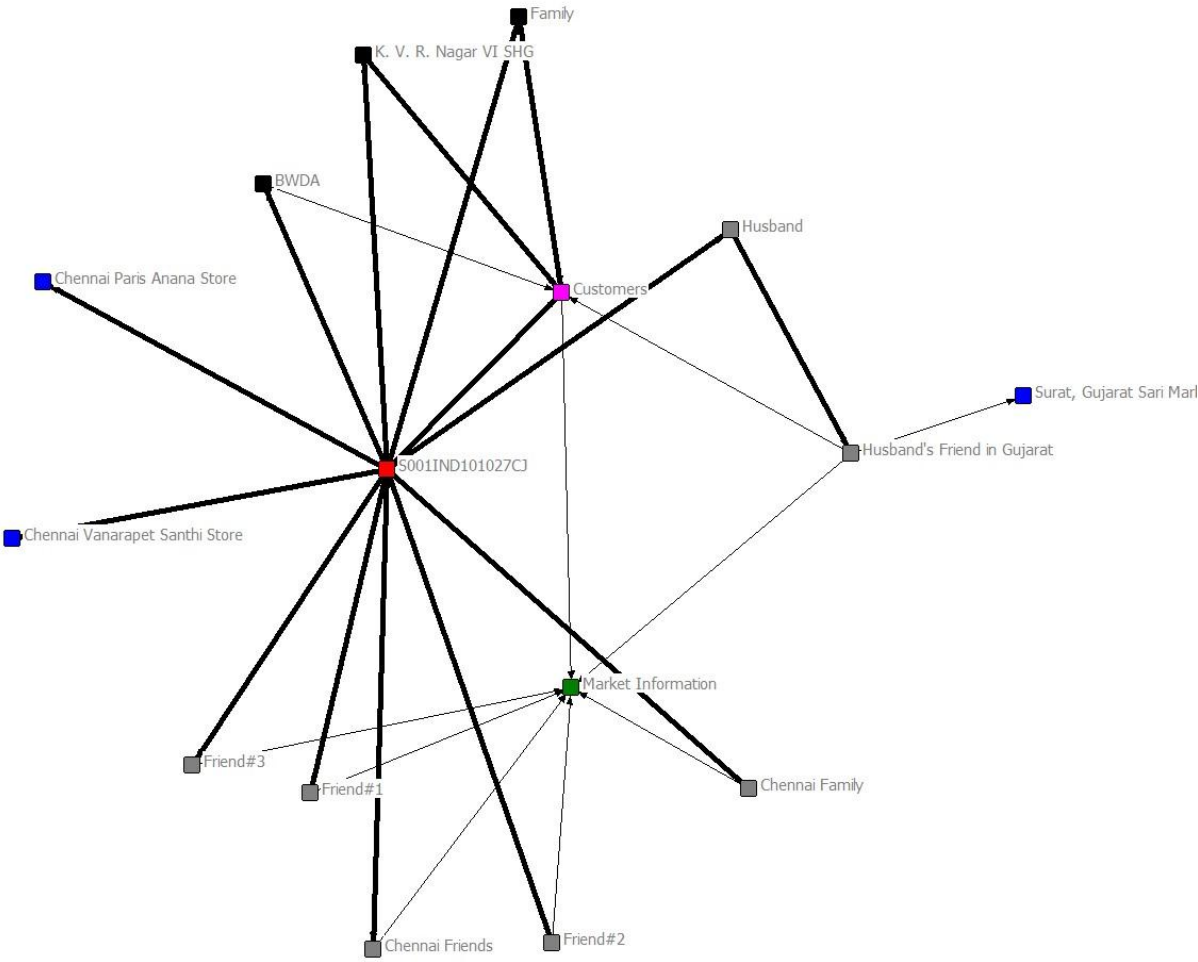

Figure 9

Strong and Weak Ties in a Sari Seller Ego Network

Red=Sari Seller Black=Financial Sources Blue=Suppliers Grey=Other Contacts

Bold Lines=Strong Ties, Non-Bold Lines=Weak Ties

Other analysis was done on the sari seller ego networks. Table 15 breaks out the sari seller ego network data by jati. Besides all jati categories having on average more strong ties than weak ties, the sizes of the ego networks tend to be small after excluding individual customers. The effective size measure, which comes from Burt (1992), takes the number of alters or those not ego in an ego network and subtract the average degree of the alters not counting the connections to ego. This measures how well connected the alters are in an ego network. In general, the effective size is somewhat smaller than the number of alters indicating that these are not generally well connected networks. Another indication of this is the network density measure. This takes the number of links in a network and divides it by the total possible number of links. The densities range from 9% to 13% which indicates a number missing connections and structural holes. According to Burt (1992), this presents a brokerage opportunity but in the Indian context given the power distance it is unlikely that a poor sari seller will be able to, for example, broker between a major bank and a large sari shop in Chennai.

Jati	#	Avg. PPI	Avg. Ego Strong	Avg. Ego Weak	Avg. Density	Avg. Effsize
Hindu Brahmin	2	89	4.5	3	0.11235	7.4655
Chettiar	2	65.5	4	2	0.11805	5.9585
Hindu Raddiar	4	83.25	5	1.25	0.13083	6.2345
Yadava	4	73.5	7.5	2.75	0.098025	10.016
Hindu OC	2	76.5	4	3.5	0.1037	7.5
Avg. BC	26	73.19	4.61	2.59	0.1167	7.14
Avg. OBC	5	79.67	5.17	3.17	0.1040	8.2425
Avg. MBC	44	73.83	6.26	1.75	0.1069	7.7656
Avg. SC	7	64.125	4.75	1.625	0.1060	6.2588
Avg. Muslim	10	68.25	5.83	3	0.1075	8.6722

Table 15 – Sari Seller Ego Networks by Jati

Other analysis was done by category as shown in Table 16. Once again all categories have more strong ties than weak ties. Again, the network densities indicate that these ego networks are not very well interconnected. However, when comparing effective size against network size, all categories have effective sizes slightly smaller than the network size with one exception. That exception is the effective size for the ego networks of animators. This is significantly lower than the network size. This indicates that the alters in the ego networks of animators are much more interconnected than those of non-animators. This may be a result that because of their position, animators know more people who know each other than non-animators.

There were two other analyses done on the sari seller ego networks. First was the E – I Index test. The question to be answered is how much families took part in the ego networks of the sari sellers. UCINET was given a file which indicated whether or not an alter was a family member. The E – I Index calculation was done with index ranging from 1 to -1 with -1 indicating that the entire ego network consisted of family members. As can be seen in Table 16, the ego networks are dominated by non-family members. Shop owners used the fewest family members in their ego networks while sari sellers selling full time used the most family members.

The final analysis was done to see if there was any correlation with the shape of the network and any of the variables in Table 16. The shapes looked at were stars, simply modified stars, complex modified stars, two stars, boxes, diamonds and cliques. A clique is a network where all of the members are connected to every other member of the network. No significant correlations were found. See Appendix I – Sari Seller Network Shapes Comparison.

There was an attempt to measure closure within the SHG the sari seller by asking what percentage of time they spent socialising with each other, who they go to for advice on important matters and do they recommend the sari sellers to their friends. Because the meetings with the sari sellers took place when many SHG members were not available, the decision was taken to choose times the sari seller was available rather than the SHG. As a result of this decision, SHG closure data was not collected.

Type	#	Avg. PPI	Avg. Ego #Strong	Avg. Ego #Weak	Avg. Density	Avg. EffSize	#Saris Sold / Year	Avg. E-I Index	Size
Shop Owners	12	76.25	4.33	2.33	0.12	6.64	570.00	0.77	6.75
Full Time	53	70.23	5.38	2.26	0.11	7.47	706.23	0.64	7.66
Part Time	45	73.64	5.11	2.18	0.11	7.18	185.30	0.73	7.29
Urban	70	74.91	5.33	2.26	0.11	7.44	426.55	0.69	7.60
Suburban	22	71.86	5.82	1.77	0.11	7.45	676.67	0.74	7.59
Rural	19	61.68	4.11	2.58	0.12	6.61	444.21	0.65	6.74
Urban No SO & PT	36	73.69	5.47	2.36	0.11	7.64	570.28	0.63	7.86
Sub. No SO & PT	10	63.20	6.70	1.10	0.11	7.65	1164.00	0.65	7.80
Rural No SO & PT	9	56.22	4.22	2.89	0.12	6.98	577.78	0.63	7.11
Saris Only FT	15	68.33	6.00	2.53	0.10	8.34	1392.00	0.56	8.53
Saris & Maybe FT	19	70.63	5.95	2.79	0.10	8.57	1327.89	0.60	8.74
All Others	92	72.34	5.07	2.10	0.12	7.04	297.59	0.70	7.18
Animators	60	71.68	5.25	2.32	0.11	5.47	465.50	0.70	7.60
Non-Animators	51	72.47	5.18	2.10	0.11	7.16	501.54	0.66	7.27

Table 16 – Sari Seller Ego Network Data

7.5 Problems with Sari Seller Social Network Data

An analysis done by organisation revealed there was some serious problems with the network data collected during the second research field trip. What the analysis does is to see which organisations the sari sellers share. The more organisations a sari seller shares with other sari sellers, the more likely they have a personal connection with each other. In this way a hidden structure can be revealed. This analysis did not work because many of the sari sellers belonged to the same organisations and showed connections between sari sellers that were known not to be correct. For example, a number of SHGs all over the Tamil Nadu and Pondicherry used the State Bank of India. This did not mean that a sari seller in Villupuram who took a loan from the State Bank of India knew a sari seller who took a loan from the same bank in Cuddalore. It turns out that when identifying the nodes in their ego networks, persons and organisations were identified. This turned out to be comparing apples and oranges. What would be needed was network data that indicated the person the sari seller knew in these organisations. The person-to-person networks would provide much more solid network data.

7.6 Hypotheses to be Tested

The hypotheses below will be tested on the new person-to-person network data for two purposes. First is to verify that the key results of the second research trip are confirmed by the new improved network data. Second is to verify the need for weak bridging ties in the social networks of the sari sellers.

According to Granovetter (1983), the poor rely more on strong ties than weak ties. Granovetter posits that this is because of the level of insecurity experienced by the poor. Therefore, it is expected that the poor will have more strong ties than weak ties in their ego networks. This would confirm the results from the second research field trip. If the hypothesis is confirmed, the answer to the first research question is for the MFI to help introduce weak bridging ties to the social network of heir sari seller clients.

Hypothesis 1: The sari sellers will have more strong ties than weak ties in their ego networks.

Burt (1992) argues that the more non-redundant links in an ego network, the more structural holes this social network will have. The measure Burt uses to measure redundancy of ties is effective size. The higher the effective size, the more non-redundant ties there are in the ego network which implies an increasing number of structural holes. Burt's measure of efficiency divides the effective size by the number of alters in the ego network. This gives a rough percentage of the number of alters that have non-redundant ties to ego. The expectation is that their business based ego networks, unlike their family based ego networks, will have large percentage of non-redundant ties to their alters. If this hypothesis is confirmed, this would agree with the results from the second research filed trip where most sari sellers had the effective size of their social networks only slightly smaller than the size.

Hypothesis 2: An overwhelming majority of sari sellers will have efficiencies of least 0.60 (60%) indicating access to a significant number of structural holes.

Granovetter (1983) also posited that the reliance of the poor on strong ties will lead to fragmentation of their networks. This means that the removal of just one person from the combined network of all the ego networks at either the BWDA level or branch level could lead to a loss of access to information for the sari seller. If this hypothesis is confirmed, this would mean that the sari seller social network for the business is susceptible to fragmentation if key people leave the network. This would interrupt the flow of information to the sari seller. However, the introduction of weak bridging ties will strengthen the network and help prevent fragmentation.

Hypothesis 3: The maximum Girvan-Newman Q value will indicate the full and branch networks are highly fragmented.

7.7 Ego Networks Data Analysis

Of the 111 sari sellers interviewed in October 2010, 83 were interviewed in May 2011. The resulting ego networks were analysed to see if any patterns emerged. The two obvious findings were that the business networks of these sari sellers were small and reliant on strong ties. The average size the sari seller's business networks excluding customers was 6.18. The average number of strong ties in these networks was 3.88 and the average number of weak ties was 1.58. It is probable that the number of strong ties is higher. Some of those who collected the data put the alters at a constant distance from ego rather than a distance that indicated the true emotional closeness to ego. Some of these were corrected but there remain some uncorrected.

To illustrate how ties were analyzed using a diagram based on Kahn and Antonucci (1980), Figure 7 below will be used as an example. The six alters of the sari seller's business network are represented by dots. The lines between the dots represent relationships between the alters. The four alters in the light grey area very close to ego, represented by the white circle in the centre, are treated as strong ties since they are so emotionally close to ego. The alter in the dark grey area is a supplier and treated as a weak tie. The alter outside the dark grey circle is a local government minister. The sari seller identified him as someone who could help her sell a hypothetical Kanchipuram silk sari worth 25,000 rupees (around £340). Previously, the sari seller had shown photos of herself and this local government minister at several events. When asked why the local government minister was placed so far away, her reply was that in the latest elections, he was just voted out of office!

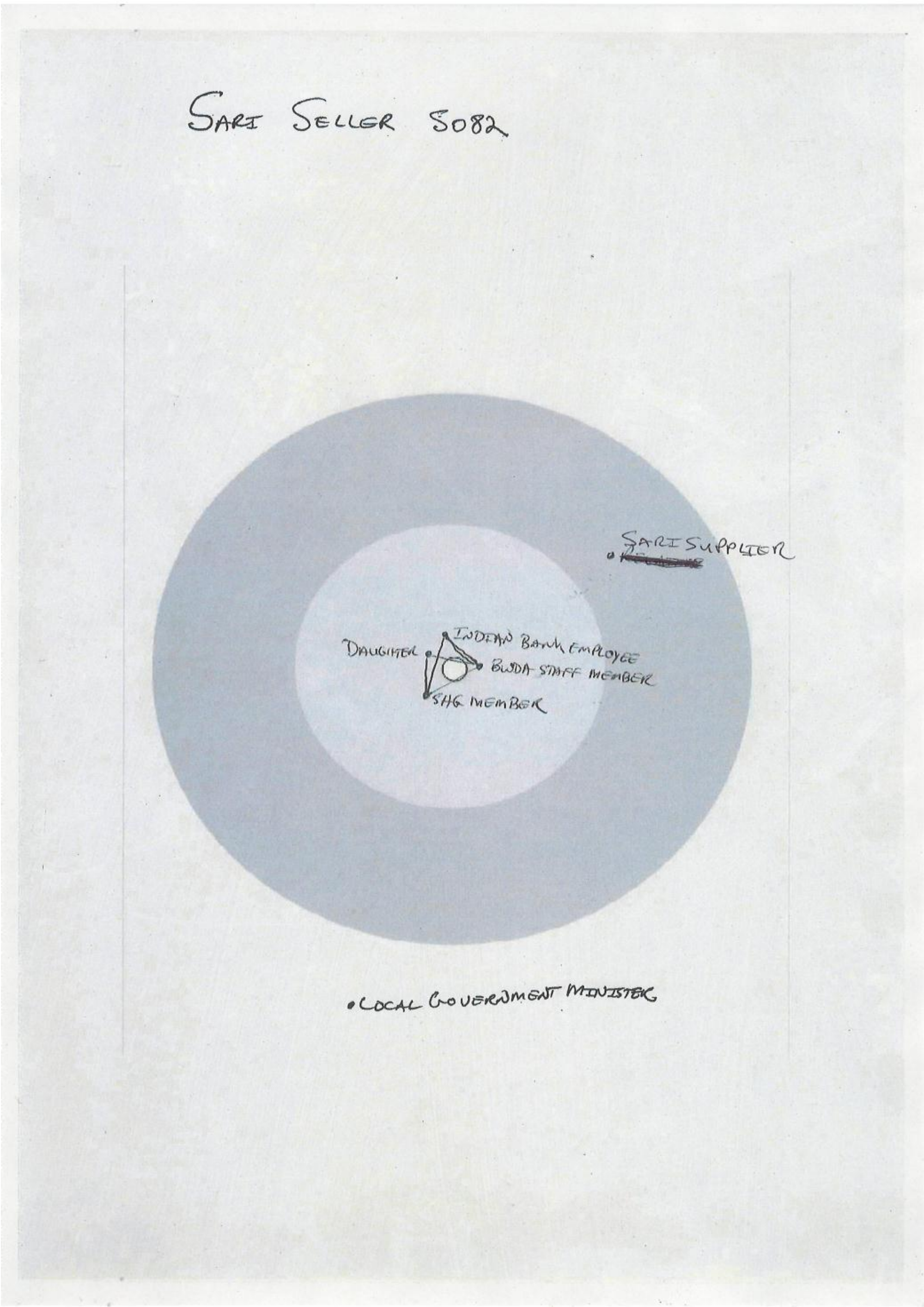

Figure 10 – Example of Network Data Collected on Third Research Field Trip

However, one must be careful to not always assume that every alter placed in the dark grey is a weak tie. There may be cases, for example, where a family member may be placed in the dark grey area but still be a strong tie especially if no other alters are placed closer.

Type	Sample#	PPI	Size	Ties	Density
Full Data	83	73.11	6.18	13.49	46.03

Table 17 – Averages for All Sari Sellers Part 1

Type	EgoBet	NEgoBet	EffSize	Efficiency	Constraint	Ego#Strong	Ego#Weak
Full Data	15.52	45.02	4.17	0.64	0.52	3.88	1.58

Table 18 – Averages for All Sari Sellers Part 2

Tables 17 and 18 show the average values for the 83 ego networks. PPI stands for the Progress Out of Poverty Index created by Grameen Foundation. The average PPI for the 83 sari sellers is 73.11. Appendix E holds the PPI Probability Table which shows the probabilities of someone with this PPI being below various poverty lines.

The PPI indicates there is a small probability that the sari sellers earn below $1.25/day, a large percentage of sari sellers are either earning between $1.50/day to $2.00/day or earning more than $2.00/day. This means that extra income earned could put the sari seller above the $2.00/day threshold or if already earning above $2.00/day, the extra income could provide an extra safety margin in case of financial shocks to the household.

In Table 17, the average size of 6.18 and average ties of 13.49 indicate that on average each sari seller has around 6 alters in their business networks with an additional 7 ties between the alters. However the average density of 46.00 indicates that these business networks have room for many more additional ties between the nodes of the networks. The density is the ratio of existing ties in the network to the total number of possible ties in the network.

In Table 18, Ego Betweeness (EgoBet) is ego's proportion of times ego lies on the shortest path between each pair of alters. The more often ego is the only way to connect the alters, the higher the ego betweeness score. The more interconnected the alters are, the lower the ego betweeness score. The normalised ego betweeness score (NegoBet) is normalised by a function of the number of nodes in the ego network. Both of these averages will be used as a baseline to compare the different categories of ego networks.

Effective Size (EffSize), Efficiency and Constraint comes from the structural hole calculations. Effective size is an indication of how interconnected an ego network is. The more interconnected the network is, the smaller the effective size. An effective size equal to the size of the network indicates that none of the alters are connected to each other which means all ties are non-redundant. Efficiency is the effective size divided by the number of alters in ego's network. Constraint indicates how much a person's network inhibits that person in reaching others in the broader network (Valente, 2010 pg. 56). This based on a theory of Burt's (1992, pg. 55) where he posits that the more interconnected the network, the more constrained ego is because the alters can collude to keep information from ego. These three average values will also be used as a baseline to compare different categories of ego networks.

Finally, on average, the sari sellers have over twice the number of strong ties than weak ties. This is an indication that there is reliance by the sari sellers on strong ties. This data supports Hypothesis 1. The average efficiency of 0.64 indicates that roughly 64% of the ties to alters are non-redundant which signifies that these sari sellers do have access to structural holes. This supports Hypothesis 2.

7.8 Comparison of Ego Networks Data Analysis

Below are the comparisons among different categories of sari sellers. The categories are either by location (Urban, suburban, rural) or by time commitment (Shop Owner, Full Time, Part Time). Urban areas include cities and towns such as Villupuram, Pondicherry, Tindivanam and Cuddalore. Rural indicates agricultural areas dedicated to farming and livestock. For the purposes of this research, suburban refers to towns along the major roads in the area that are outside of urban areas but are not rural such as Koliyanur, Viliyanur and Madagadipet. For the time commitment categories, shop owner indicates a sari seller who owns a shop that sells saris. Full time sari seller indicates that there is no indication that she has any other job or source of income besides selling saris. Part time sari sellers do have a job or other source of income besides sari selling.

Type	Sample#	PPI	Size	Ties	Density
Urban	49	74.88	6.82	16.51	45.36
Suburban	15	74.93	5.53	9.53	49.03
Rural	13	63.00	5.54	8.77	35.17

Table 19 – Urban, Suburban and Rural Ego Network Comparison Part I

Type	EgoBet	NegoBet	EffSize	Efficiency	Constraint	Ego#Strong	Ego#Weak
Urban	19.98	45.15	4.59	0.64	0.51	3.94	2.14
Suburban	8.82	43.10	3.72	0.62	0.52	4.00	0.87
Rural	13.36	60.53	4.04	0.72	0.48	3.08	1.92

Table 20 – Urban, Suburban and Rural Ego Network Comparison Part II

In Tables 19 and 20, are the comparisons between the urban, suburban and rural sari sellers. The striking thing is the urban/rural divide that shows up in the data. A number of commentators, such as Harper (2010, pgs. 1 - 15), have remarked on the urban/rural divide in India. First, in Table 19, there are more sari sellers in the urban areas than in the suburban or rural areas combined. Most striking is the difference in the PPI between urban, suburban and rural areas. The PPI score for suburban and rural are very close to 75. This means that there could be almost a 28% difference on average in the probability between an urban/suburban sari seller living below \$2.00/day and a rural sari seller. Urban sari sellers have one more person in their business networks than their suburban or rural counterparts. However, urban sari sellers have on average 10 ties between their alters versus 4 for suburban sari sellers. This is probably because the urban sari sellers have access to more possible network contacts than their suburban or rural counterparts. The average density of the urban sari seller's networks is slightly smaller than the suburban ones mainly because the suburban networks are smaller than the urban ones. But, the average rural network is significantly less dense than either urban or suburban. If theory is correct, there could be a significant impact on the rural sari seller's PPI scores if their business networks become larger and denser especially with the addition of weak bridging ties.

In Table 20, urban and suburban sari sellers have almost the same number of strong ties. However, urban sari sellers have twice the number of weak ties on average than the suburban sari sellers which could be related to urban sari sellers having access to more possible network contacts. Rural sari sellers have one less strong tie compared to their urban and suburban but just somewhat smaller of weak ties compared to their urban counterparts. It is clear that the rural sari sellers do not seem to benefit from this extra weak tie as evidenced by the average PPI score but it is not clear why this is so from the data. It could be the overall smaller network sizes for rural sari sellers or the lack of access to more possible network contacts. It may be that their urban counterparts have a wider choice of weak ties and can connect to weak ties that have more bridging opportunities than the rural sari sellers can. The ego betweeness values confirm that the urban sari sellers have bigger and more interconnected networks putting them more at the centre than their suburban and rural counterparts. The surprise is that suburban sari sellers ego betweeness is so small. But, the normalised ego betweeness values show that size difference of the networks is a factor. The normalised ego betweeness is normalised as a function of the number of nodes. This value shows that the suburban sari sellers are almost as central as their urban counterparts but that rural sari sellers are shown to be even more central in their networks. By comparing the effective size against size, an indication of how interconnected the networks is achieved.

The bigger the difference between size and effective size, the more interconnected the network is. Urban sari sellers have the biggest difference of 2.23 followed by the suburban difference of 1.81 and the rural one of 1.5. The wider access to network contacts and the urban sari seller's propensity to connect to people who already know each other explains the larger difference for them between size and effective size. There is little difference between efficiency and constraint values. Even if there were significant differences in the constraint values, it is not clear if Burt's (1992, pg. 54) theory that the more interconnected the network, the more constrained ego is because the alters can collude to keep information from ego which results in ego not reaching out of the network is a valid explanation in the context of Tamil Nadu. Since all but a few of the original sari sellers are low caste women, the social context may be a better explanation for ego not getting information.

For the urban, suburban and rural sari sellers, all of them have more strong ties than weak ties, which support Hypothesis 1. They have efficiencies ranging from 0.62 to 0.72 indicating they have access to structural holes. This supports Hypothesis 2.

Type	Sample#	PPI	Size	Ties	Density
Shop Owners	9	79.56	5.89	11.00	51.00
Full Time	34	71.88	6.56	15.29	40.57
Part Time	35	73.97	6.31	12.94	44.89

Table 21 – Ego Network Comparison by Sari Seller Role Part I

Type	EgoBet	NegoBet	EffSize	Efficiency	Constraint	Ego#Strong	Ego#Weak
Shop Owners	13.65	44.14	3.97	0.61	0.56	2.33	3.17
Full Time	14.90	49.85	4.45	0.67	0.46	4.65	1.19
Part Time	19.35	47.55	4.40	0.65	0.52	3.33	2.03

Table 22 – Ego Network Comparison by Sari Seller Role Part II

Tables 21 and 22 are comparisons between part time sari sellers, full time sari sellers and sari sellers who own shops. The most interesting findings involve the shop owners. They have the highest PPI score and network density. The average PPI score is almost 80 which means that a number shop owners will have a low probability of earning below $2.00/day. But, they have the smallest network among the three, the lowest betweeness, and the least interconnected network but are the only category of sari sellers who have more weak ties than strong ties. The question is, are these weak ties weak bridging ties? Of the nine shop owners, there is evidence for 6 of them that these are weak bridging ties. Sari seller#11 gets market information through her weak tie. Sari seller#19 and sari seller#75 have suppliers as weak ties who would considerable information about the sari business and therefore could act as bridges. Sari seller#70 has a moneylender as a weak tie. Moneylenders traditionally know a lot of information about the neighbours and can serve as a weak bridging tie to information about potential customers. Sari seller#10 and sari seller#21 have BWDA as weak ties and it is possible that useful information may pass through this tie. This is evidence that could show that weak bridging ties are being used by the shop owners in a way that brings new information to them that could help them to improve their businesses which increases their PPI score compared to the other sari sellers. Unfortunately there is no direct, reliable data on the performance of their businesses to confirm this. The weak ties for the shop owners tend to be either financial sources (moneylenders or pawnbrokers) or suppliers.

On the one hand, full time sari sellers have the biggest and most interconnected networks of the three categories of sari sellers which show in the full time sari sellers having the biggest difference between size and effective size. But, full time sari sellers tend to have lowest density networks and seem not to be as central in their networks as part time sari sellers as evidenced by the ego betweeness values. However, when normalised by the number of nodes, full time sari sellers betweeness centrality is slightly higher than the part time sari sellers. The most significant difference between the full time and part time sari sellers is the number of strong and weak ties they have in their networks. As shown in Table 22, full time sari sellers have four strong ties in their networks while having only one weak tie. Part time sari sellers have a three-to-two ratio of strong to weak ties instead. This indicates that adding weak bridging ties to the networks of the full time sari sellers could have a significant impact.

Both the full time and part time sari sellers have more strong ties than weak ties, which supports Hypothesis 1. The shop owning sari sellers have more weak ties than strong ties which does not support Hypothesis 1. All three categories have efficiencies ranging from 0.61 to 0.67 indicating they have access to structural holes. This supports Hypothesis 2.

Type	Sample#	PPI	Size	Ties	Density
Animators	48	74.54	6.40	13.46	45.76
Non-Animators	53	71.14	5.89	13.54	46.41

Table 23 – Ego Networks Comparison by SHG Role Part I

Type	EgoBet	NegoBet	EffSize	Efficiency	Constraint	Ego#Strong	Ego#Weak
Animators	16.18	45.39	4.43	0.65	0.51	3.70	1.80
Non-Animators	14.62	44.50	3.82	0.64	0.52	4.09	1.32

Table 24 – Ego Networks Comparison by SHG Role Part II

Despite being only 5% of the overall population of BWDA clients, animators (SHG leaders) make up over 54% of the sari seller population in the third research field trip. The purpose of this comparison is to see if there is any significant difference between sari sellers who are animators and those who are not. Animators have a slightly higher PPI score than Non-Animators but both range of poverty probabilities (see Table 23). Animators have somewhat bigger networks than Non-Animators but have slightly smaller density and number of ties. Animators have a markedly higher centrality betweeness but this disappears when normalised. Non-Animator ego networks are more interconnected than the ones for the Animators based on the effective size. Based on the difference between the number of strong and weak ties in their ego networks, Animators are less reliant on strong ties than Non-Animators.

Both Animators and Non-Animators sari sellers have more strong ties than weak ties, which supports Hypothesis 1. Both categories have efficiencies ranging from 0.64 to 0.65 indicating they have access to structural holes. This supports Hypothesis 2.

7.9 Comparing Category Data against the Full Data Set

When comparing the averages in Table 17 and 18 to the values in Tables 19, 20, 21, 22, 23 and 24, two things stand out. Rural sari sellers have significantly lower PPI scores and smaller network sizes, number of ties, network density and number of strong ties. The only place where the rural sari sellers greatly exceeded the average is in the normalised ego betweeness which indicates the rural sari sellers are very central to their networks, despite being smaller, when normalised for the number of nodes. This may indicate that the rural sari sellers require more general support in building their overall business networks and not just in the addition of weak bridging ties. Full time sari sellers and especially suburban sari sellers have significantly smaller number of weak ties in their networks than the overall average. This may indicate that adding weak bridging ties to their business networks may have a significant impact. The key would be finding effective mechanisms for doing so.

7.10 Caste Categories

Caste is one of the most important social features of India. The data has been analysed to see what impact caste has on the business networks of the sari sellers. The caste designators are the ones used by the sari sellers themselves are in common usage in Tamil Nadu.

Type	PPI	Size	Ties	Density	EgoBet	NEgoBet
Labbay Muslim	88.25	4.25	11.00	70.00	0.73	12.09
Muslim	47.67	6.00	8.00	14.07	15.17	84.26
Muslim Sheikh	70.50	4.50	11.00	65.00	1.25	19.17
Muslim Average	**70.78**	**4.89**	**10.00**	**50.25**	**5.66**	**37.72**

Table 25 – Ego Networks Comparison by Muslim Jatis Part I

Type	EffSize	Efficiency	Constraint	Ego#Strong	Ego#Weak
Labbay Muslim	2.17	0.50	0.68	4.00	0.25
Muslim	5.07	0.88	0.31	4.67	0.00
Muslim Sheikh	2.15	0.49	0.63	4.50	0.00
Muslim Average	**3.13**	**0.63**	**0.55**	**4.33**	**0.11**

Table 26 – Ego Networks Comparison by Muslim Jatis Part II

Caste is such an essential part of the social structure in India it seems to permeate everything. Unlike Hinduism, Islam does not have caste system but Muslim sari sellers were easily able to answer the question of what jati they belonged to. Comparing the averages for the Muslim sari sellers in Tables 25 and 26 to the averages for all 83 sari sellers in Tables 17 and 18, the Muslim sari sellers had more strong ties, slightly more constraint and a denser network. In all other areas, the Muslim sari sellers were smaller. However, the most interesting differences are among the Muslim jatis. These sari sellers, who call themselves just Muslim, stand from those in the Labbay Muslim and Muslim Sheikh jatis. Compared to Labbay Muslims, who have only a 12.9% probability of living on US$2.00/day, the Muslim sari sellers have a 79% probability of living on US$2.00/day (see Appendix E). Muslims have a slightly bigger network size than the Labbay Muslims and the Muslim Sheikhs. However, the alters of the Muslim networks are not as well interconnected as those of the Labbay Muslims and Muslim Sheikhs which explains why the effective size of the Labbay Muslim and Muslim Sheikh networks are much smaller. As a result, the network density of the Muslim sari seller networks is much smaller on average than those of the Labbay Muslims and Muslim Sheikhs. All three Muslim jatis are extremely reliant on strong ties and all three have almost no weak ties in their networks. Compared to the Labbay Muslim and Muslim Sheikh sari sellers, the Muslim sari sellers have a relatively low constraint value. According to Burt's argument (1992, pg. 54), those with low constraint values are less inhibited by their network connections to form ties that will bring information from the outside. This is in the context of a network inside U.S. multinationals, banks and law firms constrains the entrepreneurial opportunities where a large amount of time and energy to reach the network and the network is surrounded by few structural holes that provides the leverage to negotiate a favourable return on investment. However, this is not happening for these sari sellers. They have no weak ties in their networks which would indicate a bridge where information can travel over. All three Muslim women mentioned they were uncomfortable operating outside of their Muslim community in Villupuram. Their business networks have been shaped around the contours of the social context they live in and that is acting as the major constraint. These sari sellers did not have to expend a lot of time and energy to reach this network. In this case, the constraint factor for the business networks of the Muslim sari sellers does not indicate much as the social context and social network of the Muslim community in Villupuram is a much more important factor in how their business networks are shaped.

All the Muslim sari sellers have more strong ties than weak ties, which supports Hypothesis 1. Both Labbay Muslims and Muslim Sheikhs have efficiencies ranging from 0.49 to 0.50 indicating they have below average access to structural holes. This does not support Hypothesis 2. The sari sellers that simply identify themselves as Muslim have one of the highest efficiencies at 0.88 that indicates significant access to structural holes that supports Hypothesis 2.

Type	PPI	Size	Ties	Density	EgoBet	NEgoBet
Hindu Brahmin Average	**89.00**	**7.00**	**7.00**	**15.60**	**16.75**	**79.17**

Table 27 – Hindu Brahmin Ego Networks Data Part I

Type	EffSize	Efficiency	Constraint	Ego#Strong	Ego#Weak
Hindu Brahmin Average	**6.04**	**0.87**	**0.34**	**2.00**	**3.00**

Table 28 – Hindu Brahmin Ego Networks Data Part II

The Brahmin sari sellers have a well above average PPI score that indicates a low probability of living on US$2.00/day. Their average network size is slightly larger than the average for the 83 sari sellers but they have smaller than average number of ties, network density and a relatively high effective size due to the low level of interconnectedness in the networks. Brahmins were among one of four jatis where they had more weak ties than strong in their business networks. One may expected them to have networks that are more robust. However, it may be that these sari sellers depend on unreported Brahmin networks to support their sari business. One of the Brahmin sari sellers told that her brother owns a lorry business with 17 trucks. Whenever she needed to buy saris from Surat in the state of Gujarat, her brother would arrange for his lorries to bring the saris back from Gujarat. If his trucks were not available, he would use his contacts to see if others in the lorry business could carry the saris. This access to Brahmin networks and being significantly better off than most of the other sari sellers may explain why these Brahmin sari sellers do not suffer the insecurity that Granovetter (1983) says drive the poor towards strong ties.

The Brahmin sari sellers have more weak ties than strong ties, which does not support Hypothesis 1. They also have an efficiency of 0.87, which indicates significant access to structural holes and supports Hypothesis 2.

Type	PPI	Size	Ties	Density	EgoBet	NEgoBet
Hindu Agamuthalier	**56.00**	**10.00**	**32.00**	**35.56**	**29.00**	**64.44**
Hindu Vathavar	**71.00**	**10.00**	**31.00**	**34.44**	**58.33**	**64.81**
Hindu Komudur	**24.00**	**7.00**	**14.00**	**33.33**	**14.00**	**66.67**

Table 29 – Ego Networks Comparison of Three Jatis Part I

Type	EffSize	Efficiency	Constraint	Ego#Strong	Ego#Weak
Hindu Agamuthalier	**6.80**	**0.68**	**0.33**	**4.00**	**6.00**
Hindu Vathavar	**6.90**	**0.69**	**0.33**	**0.00**	**10.00**
Hindu Komudur	**5.00**	**0.71**	**0.36**	**2.00**	**4.00**

Table 30 – Ego Networks Comparison for Three Jatis Part II

There are 7 jatis that have only 1 sari seller in it. The three highlighted above are ones where the sari seller had more weak ties than strong ties. For the Hindu Agamuthalier sari seller, four of the weak ties are to BWDA staff in the Villupuram branch office. Unlike most other sari sellers, she saw BWDA staff as weak rather than strong ties. The Hindu Vathavar sari seller ten weak ties is probably a mistake. The person who recorded her ties put all of the alters just beyond the boundary defining weak and strong no matter close they were to ego. The most interesting case is that of the Hindu Komudur sari seller. Two of her weak ties were suppliers while the other two were BWDA staff. Two other BWDA staff members were identified as strong ties. What makes this so interesting is that at a PPI score of 24, she is the poorest of the sari sellers interviewed. She has a 98% probability of living on US$2.00/day. So why does the poorest sari seller have more weak ties than strong ties when such poverty is expected to generate an insecurity that leads to a reliance on strong ties? She does have a contract with the state government of Tamil Nadu to stitch uniforms that may give her enough security to allow her to depend on weak ties.

All three castes have more weak ties than strong ties, which does not support Hypothesis 1. The three castes have efficiencies that range from 0.68 to 0.71, which indicates access to structural holes. This supports Hypothesis 2.

Type	PPI	Size	Ties	Density	EgoBet	NEgoBet
Hindu Reddiar Average	**83.25**	**6.25**	**9.00**	**39.82**	**12.25**	**56.61**
Hindu OC Average	**76.50**	**5.50**	**9.00**	**27.39**	**7.09**	**63.49**
BC Average	**74.82**	**7.09**	**15.91**	**38.16**	**22.93**	**53.09**
OBC Average	**82.33**	**4.67**	**12.00**	**71.11**	**1.05**	**11.30**
MBC Average	**71.58**	**5.97**	**13.94**	**52.24**	**15.47**	**37.88**

Table 31 – Ego Networks Comparison for Five Jatis Part I

Type	EffSize	Efficiency	Constraint	Ego#Strong	Ego#Weak
Hindu Reddiar Average	**4.63**	**0.69**	**0.56**	**3.00**	**1.67**
Hindu OC Average	**4.11**	**0.77**	**0.46**	**3.00**	**3.00**
BC Average	**5.12**	**0.69**	**0.46**	**4.16**	**1.89**
OBC Average	**2.10**	**0.45**	**0.69**	**4.33**	**0.33**
MBC Average	**3.81**	**0.60**	**0.56**	**3.79**	**1.61**

Table 32 – Ego Networks Comparison for Five Jatis Part II

The Reddiar jati are landowners and rent collectors (Sinniah, 2010). Other Category (OC), Backward Caste (BC), Other Backward Caste (OBC) and Most Backward Caste (MBC) are categorisations of castes created by the Indian government (Kishor,2011). Other category is mainly comprised of three of the highest classes in the Varna system, which are the Brahmins, Kshatriyas and Vaishyas. Backward castes are deemed to be from the economically and backward classes of the society. Other backward castes, consisting around 30% of the population of India, are considered similar to scheduled tribes. These are tribes that have traditionally lived in the forests, making up 7 – 8% of Indian population. They have traditionally been marginalized and not in the mainstream of the society. Most backward castes are the ones considered by the Indian government the most economically and socially deprived (Kishor, 2011).

Tables 31 and 32 hold the data for the castes discussed above. Except for the MBC, the other caste groups have above average PPI scores. The MBC PPI score is just below average. OBC sari sellers networks on average are significantly above the average for all sari sellers. Only the OBC and MBC sari sellers have network densities that are above average. The MBC sari sellers above average network density is due to slightly higher than average network connectivity. The OBC sari sellers above average density is due to its relatively small network size. With exception of the Hindu OC sari sellers, the rest have more strong ties than weak ties. Since Hindu OC includes the higher order castes, these sari sellers may have more access to weak ties for the reasons discussed above.

With the exception of Hindu Other Castes (OC), the other four castes have more strong ties than weak ones, which support Hypothesis 1. The support of the Hindu OC data for Hypothesis 1 is inconclusive. With the exception of Hindu Other Backward Castes (OBC), the remaining castes have efficiencies ranging from 0.60 to 0.77 indicating access to structural holes and supports Hypothesis 2. The Hindu OBC sari sellers have an efficiency of 0.45, which indicates a much lower access to structural holes. The reason for this is that the Hindu OBC sari sellers have a relatively high network density of 71.11 indicating there are relatively few non-redundant ties.

Type	PPI	Size	Ties	Density	EgoBet	NEgoBet
Dalit	**57.00**	**5.00**	**12.00**	**60.00**	**4.00**	**40.00**
Hindu SC	**84.50**	**5.00**	**16.50**	**82.50**	**1.59**	**7.92**
Dalit & Hindu SC Average	**75.33**	**5.00**	**15.00**	**75.00**	**2.39**	**18.61**

Table 33 – Ego Networks Comparison for Scheduled Castes Part I

Type	EffSize	Efficiency	Constraint	Ego#Strong	Ego#Weak
Dalit	**2.60**	**0.52**	**0.53**	**5.00**	**0.00**
Hindu SC	**1.70**	**0.34**	**0.70**	**5.00**	**0.00**
Dalit & Hindu SC Average	**2.00**	**0.40**	**0.65**	**5.00**	**0.00**

Table 34 – Ego Networks Comparison for Scheduled Castes Part II

Hindu Scheduled Castes (SC) are the castes that were in earlier times considered as untouchables comprising 16-17% of the total population of the country (Kishor, 2011). Originally the untouchables were considered below the caste system. Today the untouchables are called Dalits. While the Dalit sari seller has a PPI score of 57 giving her a 69.9% probability of living below the US$2.00/day poverty line, the two Hindu SC sari sellers have an average PPI score of 84.50 giving them only a 15.5% probability of living below the US$2.00/day poverty line. They all have smaller than average effective sizes and larger than average network densities due to the network connectivity. What stands out is that none of these sari sellers have any weak ties in their ego networks. These sari sellers are at the bottom of the pyramid in India and the lack of weak ties supports the argument Granovetter (1983) made about insecurity being the reason the poor are reliant on strong ties. While the Hindu SC sari sellers may not be as relatively poor as the Dalit sari seller, the insecurity associated with being at the bottom may be enough to induce the reliance on strong ties.

Each caste has no weak ties, which supports Hypothesis 1. For these castes, the efficiencies range from 0.34 to 0.52, which does not support Hypothesis 2. The reason the Hindu Scheduled Caste (SC) sari sellers have a network efficiency of 0.34 is because of their very high network density of 82.50 which indicates there are very few non-redundant ties in their networks and therefore, little access to structural holes.

7.11 Summary of Category Support for Hypotheses 1 and 2

There were twenty-two categories analysed overall. Of these, sixteen categories supported Hypothesis 1, five did not support Hypothesis 1 and one category was inconclusive. Similarly, seventeen categories supported Hypothesis 2 and five categories did not support Hypothesis 2. In general, Hypotheses 1 and 2 found support in the ego network data with some exceptions.

7.12 Discussion on Access to Structural Holes

The data shows that most of the sari sellers have access to structural holes in their ego networks. However, to get the benefit of this, one must either build a weak bridging tie to access non-redundant information or use the access to this non-redundant information to create a brokerage opportunity. The sari sellers do not seem to be doing either. They do not seem to recognise the opportunity that natural networks in their lives present. For example, two sari sellers have husbands who work for the Indian Railways. They both work at Villupuram Junction, which is a major station on the main line from Chennai to Madurai in Tamil Nadu. This social network of the southern railway of Indian Railways offers potential connections to thousands of employees who will know people who want to buy saris. However, the sari sellers have never explored this. The strong closure evident in all the ego networks studied explains why the sari sellers did not explore this depending instead on the strong ties that generated the closure. It is important to remember the social context in which Burt (1992) did his research. This is among managers of big American banks and high technology firms where managers can easily create weak ties, identify, and take advantage of the structural holes around them. There is a very different social context operating in Tamil Nadu especially among poor sari sellers. The biggest difference between these two social contexts is the stronger and more rigid social hierarchy in Tamil Nadu. Unlike the low power distance countries like the United States (Hofstede and Hofstede, 2005), where building weak bridging ties is much easier, the poor sari seller in Tamil Nadu will often need to build weak bridging ties to those higher in the social hierarchy. The power distance between the sari seller and the alter makes building a weak bridging tie more difficult. The power distance between the sari seller and the alter means that the presence of a non-redundant tie does not automatically offer the sari seller a brokerage opportunity. Therefore, the data and the social context indicates that sari sellers will need help in accessing the potential of structural holes to bring them the non-redundant information needed to improve their businesses.

7.13 Full Network Data Analysis

By using the connections between the BWDA staff members, a whole network can be created from all the ego networks of the sari sellers. The perspective of this whole network is from the bottom up or that of the sari sellers. If the network is created from a top down perspective, it is very likely a very different network would emerge.

When the ego networks are combined into a whole network (see Figure 8 below), it is shown that this network is fragmented and contains a number of structural holes. The major indication of fragmentation is that there are no ties between branches accept through BWDA head office in the network. In reality, there are ties between the branch staff but there are none from the perspective of the sari sellers. In this way, the full network resembles command and control structures where the silos join at the top. However, at the level of the sari sellers, the reality is that there are almost no ties between sari sellers of different branches. Weak ties should be able to bridge the structural holes and help stabilise the network. Looking at the network diagrams, it is easy to visualise the various places where the network could be fragmented.

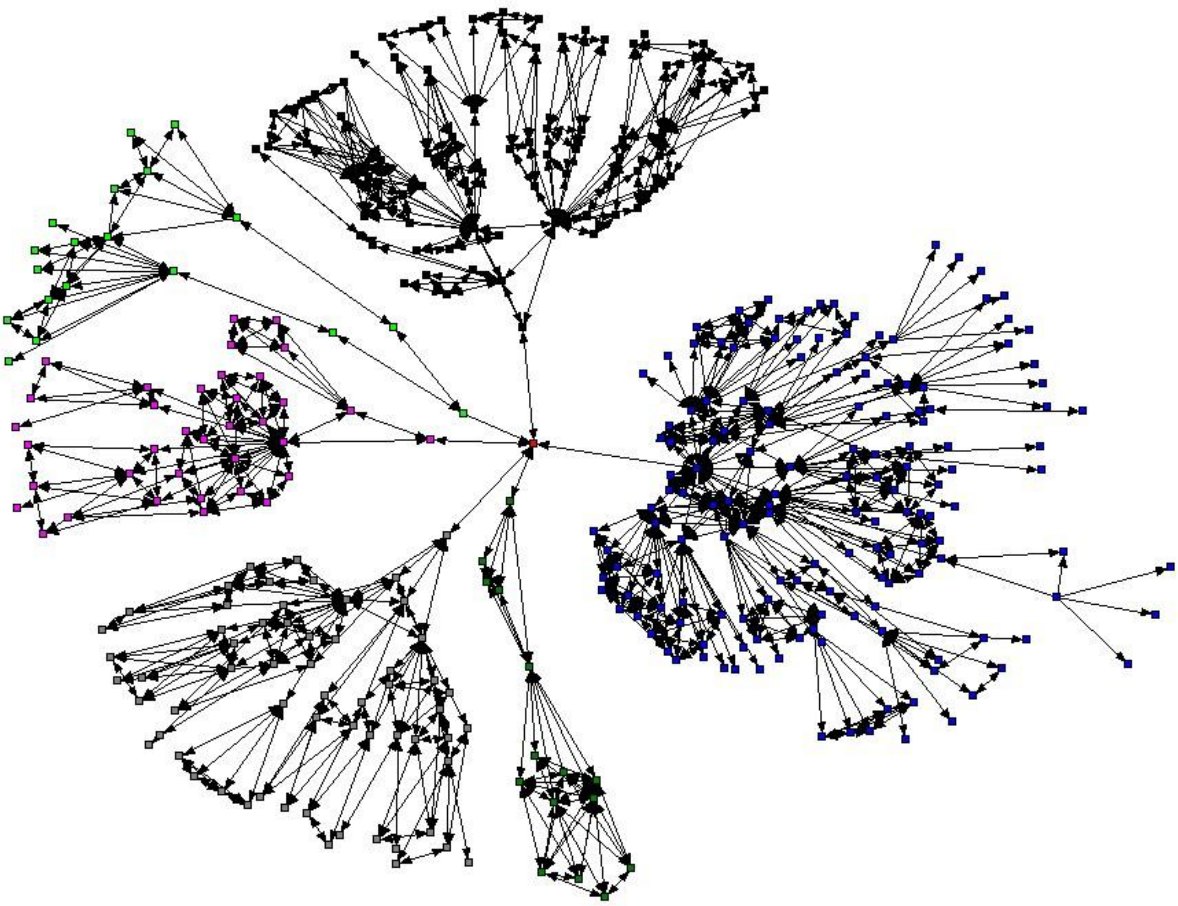

Figure 11 – BWDA Full Sari Network Coloured by Branches

The data indicate that the sari seller's networks are small and that they rely on strong ties. The average size the sari seller's business networks excluding customers was 6.18. The average number of strong ties in these networks was 3.88 and the average number of weak ties was 1.58.

Centrality is an important concept in social network analysis. This is because people occupying the central positions in networks often occupy important positions of prestige and visibility and may be influential in the spread of ideas and behaviours (Valente, 2010). Network analysts have developed numerous ways to measure centrality (Borgatti and Everett, 2006). The analysis of the whole networks will focus on three types of centrality; degree, betweeness (Freeman, 1979) and eigenvector centrality (Bonacich, 1987). Degree centrality is a measure of the number of links connecting a node. Betweeness centrality measures the frequency a person lies on the shortest path connecting everyone else in the network. Eigenvector centrality of a node is a measure of the centrality of its neighbouring nodes. It is important to note that each centrality can produce a different set of central players.

The senior manager of Villupuram Branches 1 and 2 is the only person in the BWDA Full Sari Group that shows up as a central player in all three types of centrality. He is the manager of the largest subgroup in the network, the one with the most interconnections and he is senior manager with the most direct connections to the sari sellers in his branch. This is why he has the highest degree centrality in the network. He shows up in red in the Figure 9 below.

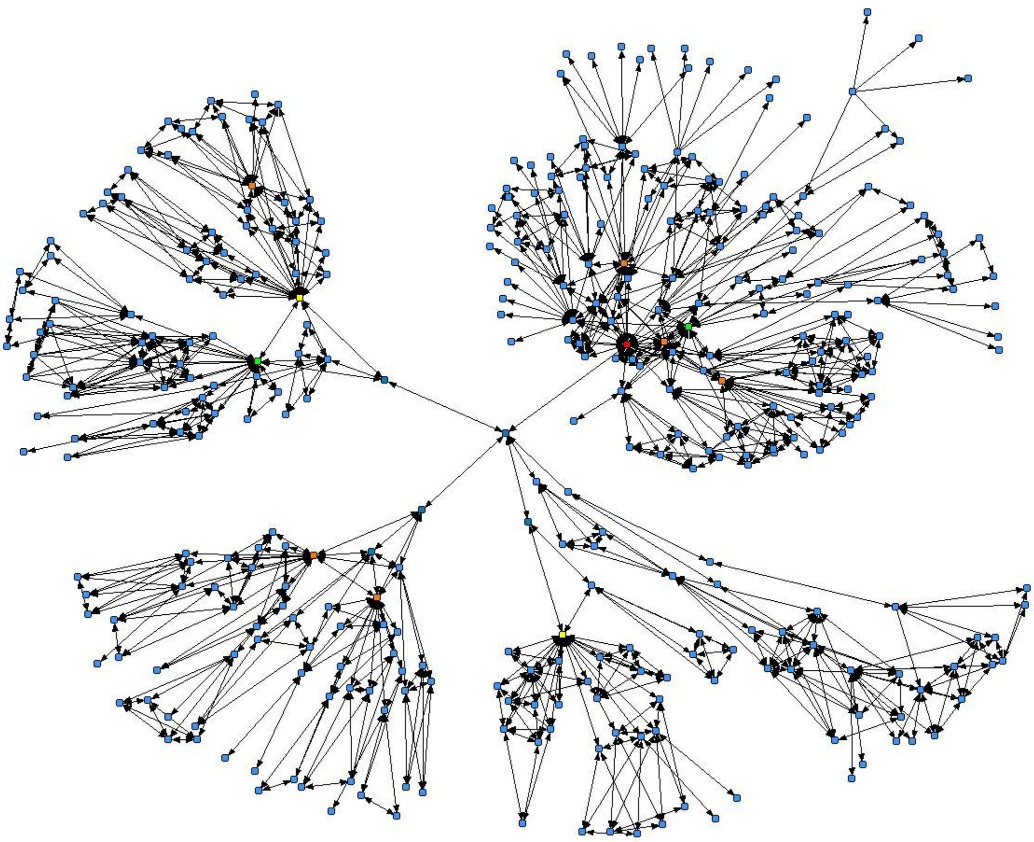

Figure 12 – BWDA Full Sari Group by Degree Centrality

Red=7<C, Yellow=6<C<7, Green=5<C<6, Orange=4<C<5

These interconnections are why Villupuram has five central players with high degree centrality where as the most any other branch has is three. This may make it easier to develop weak bridging ties within the Villupuram branches than in the other branches.

Another reason the Villupuram branches may be able to develop weak bridging ties within themselves is the high degree of eigenvector centrality. Figure 10 below shows how all of the nodes in the network with a high degree of eigenvector centrality are in the Villupuram branches. This shows that all of the nodes in colour are connected to nodes that have high centrality. The senior manager of Villupuram Branches 1 and 2 has the highest eigenvector centrality score because he has high degree centrality connected to nodes that have high centrality themselves.

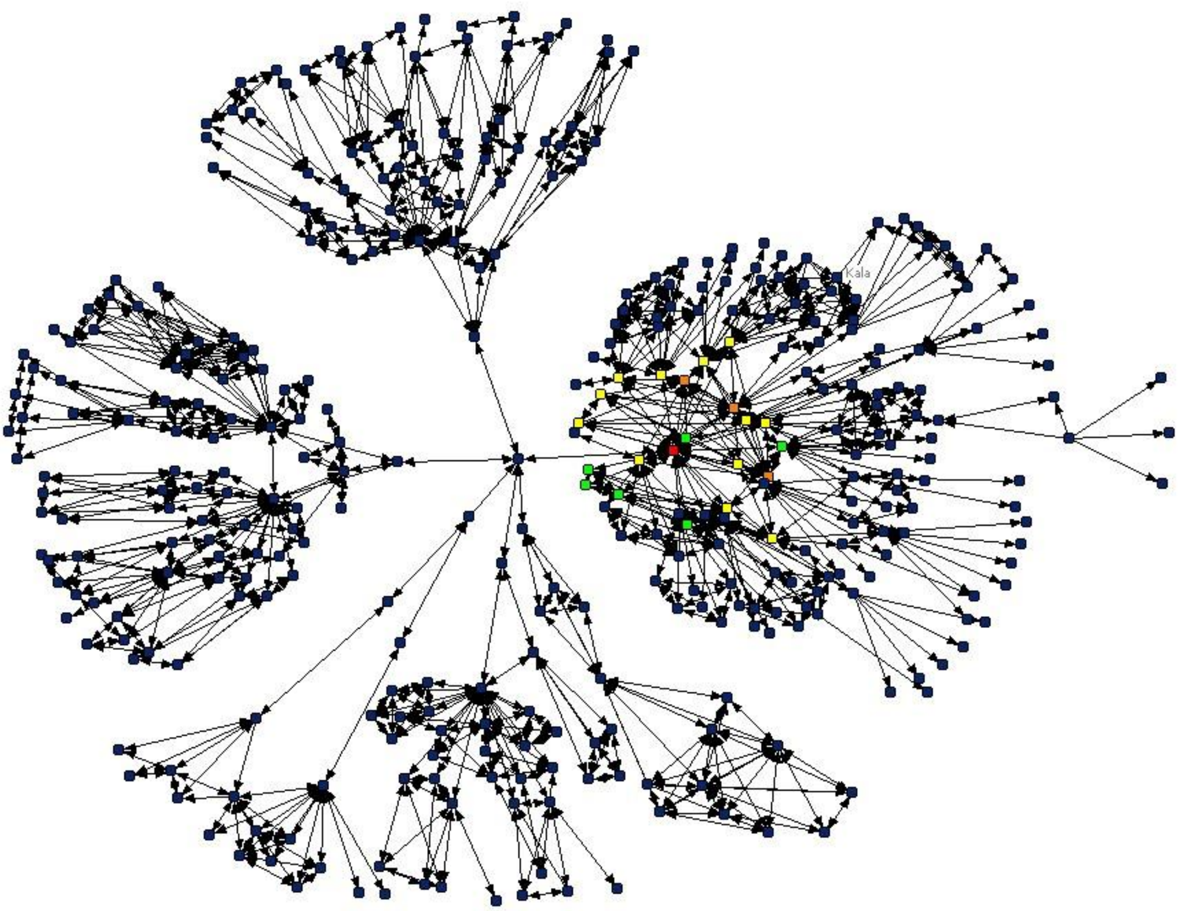

Figure 13 – BWDA Full Sari Group by Eignevector Centrality

Red=50<C, Orange=40<C<50, Yellow=20<C<40, Green=10<C<20

The BWDA MD has the highest betweeness centrality because he is the only person in the network who connects the six branches. The senior manager of Villupuram Branches 1 and 2 shows up with a high betweeness centrality because he connects the Villupuram branches to the rest of the network. Those with high betweeness centrality tend to occupy the most strategic positions in the network (Valente, 2010 pg. 87). Therefore, it is not surprising that those with the highest betweeness centrality BWDA MD, the senior managers of the largest branches and some of their deputies, as shown below in Figure 11. Another implication of high betweeness centrality from Granovetter's (1973) work is that those with high betweeness centrality act as bridges. It is obvious why the BWDA MD has the highest betweeness centrality. He is the one who connects the six branches. However, it should be noted that there are some without high betweeness centrality who act as bridges. The senior managers of Cuddalore and Mettapattu branches are definitely bridges but do not have a high betweeness centrality because their branch networks are so small.

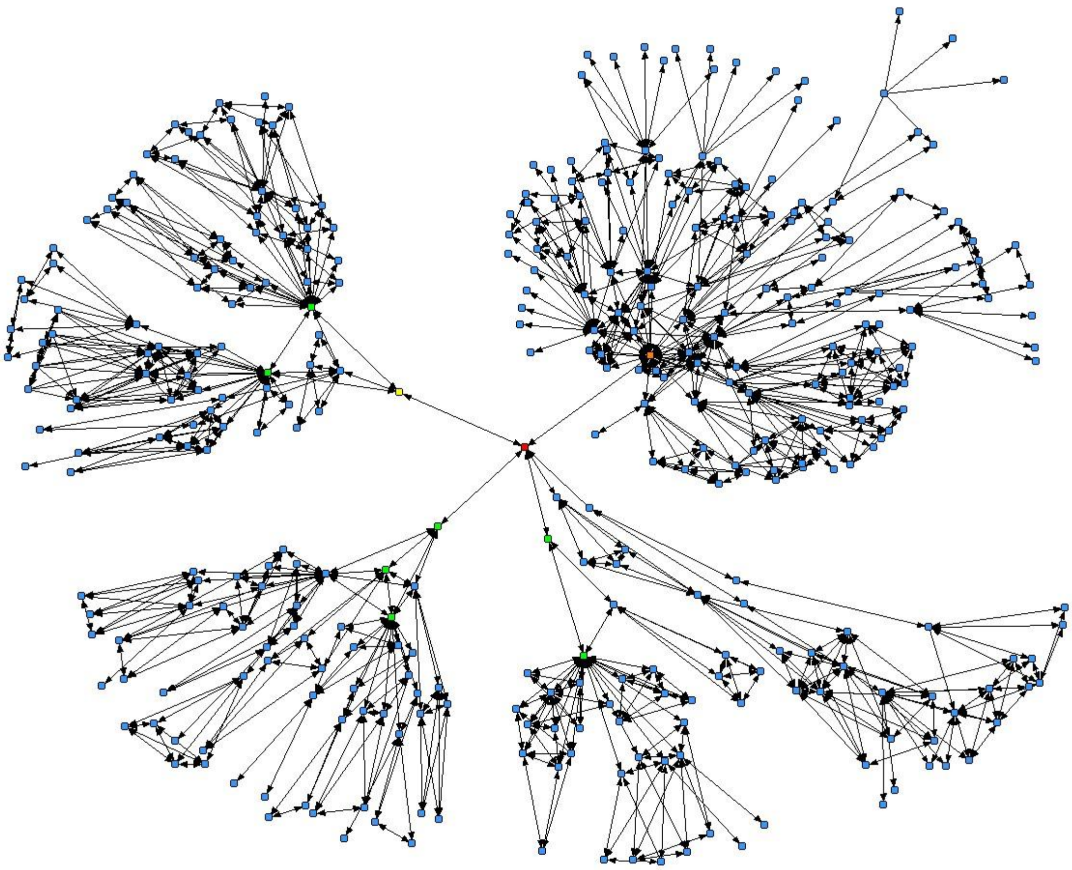

Figure 14 – BWDA Full Sari Group by Betweeness Centrality

Red=70<C, Orange=50<C<70, Yellow=30<C<50, Blue=20<C<30, Green=10<C<20

The networks of each of the branches were also analysed. The densities of the networks for the Villupuram (0.0266), Tindivanam (0.0587), Pondicherry (0.0724) and Madagadipet (0.1365) branches are very low. Since network density is the ratio of the number of network ties over the possible number of network ties, these low densities is an indication low number of cross network ties. The Mettapattu (0.2105) and Cuddalore (0.4381) branches have higher densities but this is mainly because the branch networks are significantly smaller than the other four branches.

7.14 Villupuram Branches Network Data Analysis

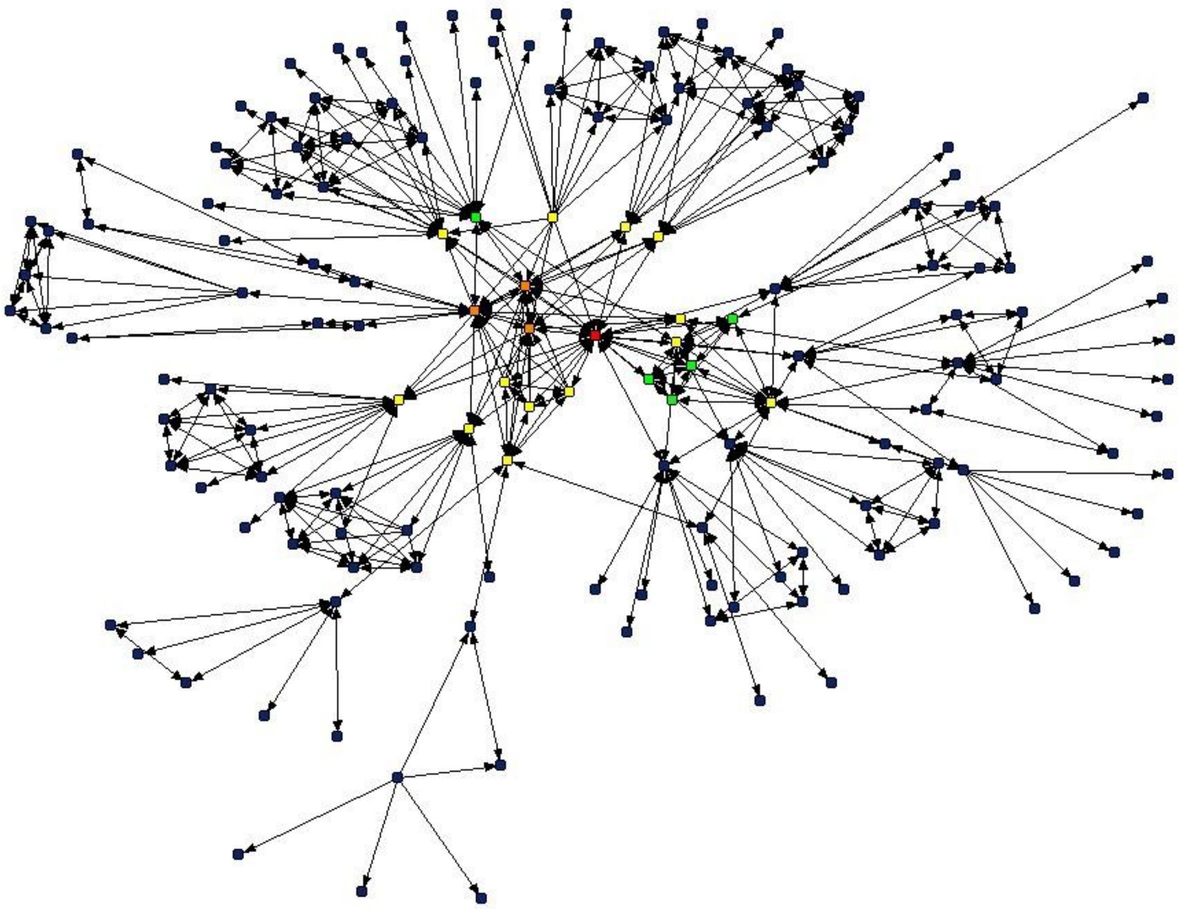

Figure 15 – BWDA Villupuram Branches Network by Eigenvector Centrality

Red=50≤C, Orange=40≤C<50, Yellow=20≤C<40, Green=10≤C<20

The Villupuram branch network has 152 nodes in it. Figure 12 emphasises how interconnected the central core of the Villupuram network is. Mr Sankar, in red in this diagram, has the highest eigenvector centrality is surrounded by those with relatively high eigenvector centrality who in turn are surrounded by others with relatively high eigenvector centrality. The senior manager of Villupuram branches 1 and 2 also has the highest degree and betweeness centrality. Of the 152 nodes in this network, 22 have relatively high eigenvector centrality. Sixteen of these nodes are BWDA staff. This suggests one possible way for weak bridging ties to be created between the sari sellers in this network is when a sari seller in one arm of this needs help, the BWDA staff member she is connected to will enquire among his or her colleagues to see if they know any sari sellers who could help. If so, the two sari sellers would be introduced. If a weak tie brought new information about saris to any of the central players in the Villupuram branch network, this suggests that this new information could spread quickly throughout the network.

7.15 Tindivanam Branch Network Data Analysis

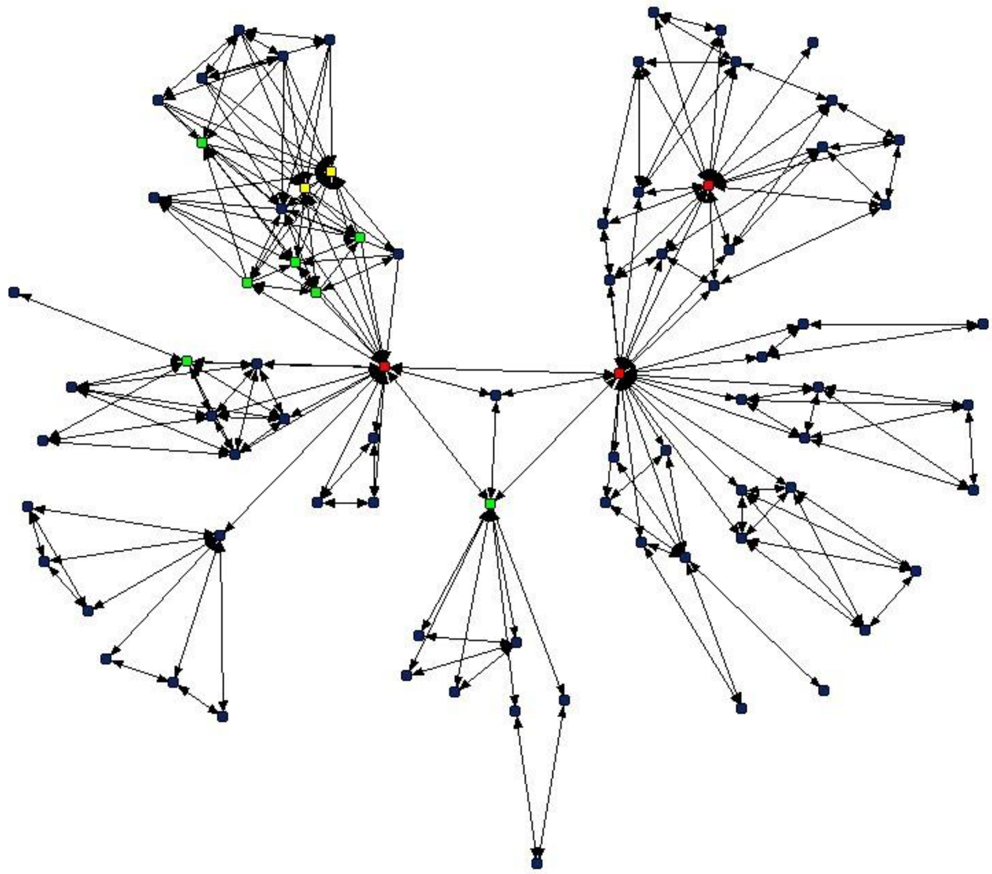

Figure 16 – BWDA Tindivanam Branch Network by Degree Centrality

Red= 20≤C, Yellow=15≤C≤19, Green=10≤C≤14

The Tindivanam branch network has 80 nodes. Unlike the Villupuram, the Tindivanam network is centred on two BWDA staff members each of which have a very high degree centrality. These are marked in red at the centre of Figure 13. The node between them is the senior manager for the Tindivanam branch. Note that he is nowhere as central to this network as the senior manager of the Villupuram branches is to his. The most central members of the network are in the upper left hand part of the Figure 13. This is even more pronounced in the eigenvector centrality Figure 14 of the network below. In Figure 14, the most central nodes in the network are in the upper left hand side connected to a cluster coordinator 1, a BWDA staff member, who has the highest eigenvector centrality. If a weak tie brought new information about saris to a cluster coordinator of BWDA Tindivanam, this suggests that this new information will spread more quickly in the upper left hand part of the network than anywhere else in the network. This is because cluster coordinator 1 has high degree, betweeness and eigenvector centrality. Her colleague, cluster coordinator 2, also has high degree and betweeness centrality. But, because her links are not as central as cluster coordinator's 1, her eigenvector centrality is significantly lower.

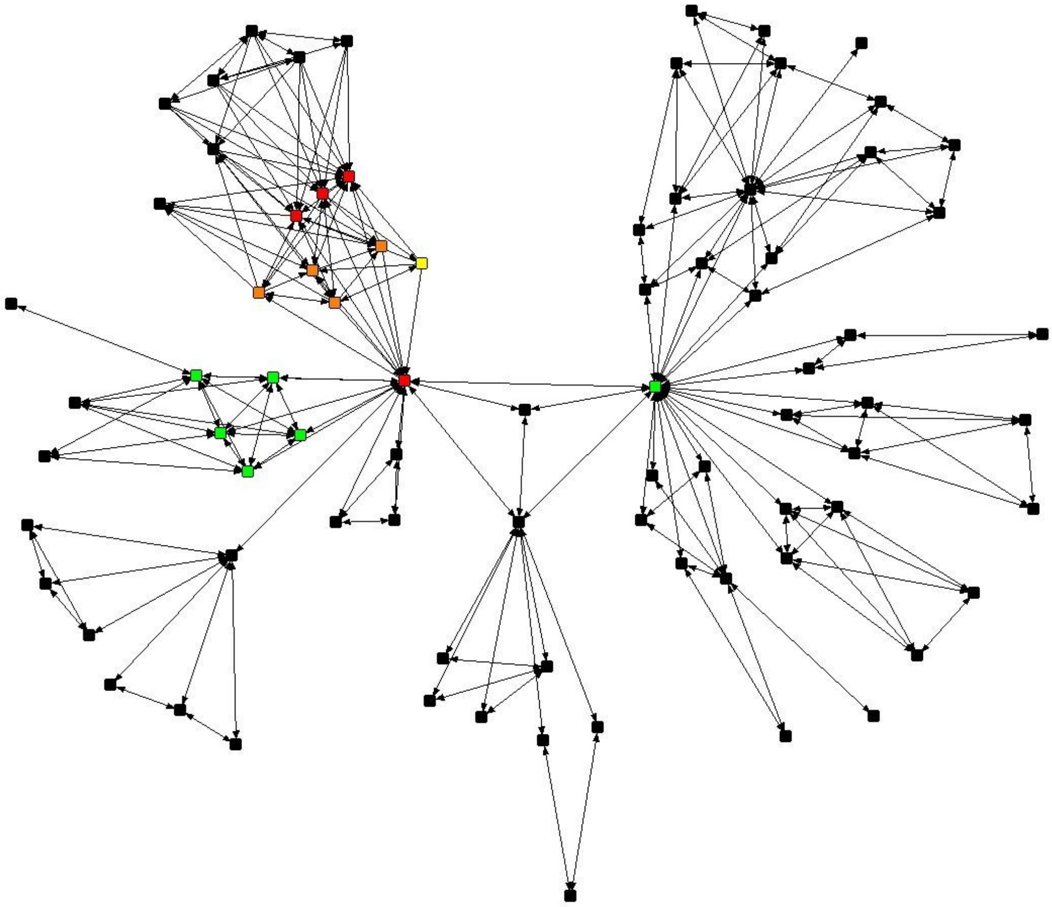

Figure 17 – BWDA Tindivanam Branch Network by Eigenvector Centrality

Red= 40≤C, Orange=30≤C<40, Yellow=20≤C<30, Green=10≤C<20

7.16 Pondicherry Branch Network Data Analysis

In a similar way to the Tindivanam branch network, the Pondicherry branch network has more central players on the right side of the network (see Figure 15 below). The cluster coordinator has the highest degree, betweeness and eigenvector centrality in the network. This suggests that the best place to put the Pondicherry end of a weak bridging tie bringing in new information on saris will be with the cluster coordinator.

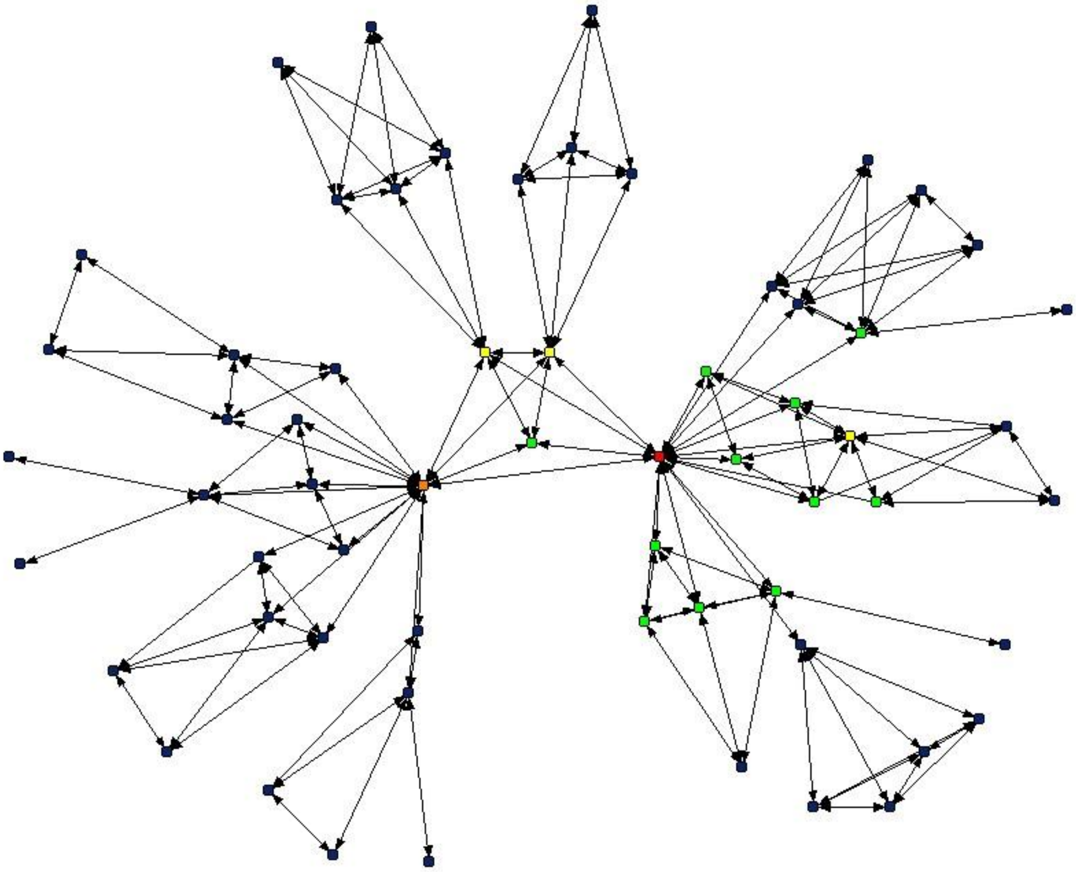

Figure 18 – BWDA Pondicherry Branch Network by Eigenvector Centrality

Red=60≤C, Orange=40≤C<60, Yellow=30≤C<40, Green=20≤C<30, Blue=10≤C<20

7.17 Madagadipet Branch Network Data Analysis

The Madagadipet branch network is centred on the cluster coordinator. She has the highest degree, betweeness and eigenvector centrality in the network. Unlike the branch networks at Tindivanam and Pondicherry branches, the central players in this network are more evenly distributed. The obvious choice to anchor the Madagadipet end of a weak bridging tie that brings in new information on saris is the cluster coordinator. See Figure 16 below.

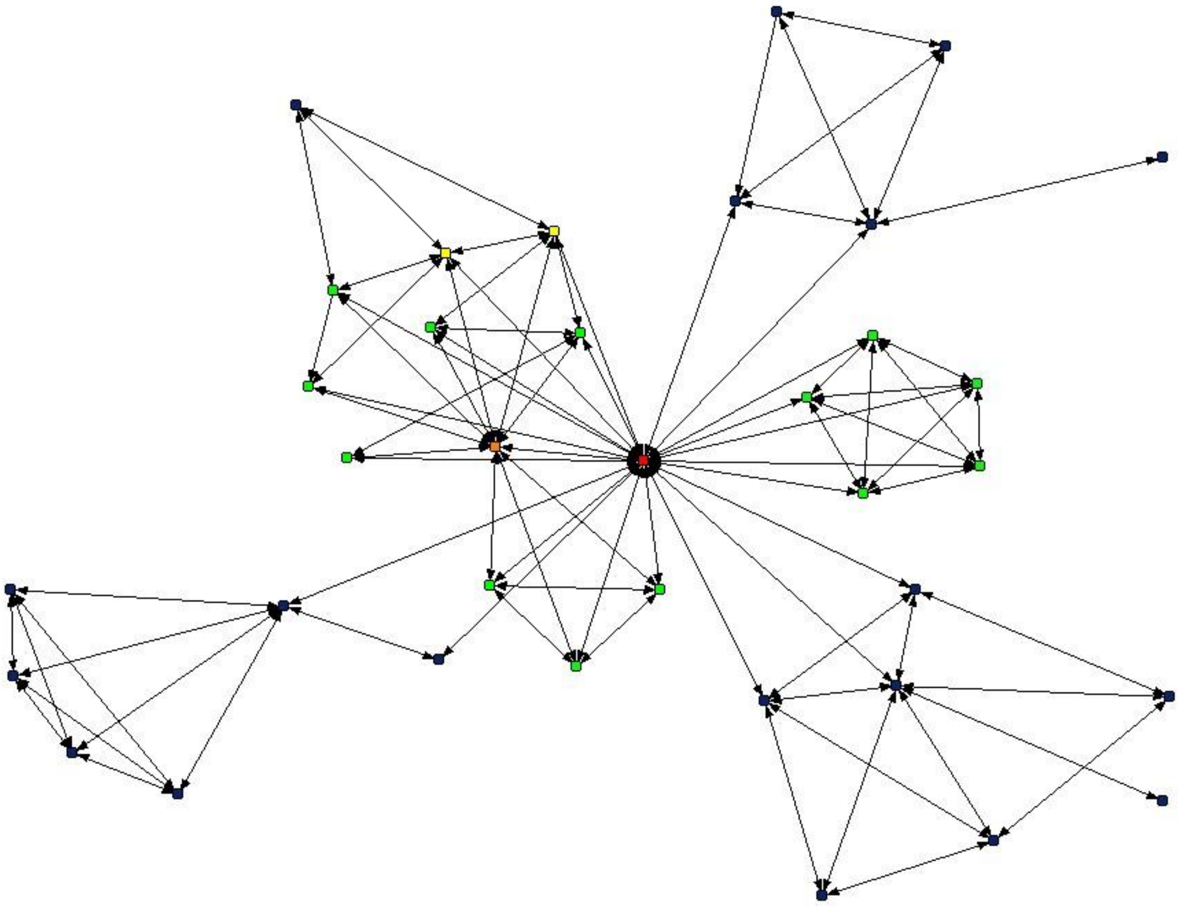

Figure 19 – BWDA Madagadipet Branch Network by Eigenvector Centrality

Red=C≥70, Orange=40≤C<70, Yellow=30≤C<40, Green=20≤C<30

7.18 Mettapattu Branch Network Data Analysis

The Mettapattu branch network is very small with only 19 members in it. This makes it easier to reach all parts of the networks from any node. The network member with the highest betweeness, degree and eigenvector centrality is sari seller#49. She has mentored another sari seller in the area. Sari seller#49, as the most central node of the Mettapattu branch network, is the place to link a weak bridging tie that brings in new information on saris. See Figure 17 below.

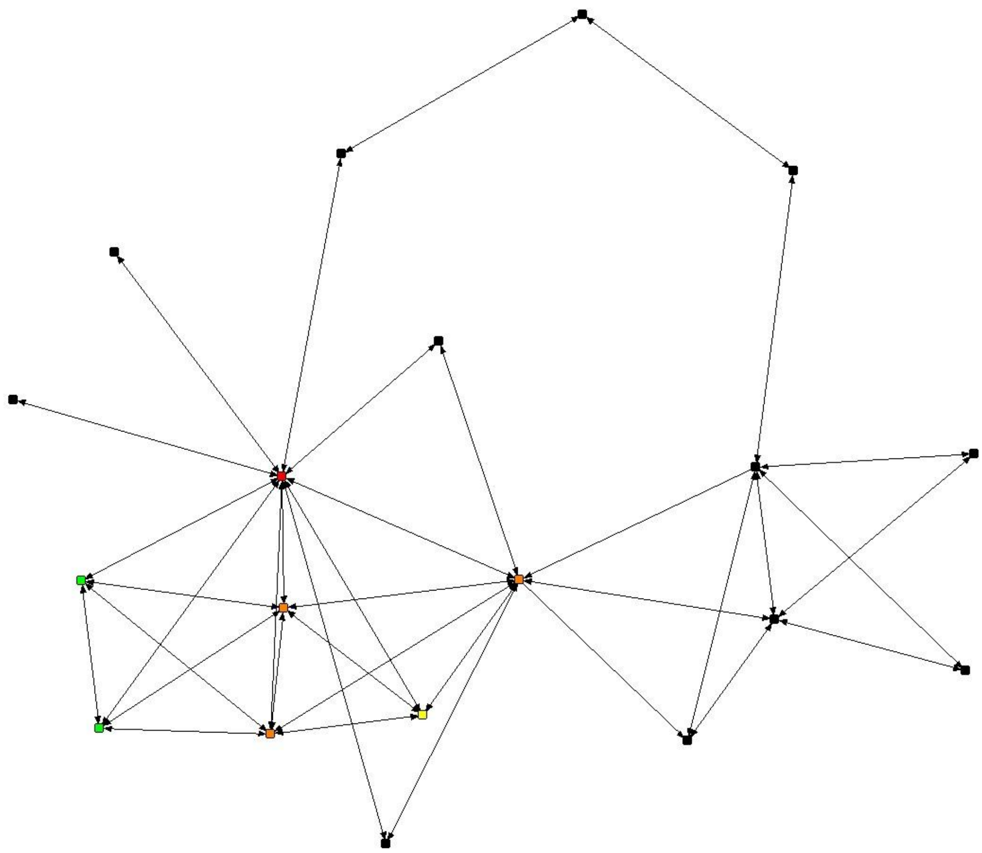

Figure 20 – BWDA Mettapattu Branch Network by Eigenvector Centrality

Red=60≤C, Orange=50≤C<60, Yellow=40≤C<50, Green=30≤C<40

7.19 Cuddalore Branch Network Data Analysis

The Cuddalore branch network is the smallest and contains only one sari seller with a much interconnected network. The smallness and the interconnections lead to a number of nodes being central players. Some of these are neither sari sellers nor BWDA staff. The cluster coordinator, BWDA staff member, has the highest degree and betweeness centrality but a somewhat lower eigenvector centrality than some of the other nodes. The sari seller#87 has the same degree centrality as the cluster coordinator and the highest eigenvector centrality but has a significantly lower centrality than the cluster coordinator. Looking at Figure 18, a weak bridging tie could go to either cluster coordinator or sari seller#87. However, since Cuddalore has a number of BWDA clients who are sari sellers, the cluster coordinator would probably be the better choice.

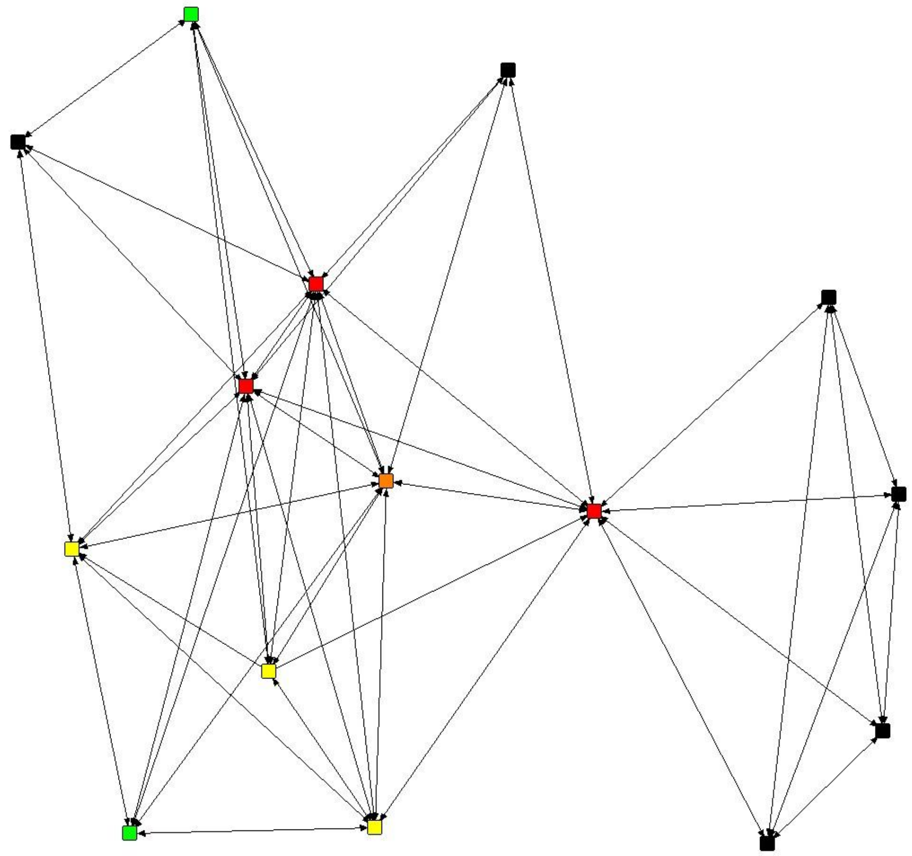

Figure 21 – BWDA Cuddalore Branch Network by Degree Centrality

Red=70≤C, Orange=60≤C<70, Yellow=50≤C<60, Green=30≤C<50

7.20 Network Fragmentation Analysis

As was mentioned above, there are no ties between the branches except at senior manager level. This can lead to network fragmentation which the Girvan-Newman technique and the Geodesic Distance calculations confirm for these networks. The Girvan-Newman (2002) technique calculates how many parts a network can be broken into starting with removing the most central nodes. This technique generates a value called Q. The value of Q indicates the percentage of ties in the network that occur within the groupings found by the algorithm (Newman and Girvan, 2004).

This technique can break the network into many parts. There are two ways to use Q to do this. First is to look at the number of network partitions that maximises the value of Q. Table 36 shows the results of this use of Q for the full network and branches. The numbers highlighted in yellow show the maximum Q value for each. The much denser Cuddalore and Mettapattu branches have maximum Q values at three network partitions. The less dense network of the Madagadipet branch can be broken into five partitions, the network of the Tindivanam branch can be broken into six partitions and the network of the Pondicherry branch can be broken into nine partitions. Both the Villupuram and the full BWDA networks are extremely fragile. The Villupuram branch network can be broken into nineteen partitions and the full BWDA network can be broken into twenty-two partitions.

The second way, which is a more efficient way to fragment the network, is where the focus is on the largest increase in the value of Q. Table 37 shows the results of using the largest increase in the value of Q. For all the networks except the Villupuram branch, the most efficient way to fragment is into three parts. For the Villupuram branch, the most efficient way to fragment is into five parts.

The percentage of fragmentation for the full network and the branches is seen in Table 34. Fragmentation and density are almost a perfect negative correlation (-0.9309) which indicates the more dense the network is, the less fragmented it is. This is another indication of the need to add more ties to the networks to stabilise them and make them more robust. Adding weak bridging ties for each of the sari sellers would definitely do this. The diagrams below show the optimum Girvan-Newman fragmentation for the full network and each branch.

The importance of network fragmentation is that it interrupts the flow of information across the network. In order to strengthen these networks, weak bridging ties need to be added.

Network	Fragmentation %	Density
Villupuram	78.5	0.0266
Tindivanam	65.6	0.0587
Pondicherry	62.9	0.0724
Madagadipet	51.6	0.1365
Cuddalore	31.0	0.4381
Mettapattu	47.1	0.2105
BWDA Full Sari Network	83.2	0.012

Table 35 – Network Fragmentation by Branch

Branch	Q Part 3	Q Part 5	Q Part 6	Q Part 9	Q Part 19	Q Part 22
Villupuram		0.468	0.521	0.630	0.741	0.736
Tindivanam	0.530	0.625	0.677	0.664	0.591	0.546
Pondicherry	0.575	0.643	0.685	0.700		
Madagadipet	0.400	0.568	0.558	0.511		
Cuddalore	0.230	0.176				
Mettapattu	0.343	0.324			-0.077	
BWDA Full Sari Network	0.652	0.737	0.762	0.782	0.854	0.856

Table 36 – Q Maximum Values by Branch

Branch	Q Part 3	Q Part 4	Q Part 5	Q Part 6	Q Part 7	Q Part 8
Villupuram			0.321	0.053	0.009	0.056
Tindivanam	0.061	0.047	0.048	0.052	-0.006	-0.003
Pondicherry	0.105	0.055	0.013	0.042	0.003	0.005
Madagadipet	0.185	0.090	0.078	-0.010	-0.019	-0.008
Cuddalore	0.033	-0.031	-0.023		-0.088	
Mettapattu	0.013		-0.019		-0.042	
BWDA Full Sari Network	0.177	0.065	0.020	0.025		

Table 37 – Q Values Jump by Branch

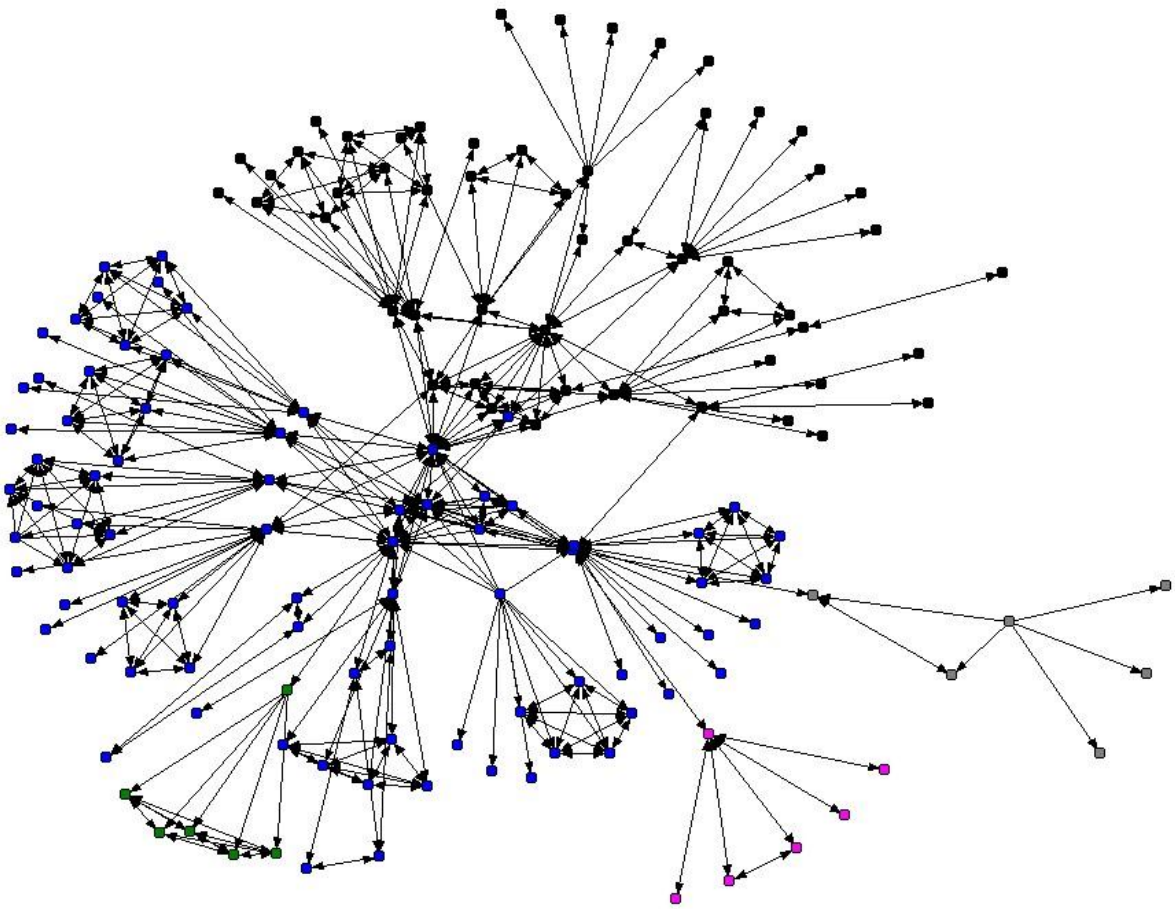

Figure 22 – BWDA Villupuram Branches Network Coloured by Girvan-Newman Parts

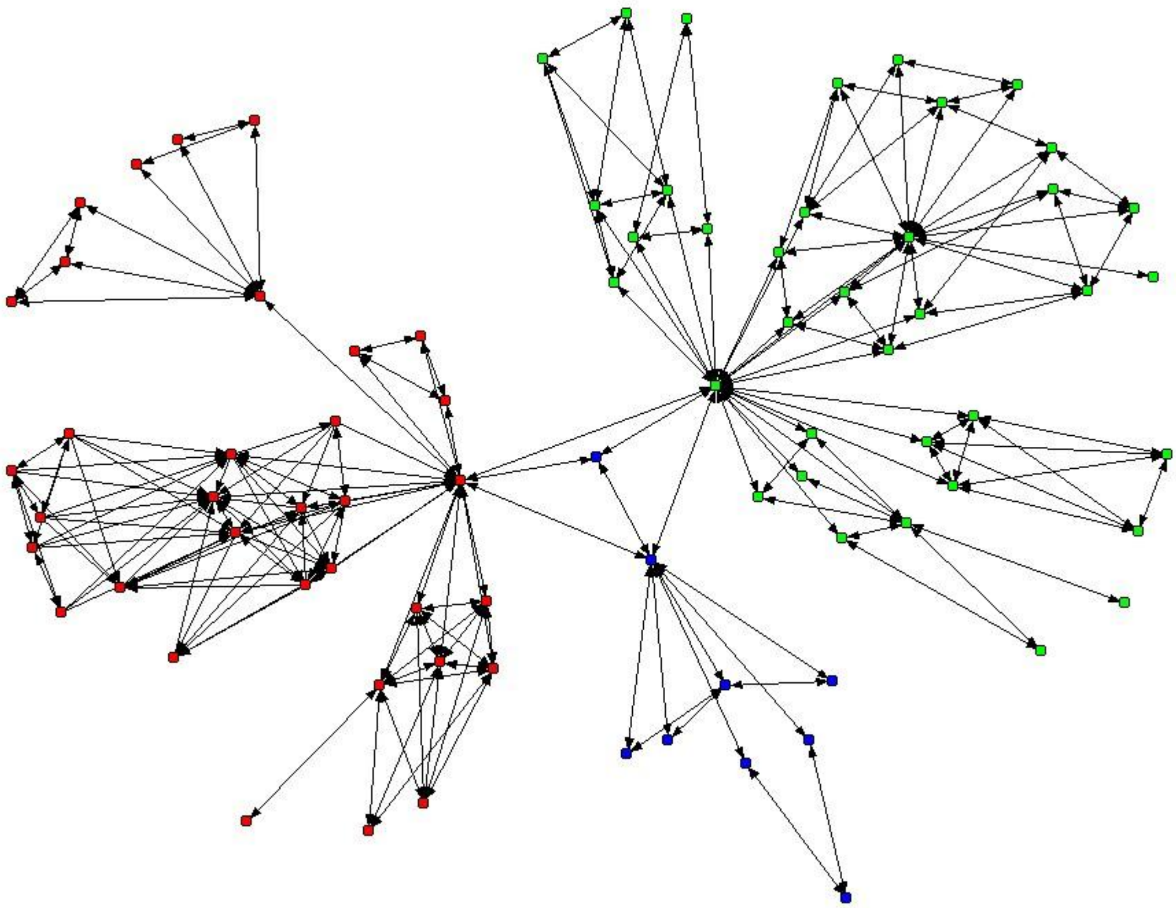

Figure 23 – BWDA Tindivanam Branch Network Coloured by Girvan-Newman Parts

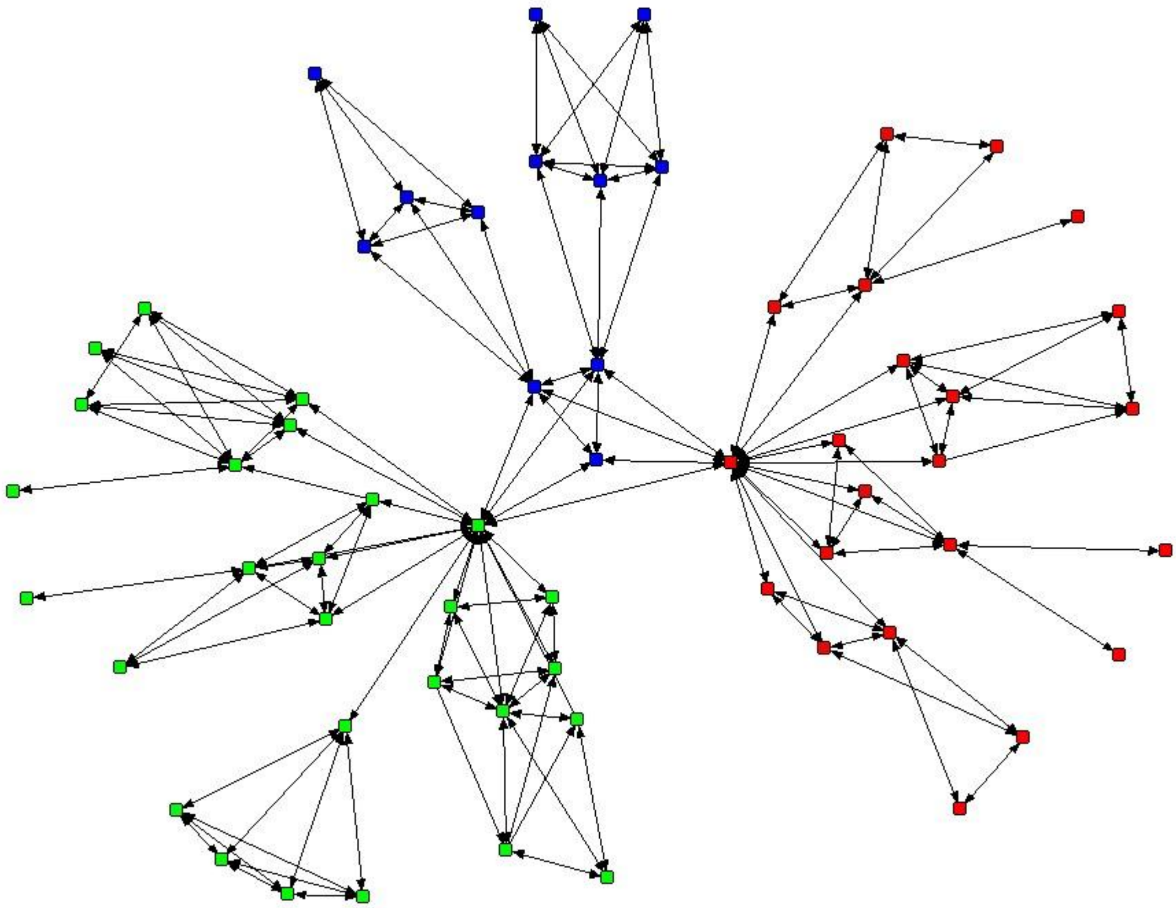

Figure 24 – BWDA Pondicherry Branch Coloured by Girvan-Newman Parts

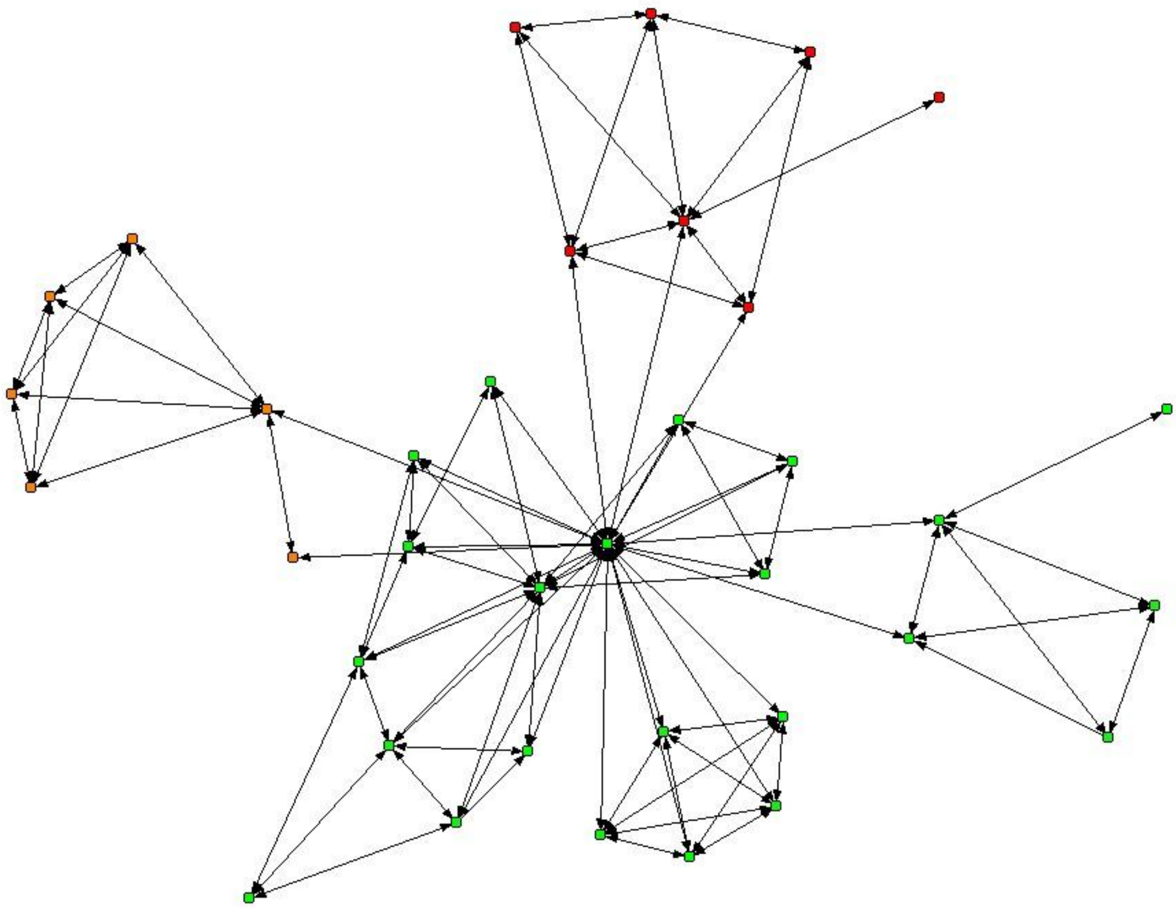

Figure 25 – BWDA Madagadipet Branch Network Coloured by Girvan-Newman Parts

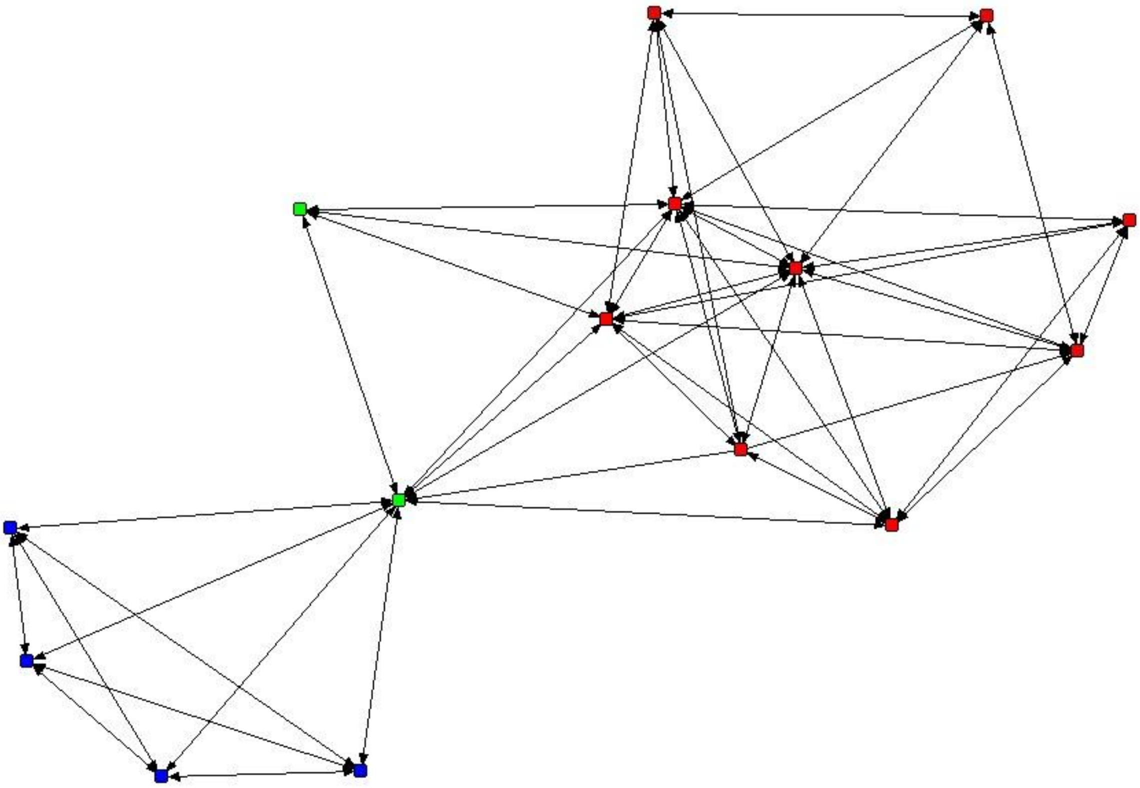

Figure 26 – BWDA Cuddalore Branch Network Coloured by Girvan-Newman Parts

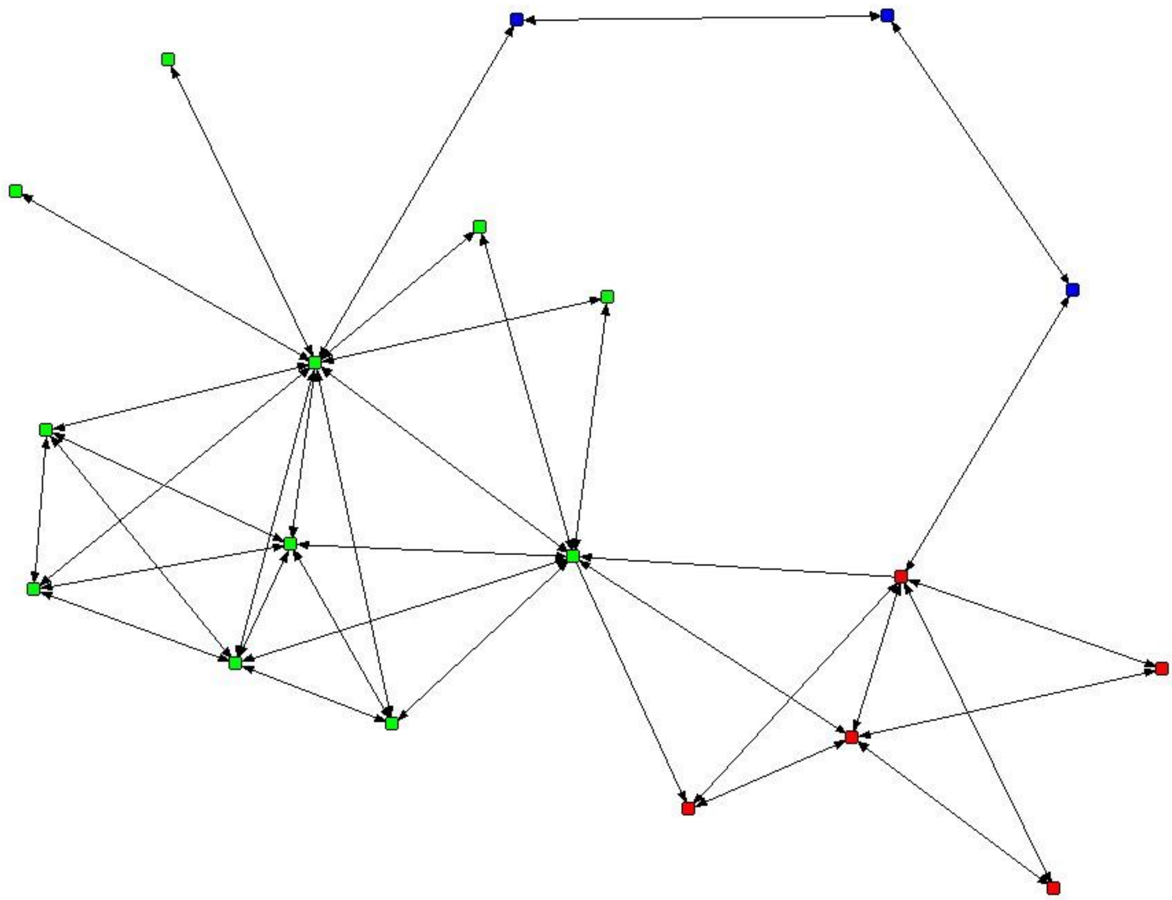

Figure 27 – BWDA Mettapattu Branch Network Coloured by Girvan-Newman Parts

7.21 Summary of Category Support for Hypothesis 3

The use of the maximum Q values shows that the full BWDA network and the Villupuram branch network are extremely fragile and can fragmented into many pieces. The Madagadipet, Pondicherry and Tindivanam branches are not as fragile but can also be fragmented into several pieces. This indicates that it will not take much to interrupt the flow of information to the sari sellers. The data for these networks supports Hypothesis 3. The Cuddalore and Mettapattu branch networks, being smaller and much denser than the other networks, fragments into only three fragments. This data does not support Hypothesis 3.

7.22 Intervention results

The intervention was timed to take advantage of the Dewali sales. Diwali, the Hindu festival of lights, is one of the biggest sari selling seasons in Tamil Nadu along with

Pongal, the Tamil harvest festival, usually held in the middle of January. The hope was that this big selling season would encourage the sari sellers maximise their sales and encourage them to contact other sari sellers to establish weak bridging ties to get information to increase their sales.

Unfortunately, it was not possible to collect the definitive data during this research trip. Of the 47 sari sellers in the treatment group, only 2 showed up at BWDA's head office on the first day and only a total of 8 responded by the end of the 4th research field trip. Of the 64 in the control group, 22 sari sellers responded. The reason for this was a staffing change at BWDA. The BWDA lawyer who was serving as translator during the 2nd and 3rd research field trips was also responsible for coordinating the BWDA response to research requests. During the summer of 2011, he left to start a consultancy. No one replaced him in the coordinating role. Therefore, despite several e-mails between the two research trips, the sari sellers weren't told the dates to appear at the BWDA offices until the start of the 4th research field trip. The Sari Seller Information and Training Offer document was distributed late and there was no follow up on the financial diaries. This resulted in no financial diaries being ready for collection. He did return to do some of the interviews during the 4th research field trip with a new manager handling the translation when he could not make it. There were 21 other sari sellers who were interviewed who had not had their social networks mapped before. The Rs. 100 incentive payment helped to draw them in. However, because these sari sellers did take part in either the 2nd or 3rd research field trips, their data will not be included in this discussion.

The proxy for the improvement in the sari selling business was a year on year improvement of the number of saris sold for Diwali. Of the 30 sari sellers in the respondent's group, only 3 saw an increase and all 3 were in the treatment group. An increase in the number customers was the explanation for all 3 sari sellers. Only 2 sari sellers saw a year on year decrease in Diwali sales. These two were also in the treatment group. Sari seller S005 said that the state elections were reasons for the decline in sales. However, sari sellers S011, S012 and S045 were able to increase their sari sales during the same state election. Sari seller S008 said that this was because the designs of the saris her supplier sells is unpopular. She said she did not know of another supplier that sells more popular designs. This situation seems to cry out for a weak bridging tie so that she can access the information on suppliers. But, she did not have one. All the other sari sellers saw little change in the number of saris sold in 2011 compared to Diwali 2010.

The sari sellers were asked about the percentage of household income that comes from sari selling. The rationale behind the question was that the higher the percentage, the more effort would be put into the business. Of the 30 sari seller interviewed, 20 had 50% or less of their household income coming from sari selling. Therefore two thirds of the sari sellers were either supplementing household income or had other businesses or jobs thus matching what Bannerjee and Duflo (2011) said about the inability of microentrepreneurs to focus on one business. Eastwood (2004) also mentions the impact of family commitments on female microentrepreneurs. See Figure 25 for details on percentage household income of sari selling.

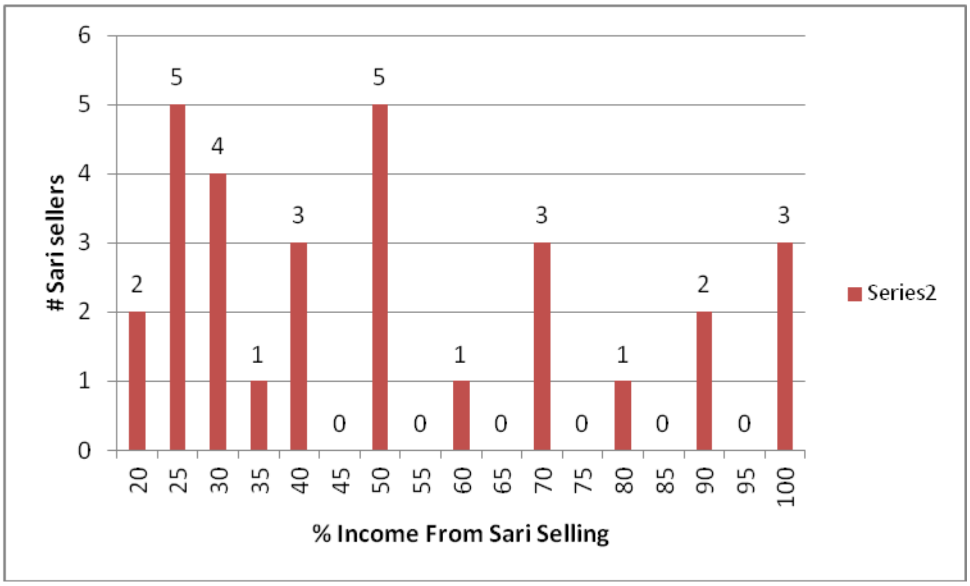

Figure 28 - Distribution of % of Household Income Due to Sari Selling

The proxy for the reduction of poverty was an increase in the PPI score from 2010 to 2011. Of the 30 sari sellers interviewed, 6 had increases in their PPI scores, 4 had a decrease in their PPI scores in the same time period and the rest had no change. With two exceptions, all the changes were either up or down one level of probability in the PPI tables (See Appendix E – PPI Probability Tables for India).

In the treatment group, sari seller S012 had her probability of living under US$2/day reduced to 27.3% because she could now afford another electric fan. Sari seller S045 had her probability of living under US$2/day reduced to 15.5% because she could now afford another pressure cooker. Sari seller S017 saw her probability of living under US$2/day increase to 55.2% because she no longer had a scooter and could not afford to replace it.

In the control group, sari seller S058 had her probability of living under US$2/day reduced to 50.0% because she moved into an all pucca house. Sari seller S062 had her probability of living under US$2/day reduced to 93.7% because one of her children grew up and left home. Sari seller S071 had her probability of living under US$2/day reduced to 15.5% because she could now afford a scooter. On the other hand, sari seller S083 saw her probability of living under US$2/day increase to 42.9% because of the discovery that her LPG stove was from the Tamil Nadu state government. Her ability to afford a new pressure cooker kept her probability from increasing further. Sari seller S087 saw her probability of living under US$2/day increase to 42.9% because she gave birth to another child during the year.

In the control group there were two cases of sari sellers moving two levels on the PPI table both up and down. Sari seller S073 saw her probability of living under US$2/day reduced to 4.4% because main occupation of the household now is real estate and she was able to afford a new sewing machine. Sari seller S085 saw her probability of living under US$2/day increase to 42.9% because the main occupation of the household is labourer. See Appendix H – Sari Seller Data from the 4th Research Field Trip for details.

In the treatment group both sari sellers S012 and S045 saw an increase in their year on year Diwali sari sales and an increase in their PPI scores. Is there a link to an additional weak bridging tie being responsible for either? For sari seller S012, there is no data to tie the increase in Diwali sales to additional weak bridging ties. However, sari seller S045 and an incident while interviewing members of the control group in Pondicherry provide case studies that give indications that the theory of the strength of weak ties holds for microfinance clients who have low growth, low entry barrier businesses.

7.23 Case Study 1 – Pondicherry Sari Sellers

The incident in Pondicherry occurred while interviewing 15 sari sellers at the BWDA branch office there. One of the sari sellers asked the translator why BWDA was not buying saris in bulk for all of the sari sellers to obtain a big discount which increase the profit margins for the sari sellers. The translator stopped the interview and told everyone the question that had been asked. The translator, who was very familiar with the research, said that BWDA was working on this suggestion but it would take some time. He asked in the meantime did anyone in the room know of anyone living in Surat, Gujarat. Surat is now the centre of sari production in India. It is over 1,500 kilometres away on the west coast of India on the Arabian Sea. One sari seller raised her hand to say that her son lived there. The translator then told everyone to give this woman their mobile telephone numbers so that she could coordinate a bulk order of saris that her son could purchase. The effect on the room was electric. It was obvious no one had thought of this before. This matches what Hofstede and Hofstede (2005) said about less powerful people being dependent. The sari sellers, being less powerful, were depending on BWDA, being more powerful, to solve this problem for them. They had never thought of organising a solution themselves. They were so excited about organising a bulk purchase among themselves that the translator had to tell them to be quiet so that he could continue to conduct the interviews.

In this case, the translator provided the mechanism that created weak bridging ties among the sari sellers that brought new, non-redundant information to them which included identifying a sari seller with a link to Surat and how to combine their efforts to buy saris in bulk and increase their profit margins. If the margins are increased enough, the sari sellers would start to see real poverty reduction. One can imagine what could happen if this scenario is repeated with other BWDA sari seller clients. This case shows why microfinance theory needs to take into account social networks and the strength of weak ties in microfinance.

7.24 Case Study 2 – Sari Seller S045

While the data does not connect the increase in Diwali sales for sari seller S012 to the addition of weak bridging ties to her social network, it is possible to make that connection with sari seller S045. Both her PPI score and her Diwali sales were up.

When asked why her 2011 Diwali sales had increased, she said that she had added a new friend to her social network and that new friend introduced her to a lot of new customers. It was these new customers that led to a large increase in her sales. Figure 25 shows her social network in 2010. Figure 26 shows her social network in 2011. The new friend is in Figure 26. While she started as a weak link, she is now a strong tie. One can imagine the introduction to new customers strengthened the tie between the two. One can imagine what could happen if other BWDA sari seller clients could have weak bridging ties that could introduce them to new customers. Once again, this case shows why microfinance theory needs to take into account social networks and the strength of weak ties in microfinance.

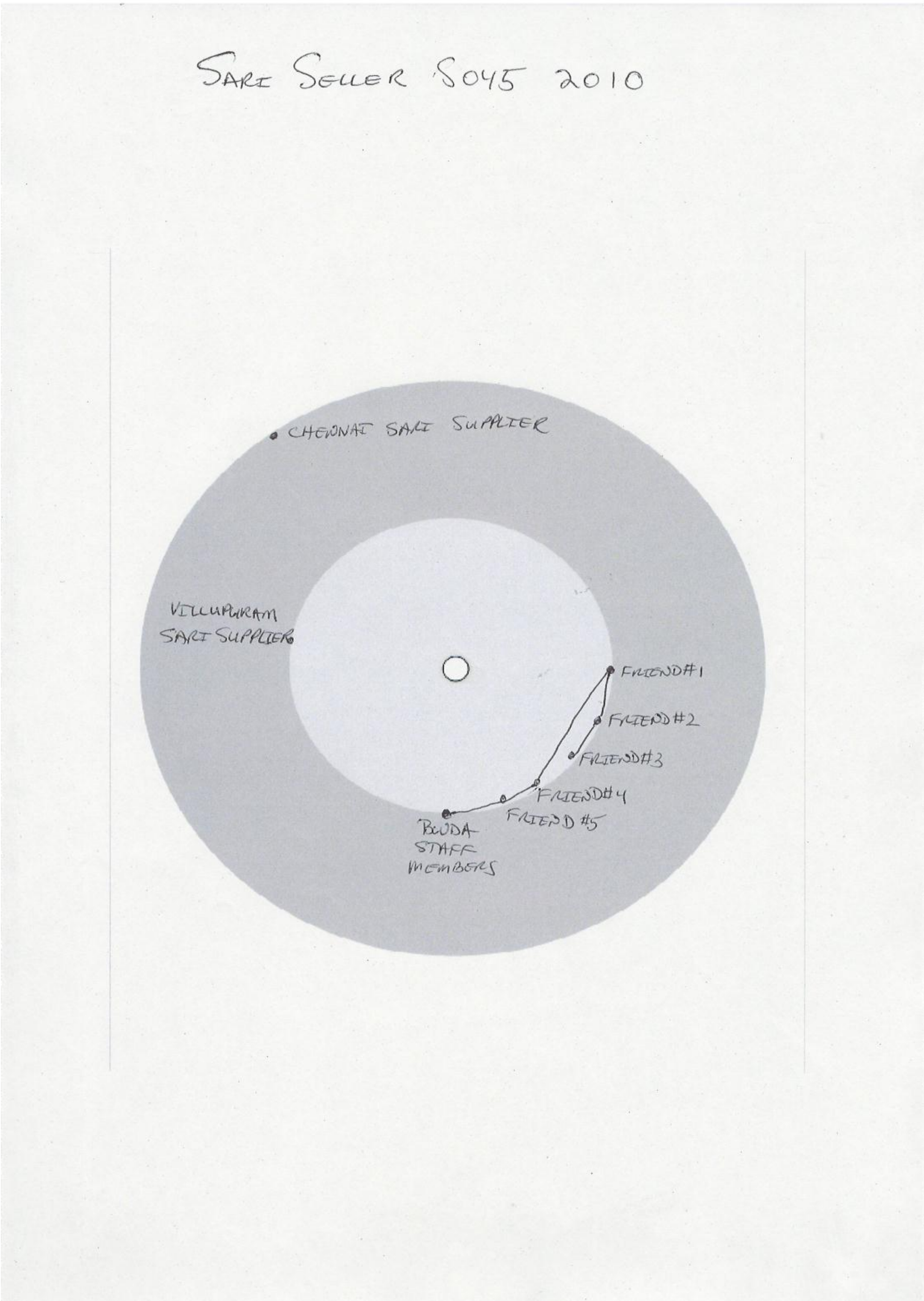

Figure 29 – Sari Seller S045 Target Diagram 2010

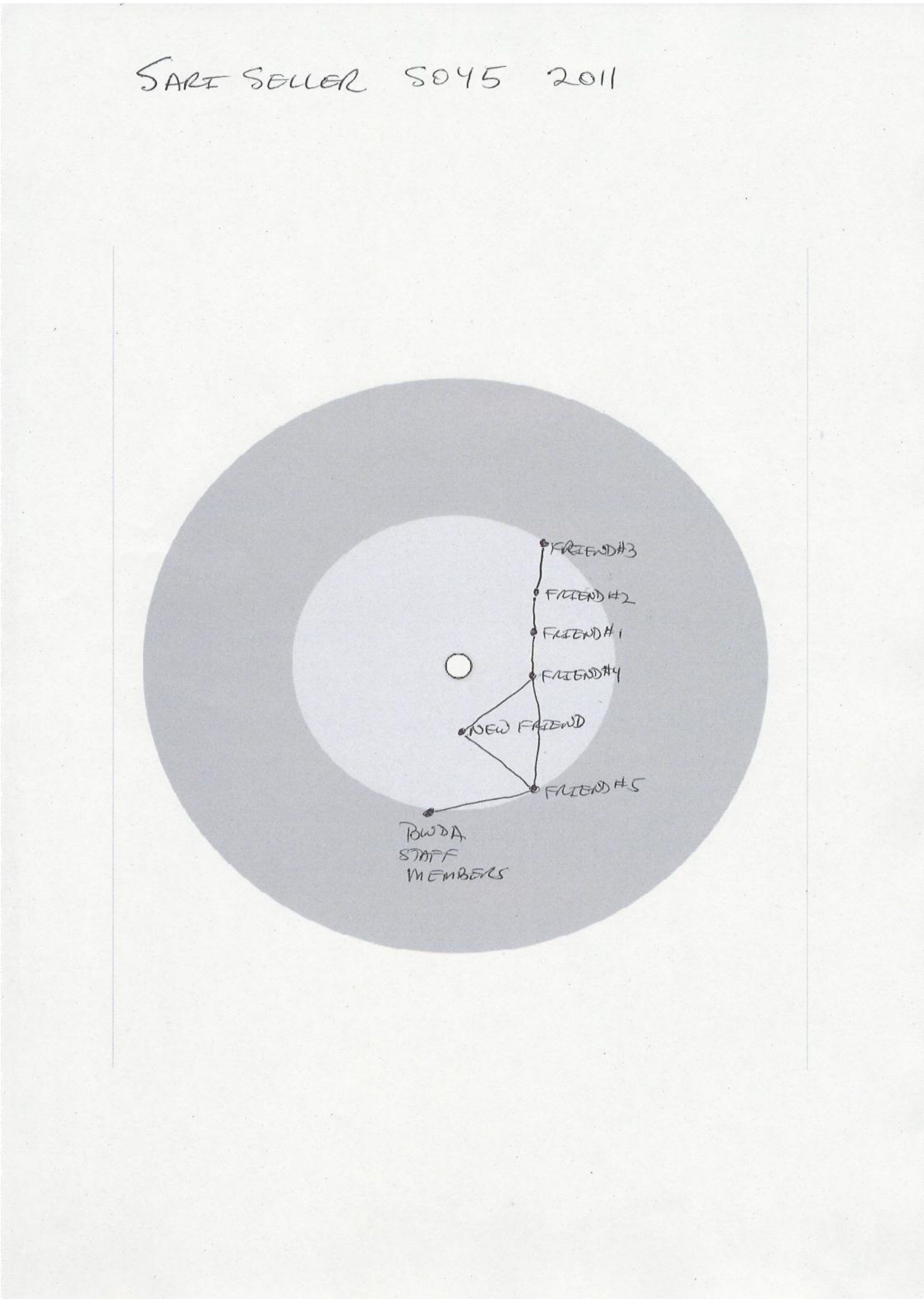

Figure 30 – Sari Seller S045 Target Diagram 2011

7.25 Strengths and Weaknesses of the Intervention

The obvious weakness of the intervention is the low response rate. There may be other cases of weak bridging ties improving the low growth, low barrier to entry sari selling business but it was not possible to get access to this data. The other weakness is that the intervention required the mainly low caste sari sellers to take a proactive role in creating additional weak bridging ties in the social networks for their businesses. Hofstede and Hofstede (2005) point that in countries with a large power distance index, such as India, the tendency was for the less powerful to be dependent on the more powerful as was seen in the Pondicherry case.

While the intervention itself did not directly introduce additional weak bridging ties to the business social networks for the sari sellers, its strength is that it provided the platform discover the power of weak bridging ties in the Pondicherry and sari seller S045 cases. The other strength is that it gives an indication that Granovetter (1973) strength of weak ties can fill this gap in microfinance theory to produce more poverty reduction for microfinance clients who have low growth, low entry barrier businesses.

7.26 Chapter Conclusion

The key finding in from the second research field trip is that the sari sellers depend on strong ties in their ego networks confirming what Granovetter (1983) said. In addition, an overwhelming majority of sari sellers were animators most probably because this was a business they could fit into their busy lives. The sari sellers were not the poorest of the poor but did mostly come from the lower castes such as backward castes, other backward castes, most backward castes and scheduled castes. The PPI scores indicated that many of the sari sellers had a significant possibility of living below the US$2/day poverty line. Analysis also uncovered a serious problem with the network data which had mixed connections with organisations and persons. The decision was made to collect better network data from the sari sellers focusing on persons they knew in the organisation.

However, this need to collect new network data provided an opportunity to do a network intervention. In his seminal paper, *The Strength of Weak Ties,* Granovetter (1973) argues that weak ties that serve as bridges to connect to people outside the existing network would provide information to the sari sellers that would improve their businesses. In addition, according to Burt, in his book *Brokerage and Closure (*2005*),* these weak ties would provide brokerage opportunities that would also improve their businesses. However, India is an intensely hierarchical society. So, how do the poor establish weak ties in an intensely hierarchical society?

The opportunity to answer this question could come through a network intervention. The idea was to accurately map the ego networks of the sari sellers to establish a baseline. Then a network intervention would attempt to introduce weak bridging ties into the sari seller's networks and then see if their businesses improve.

In order to set the stage for the intervention, both ego network analysis and full network analysis has been done on the network data collected. The ego network analysis showed that on the whole, the sari sellers have more strong ties than weak ties and that their ego networks are small. It was also evident from the ego network analysis there was strong closure in all the ego networks studied. However, the data shows that shop owners and Brahmins were two groups of sari sellers that were the exception where there were more weak ties than strong ties. The shop owner's weak ties tend to be to informal financial sources and suppliers. These Brahmin sari sellers may have unreported Brahmin network link such as the example of the brother of one Brahmin sari seller's brother using his connections in the lorry business to bring her saris from Surat, Gujarat. Both of these groups had have higher than average PPI scores (PPI average score = 73.11). Shop owners have an average PPI score of 79.56 and the Brahmin sari sellers have an average PPI score of 89.00. It may be tempting to infer that the weak ties improved their businesses which improved their PPI score but there is no direct evidence of this. It may be that the relatively high PPI scores put them into a position to develop more weak ties than the other sari sellers.

The full network analysis showed using the connections with BWDA staff members it is possible to build a whole network from the perspective of the sari sellers. The sociogram of the resulting networks shows that this whole network is organised around branches with the only connection between the branches through the BWDA managing director. As a result, shown by using the Girvan-Newman technique, this whole network and most of the network branches are fragmented and fragile. The analysis also showed that increasing the network density decreases the fragmentation. Therefore, the addition of weak bridging ties to the networks would increase the density and make them more stable. The centrality measures (betweeness, degree and eigenvector) were used to identify possible anchors for weak bridging ties bringing new information to sari sellers. Eigenvector centrality was especially useful by identifying those who were most connected to the most central players in the networks. These people strategic positions in the networks could help increase the velocity of new information on the sari business spreading throughout the networks.

The key task then is to find ways to introduce weak bridging ties into both the ego and whole networks and see what impact it has on the sari sellers' networks and businesses. The evidence of this chapter shows that there is a clear and understandable strong brokering role for BWDA to play when the sari sellers' ego networks are aggregated. The chapter then described a simple intervention to introduce weak bridging ties among the sari sellers by advantage of the brokering role BWDA can play by connecting sari sellers who are willing to offer information, skills and training other sari sellers want.

The intervention provides indications that weak bridging ties gives microfinance clients who own low growth, low barrier to entry businesses access to non-redundant information that can help them grow their businesses and in doing so, help increase the reduction of poverty they can attain. It also shows the importance of social networks to the businesses of microfinance clients. It demonstrates the key role that the social context plays in the formation of social networks. In the Pondicherry case, the tendency of the less powerful to depend on the more powerful meant the sari sellers did not take a proactive role in adding weak bridging ties to their social networks. They expected BWDA to take the lead. This exposes the social network gap in microfinance theory and reveals the role that Granovetter's (1973) strength of weak ties can play in helping to fill that gap.

8 Chapter Eight – Discussion of Results

8.1 Chapter Introduction

The intervention gives indications that the addition of weak bridging ties to the social networks of microfinance clients who own low growth, low entry barrier businesses gives access to non-redundant information needed to grow their businesses and help to reduce their poverty. Network theory helps fill the gap in microfinance theory in providing a mechanism for getting more poverty reduction where microfinance is currently not getting enough. The theory of the strength of weak ties, which has worked in other contexts, has been shown to work in a Tamil microfinance context.

Therefore, the answer to the first research question of how does a MFI help its clients bridge the structural holes in their ego networks is through the addition of weak bridging ties to their networks. As was emphasised before, financial intermediation cannot achieve this. What is needed is social intermediation by the MFIs. This leads to the second research question. This chapter will now focus on the answer to the second research question of how can MFIs socially intermediate to help their clients establish weak bridging ties.

8.2 Discussion

The key problem this research in microfinance this research is helping to solve is not getting enough poverty reduction in microfinance. Microfinance has the goal of reducing poverty in a financially sustainable way done mostly through credit until recently. Rupert Scofield (2012) who is the CEO of FINCA, an international microfinance network, describes the excitement of seeing the dramatic positive impact of loans on the poverty of the most entrepreneurial of the poor. However, as time went on, Scofield says that the entrepreneurial skills of the additional microfinance clients diminished as did the impact of microcredit on poverty. This is why the impact of microcredit on poverty is being questioned. This validates Bateman’s (2010) argument that the microfinance pioneers have fallen victim to the fallacy of composition where the assumption that if microcredit works for the most entrepreneurial of the poor, it will work for most of the poor. This also validates

Banerjee and Duflo's (2011) argument that microfinance practitioners have been overpromising. For Banerjee and Duflo (2011) and Bhagavatula and Elfring (2010), one of the main problems for microfinance clients is that they tend to start low barrier to entry businesses that suffer from low growth which limits the impact of financial intermediation.

This research has been focused on using social network theories as a method of social intermediation to get more improvement in reducing poverty through microfinance. There are two main social network theories being used. First is Granovetter's (1973) strength of weak ties which identifies the informational benefits of weak bridging ties. For Granovetter, this happens by serendipity. Second, Burt (1992) extends Granovetter with the concept of structural holes. Burt operationalizes Granovetter by showing how weak bridging ties can span structural holes in networks. Unlike Granovetter, Burt argues that people can make a strategic choice in spanning structural holes. This research shows how adding weak bridging ties to the social networks of microfinance clients gives them access to new information that can be used to improve their businesses and reduce their poverty.

However, a weakness in Burt's argument comes from the fact that his research was done in an American context and there is an assumption that everyone has the same opportunities that his respondents have. This is not true of the poor Indian microentrepreneurs who are the subject of this research. This research concludes that these people need help from the microfinance institution in order to build weak bridging ties to span the structural holes in their social networks to get access to non-redundant information. Later in this chapter, five ways of microfinance institutions doing social intermediation to achieve this will be identified. In this way, this research makes an additional contribution by showing how Burt's operationalization of the information benefits of weak ties in a non-American context by taking it a few steps in the direction of social intermediation as an application in microfinance and in the setting of a hierarchical social structure.

This study is a qualitative one which interprets a broad range of partial evidence rather than seeking to test a formal model. The evidence that supports the central claim that addition of weak bridging ties contributes to poverty reduction includes the strong closure evident in all the ego networks studied, little brokerage activity by the alters in the ego networks studied with the single, explicable, exception of the Brahmin group and the clear and understandable strong brokering role of BWDA when the ego networks are aggregated.

8.3 Examples in the literature of poor people being helped with building their social networks

The Pondicherry case in the intervention shows that for cultures with large power distance index, the poor need help in establishing weak bridging ties. The tendency for the poor to be dependent on the more powerful leads the poor to be not very proactive in establishing weak bridging ties. The poor, like the sari sellers in Pondicherry, may not realise that the potential exists for them. This is why social intermediation is required. What follows is an exploration of examples from the literature on helping the poor build their social networks.

Nguyen (2010) argues that credit is not enough. Very often, the poor rely on their social capital to provide security, access to complementary resources and to higher levels of decision-making and economic power. Technical assistance is always demanded to ensure the success of the borrowers' production and business. The reason for this lies in the fact that it helps them catch up with the most up to date techniques in order to satisfy the demand of the market.

Green (2005) reports on the efforts in Chanderi, which is a rural town of 30,000 in the state of Madhya Pradesh in India, to improve the income of handloom weavers by linking them directly to buyers in order to reduce their dependency on intermediaries. To achieve this, seven self-help groups have been formed into an apex organization, registered as an NGO. The reason for creating such an organization came from the recognition that a group of 10 weavers could not attain the critical mass and variety of products required by buyers. Furthermore, quality control and marketing efforts were believed to be more effective within a larger group. The formation of a cluster of handloom weavers is able to achieve all of this. Green argues that the links between cluster weavers and financial institutions may have positive externalities which will enhance the contribution of cluster development to reduce poverty. While the cluster project works with those poor people whose economic activities are directly related to the cluster and affect its production, Green believes that in the mid to long-term, the efforts to improve access to financial services for integrated poor cluster actors are also likely to have spill-over effects for the poor living in the same geographical area, but whose income generating activities are not related to handloom weaving.

Another way to assist the poor in building networks is through mentoring. Edgcomb and Malm (2002) define mentoring as counsel, advice and support provided by experienced business people to new entrepreneurs in a structured relationship. Mentoring offers an ongoing and supportive relationship with an experienced business person concerned for his or her success and is able to open doors to information and other resources to help the business grow. This is another way to establish weak bridging ties.

Another way to help the poor build social networks is to form cooperatives. Huda et al (2005a) quote Krishna (2002):

> "Persons bound together in dense social networks infused with norms of reciprocity and trust, are better able to and more inclined to act collectively for mutual benefit and social purpose. Compared to persons not so well endowed with norms and networks, those possessed of these features 'can more efficiently restrain opportunism and resolve problems of collective action.'"

Bhatt (2000) describes how SEWA, one of the oldest MFIs in India, found that employment opportunities are enhanced several-fold when the poor people are directly linked with the mainstream markets through cooperatives. SEWA had several examples of this. The women in the Santalpur desert area had intermittent employment and were earning a pittance when picking gum off trees and selling them to traders. But when these women formed their own co-operative and got linked with the licensing and selling agent, the Forest Corporation, they had steady employment. By forming co-operative village dairies and linking with the marketing federation, livestock owners were able to get a steady and fair price for their milk. The embroiderers could turn their occasional sale of products into a full-time employment earning opportunity when they acquired their own shop in the city.

Bamboo workers could buy bamboo at half the price when they went to another state and bought in bulk.

Another way to build a cooperative network is to build a sector-based network. Nelson (2004) defines a sector based network as a trade association for microentrepreneurs. Nelson says that some advocates posit sector-based networking as the strategic cornerstone to local economic development. She defines the success factors for a sector-based as building trust, being able to build networks in the local community, being able to balance autonomy with standards and expectations, finding the most appropriate and effective modes of communication and keeping the network relevant for mature members.

Nelson (2004) argues that entrepreneurial networks are about building social capital and accessing opportunities linked to trust and reciprocity. The essence of networking is how people come together, support each other, learn from each other, contract with each other, refer each other and form partnerships. The problem is that everyone wants to come to the first meeting but participation is hard to sustain. While the social contact and support is great but it is not enough to keep people coming when they get busy. Echoing Granovetter (1983), networks need to offer a safe haven and compelling substance. In order to solve the above problems, the organisers need to plan and budget for the network, create a welcoming atmosphere, make network meetings easy to attend, offer incentives to attend and participate, invest in network leadership, keep the network relevant and make the network an avenue for accessing the broader, mainstream economy and community.

While helping the poor to build their social networks, there are some caveats to keep in mind. Huda et al **(**2005a) found that the lack of horizontal links or solidarity contributes to the reinforcing of elite-poor dependency relationships. In effect, the poor perpetuate these patronage relationships by acting as individual clients, rather than mobilizing as a bloc to demand broader empowerment. This means an MFI needs to make sure that the network ties between the poor are dense enough to counterbalance the tendency to depend on the more powerful in large power distance cultures. Secondly, Eastwood (2004) mentions that the responsibility of family commitments in many cases means that fully exploiting and interacting in such networks often comes at too high a price with insufficient time and energy being given to the enterprises they manage. Networks therefore have a challenge of addressing how best women owned enterprises can be facilitated amidst the constraints.

8.4 How BWDA can introduce weak bridging ties into their sari seller business's social networks

Before getting into the specifics of how BWDA can help their sari seller clients build weak bridging ties, it should be mentioned that BWDA has socially intermediated before in order to help its clients and their businesses as was discussed in chapter 6. Exhibitions for the sari sellers were put on. However fear about the damage to its reputation caused by overcharging led BWDA to stop these exhibitions (Arora, 2008). But, BWDA is willing to build new social intermediation approaches to help the sari sellers. However, it is aware from its past experiences that it needs to stay within its means. This will mean that it will need to build collaborative relationships in order to achieve this. BWDA has done this several times before.

In answering the second research question, this research has identified five ways for a MFI to socially intermediate in order to help their clients establish weak bridging ties that will help improve their businesses and reduce their poverty. In this way, this research makes an additional contribution by showing how Burt's operationalization of the information benefits of weak ties in a non-American context by taking it a few steps in the direction of social intermediation as an application in microfinance and in the setting of a hierarchical social structure.

The first way to do this is for the MFI to set up assistance swaps among their clients. This is very similar to what was done during the intervention among the sari sellers. Those who have information or skills needed for sari selling can offer these to other sari sellers who need the information or the training. Because information would be passing over this link between people who may not know each well, this has the potential to become a weak bridging tie. The intervention used a simple paper based method to implement this idea. Other methods such as

BWDA staff members passing requests and offers for information to and from the most central players in each branch network as seen in Figures 8 through 18 in chapter 7. More modern technology such as mobile phones can be used to connect the sari sellers. This may make it possible for a sari seller in southern Tamil Nadu to connect with a sari seller in northern Tamil Nadu. However, the key to make this working successfully is BWDA encouraging the sari sellers identify their needs for information and skills and be willing to communicate these to each other or a BWDA staff member. Effective and efficient communication around the network is another key requirement and not relying on the traditional hierarchical pathways through the full BWDA network.

The second way is for the MFI to act as a broker between their clients and the mainstream markets. In this case, BWDA can act as a broker between the sari sellers and the sari industry and negotiate big discounts on bulk orders of saris for all of its sari sellers. However, as the experience of BASIX in Harper (2010b) shows, it is important to have someone with industry experience negotiating on behalf of the MFI so that neither the MFI nor its clients suffer from the vagaries of the industry. The negotiator must not just have industry experience but also empathetic with the goals of the MFI. The MFI can take advantage of its position to act as broker to help its clients bridge the structural holes in their ego networks but its clients can take advantage of Burt’s (2010) network spillover effect from the MFI. In this case, the most connected person at BWDA, its managing director, will probably be the one to find the negotiator to deal with the sari industry. It is not known how many sari sellers BWDA has as clients but it could easily reach into the thousands giving BWDA a strong negotiating hand with the industry.

The third way is for the MFI to build a sector based network. There are two benefits to the clients. First, is that its clients can build weak bridging ties among other clients in the same sector. Second, these clients can obtain closure (Burt, 2005) by learning from other clients in the network. BWDA did attempt to start a sector based network for the sari sellers. BWDA found that its ability to build and manage a sector based network was limited. Therefore, BWDA has applied to its donors for funding to build up its capacity in this area. This means that MFIs need to be aware of its ability to build and manage a sector based network and if needs be, approach partners to fund and provide the capacity or training.

The fourth way is for the MFI to provide mentors from the industry to their clients most likely from people retired from the industry. The client gets closure again from being trained by the mentor. The client can also get benefit from the network spillover effect from the status of the mentor allowing the client to establish weak bridging ties based on the recommendation of the mentor. In this case, the mentor would probably come from a retired sari industry person. Just like finding a negotiator from industry, it is important that the mentor be empathetic with the goals of the MFI.

The fifth way a MFI can help its clients establish weak bridging ties is to make its clients feel more secure. Granovetter (1983) said that the main reason that the poor relied on strong ties was insecurity. Therefore, the more secure a MFI can make its clients feel, the more they will feel free to explore establishing weak bridging ties for their low growth, low entry barrier businesses. The financial ways to increase their client's security include savings and insurance. The non-financial ways include building up the social capital of its clients by building trust and communities. Different clients may have different needs which a standardised approach may not be appropriate. However, with the self-help groups, BWDA has the mechanism that will allow meeting a client's individual needs if the SHG members are trained properly to do so. This may be an effective way for BWDA to make its clients more secure in a social way that will allow more building of weak bridging ties.

8.5 Comparison to previous work

As was stated previously, until recently there have been very little theoretical work involving social networks in microfinance. However, that has changed in recent years. Karlan et al (2008) looked network effects of trust on microfinance repayments and confirmed that weak bridging ties give access to information for microfinance clients. Morvant-Roux (2009) looked at the effects of access to microfinance on indebtedness and liquidity supply within the social network. Kannan (2009) investigated brokerage in SHGs in the state of Karnataka in India.

Cai et al (2011) studied the diffusion of learning about microinsurance through social networks in China.

Abhijit Banerjee and Esther Duflo of the Abdul Latif Jameel Poverty Action Lab at the Massachusetts Institute of Technology are conducting a study investigating the diffusion of microfinance take up rates in 75 villages in southern Karnataka in India. Several papers have come out of that study in the past year. Banerjee et al (2011) have taken a general look at the diffusion rates of microfinance through the social networks of these villages. Using the same villages, Chandrasekhar et al (2011a) studies insurance, savings and social networks, Chandrasekhar et al (2011b) looks at insurance, hidden income, hidden savings and social networks while Chandrasekhar et al (2011c) tested models of social learning on these social networks. Chandrasekar and Lewis (2011) look at the econometric errors introduced by sampling a network of microfinance clients. Finally, Jackson et al (2011) investigate the favour exchange networks found in these Karnataka villages.

As can be seen from the above, none of this research has looked at the role of weak bridging ties bringing non-redundant information to microfinance clients who own low growth, low barrier to entry businesses that will allow them to improve their businesses nor has any of this research identified ways for MFIs to socially intermediate to help their clients build weak bridging ties to help their businesses. This shows that this research does fill a gap in the microfinance literature.

8.6 Chapter Conclusion

This chapter answered the second research question of how MFIs can socially intermediate to help clients establish weak bridging ties. There were five ways that MFIs could achieve this. First is to organise mechanisms that that allow clients to swap offers of information and training. Second is to act as a broker between clients and industry being careful to hire a negotiator who is knowledgeable about the industry and empathetic with the goals of the MFI. Third is to build a sector based network. Fourth is to hire a mentor who is knowledgeable of the industry and is empathetic to the aspirations of the clients. Fifth is to lessen the insecurity of their clients in order to lessen their dependency on strong ties.

9 Chapter Nine – Conclusion

9.1 Chapter Summary

This concluding chapter will summarise the research including listing the accomplishments made by the research. The limitations and the implications of the research will be discussed. This will be followed by a discussion on possible further research.

9.2 Summary of Research

This research has accomplished the following:

- This research makes a contribution to knowledge by showing how Granovetter's theory of the strength of weak ties can fill the gap in microfinance theory on how greater poverty reduction can be achieved through social intermediation.
- This research found indications that the addition of weak bridging ties to the social networks of microfinance clients who own low growth, low entry barrier businesses actually can improve these businesses and help to reduce their poverty.
- Using social network theories, this research identified ways microfinance institutions can socially intermediate to add weak bridging ties to the social networks of their clients who own the typical microenterprise started by microfinance clients.
- The results of this research indicates that what works for the sari sellers of BWDA will also work for other low growth, low barrier to entry businesses started by microfinance clients.
- This research extended Burt's operationalization of Granovetter's argument of the informational benefit of weak ties in the direction of social intermediation in the context of social hierarchy with application to microfinance.

Microfinance, the delivery of financial services to poor people, initially held out the promise of financially sustainable poverty reduction. However, in recent years, this promise has been severely challenged. Microfinance has not achieved the reduction of the levels of poverty envisioned by its early promoters. Banerjee and Duflo (2011) find in their randomised control trial that microfinance worked but it was not transformational. One of the reasons that it is not transformational was that the businesses started by microfinance clients are often suffer from low growth and very low margins. Bhagavatula and Elfring (2010) added that these businesses tended to be low barrier to entry enterprises vulnerable to competition. Therefore, it is not surprising that microfinance clients were not able to generate much poverty reduction with low growth, low entry barrier businesses.

Microfinance theorists paid little attention to this. Their focus was traditionally on how the financial intermediation worked. There was an unspoken assumption that financial intermediation alone would bring about the expected reduction in poverty. The theory most used to explain how microfinance worked was joint liability which said that members of the group, the most popular methodology in microfinance, were liable for each other's loans. However, it was found that even the big microfinance institutions in Bangladesh were no longer enforcing joint liability contracts. The realisation struck that microfinance clients needed both financial and social intermediation. Initially, the theoretical focus was on using social intermediation as preparation for financial intermediation. Today, social intermediation in microfinance is looked at more holistically. But, there is still a gap in microfinance theory in how to get more poverty reduction for microfinance clients who own low growth, low entry barrier businesses.

The key to filling this gap is the realisation that human beings are ultra-social animals (Haidt, 2006). As a result of this, human beings form social networks to connect themselves to each other. These network structures provide access to resources and information such as how a poor person may improve their low growth, low barrier to entry business. The strength of the connections in the network does matter. Because those who share a strong tie with each other tend to be similar, Granovetter (1973) argued that the way to get new and non-redundant information is through weak bridging ties in the network. This is because those we share weak ties with are not as similar to those we share strong ties with and therefore travel in different circles and have access to different information. This means that if microfinance clients could access weak bridging ties, they could also access the information they need to improve their businesses. But, the problem is that Granovetter (1983) says that poor people rely on strong ties which have the tendency to cut them off from this new information. This is exacerbated by the social context that microfinance clients find themselves in Tamil Nadu in India where this research was conducted. India is a very hierarchical society which allows a considerable degree of inequality. In the Hofstede and Hofstede (2005) perspective, India has a large power distance index. In this context, the less powerful tend to have a dependency on the more powerful. Evidence for this was found during this research. This complicates the task of the poor building weak bridging ties. So, how does a poor person add weak bridging ties to her network?

To answer this question, the research measured and mapped the social networks of 111 sari sellers whose businesses are typical of the low growth, low entry barrier businesses started by microfinance clients. It was found that the sari sellers relied on their strong ties confirm Granovetter (1983) and that their social networks for their businesses were small and strong closure evident in all the ego networks studied. Section 8.6 showed evidence that it was reasonable to assume that there is little brokerage activity by the alters in the ego networks measured with the exception of the Brahmins. An intervention was done to see if weak bridging ties could be added to the sari sellers' social networks by creating a simple mechanism that allowed sari sellers to offer information and training to each other to take advantage of the clear and strong brokering role of BWDA when the ego networks are aggregated.

The intervention did not work as planned because of a poor response rate. However, there was evidence that indicated that adding weak bridging ties to the sari sellers' social networks allowed them access to non-redundant information to improve their businesses. In one instance, sari sellers in Pondicherry, under the prodding of the BWDA translator, realised they could connect to one another in order to organise a bulk purchase of saris which would considerably lower their costs. In another instance, a sari seller in Villupuram had a new contact in her network introduce her to a number of new customers which significantly increased her sales for Diwali 2011 over that of Diwali 2010.

Adding weak bridging ties to their client's social networks require a different kind of social intermediation. Five ways were identified for MFIs to socially intermediate in order to add weak bridging ties to the social networks of their clients. First is organising mechanisms to allow clients to swap offers of information and training. Second is to act as a broker between the clients and the industry being careful to hire a negotiator who is knowledgeable about the industry and empathetic with the goals of the MFI. Third is to build a sector based network. Fourth is to hire a mentor who is knowledgeable of the industry and is empathetic to the aspirations of the clients. Fifth is to lessen the insecurity their clients feel to lessen their dependency on strong ties.

The contribution of this research is to add the theory of the strength of weak ties to microfinance in order to help microfinance clients access the information needed to improve their low growth, low barrier to entry businesses and help them fend off the competition. The more this happens, the more poverty will be reduced. It is the potential to achieve more poverty reduction using a structural approach that shows the strength of weak ties in microfinance.

9.3 Limitations

One of the main limitations of this research was the researcher's inability to speak and understand Tamil, the language of Tamil Nadu. While the level of translation was good, none of the translators were able to do simultaneous translation. This meant that some data was literally lost in translation. Language difficulties also caused some problems with the data collection as some of the BWDA staff misunderstood the instructions. Some of this was later corrected but it turns out not all of it. As was stated in chapter 6, BWDA employees were used as translators on the last three research field trips. The main translator was a lawyer for BWDA assisted by a finance clerk and a new employee running a water project. It should be noted that the sari sellers felt free to criticise BWDA to the translators and the translators translated these criticisms.

Because this research was qualitative, it is unable to prove cause and effect. Even if all 47 sari sellers of the treatment group in the intervention had added weak ties that had improved their Diwali sales it would not have proven cause and effect. All that could be said that it provides an indication that adding weak bridging ties improves low growth, low entry barrier businesses. In the Further Research section below, thought will be given to how quantitative approach can contribute to this research.

The researcher tried very hard to look at social networks from the Tamil perspective. However, an incomplete understanding of Tamil culture meant that it is likely to be some misunderstanding of some of the ties in the social networks mapped.

This research was done in a Tamil context. A different social context may give a different answer to the second research question on how MFIs can socially intermediate to help their clients build weak bridging ties in the social networks for their businesses. In a Tamil context, the challenge was how to build weak bridging ties given the large power distance in the culture. In a small power distance culture, the MFI may not need to be as heavily involved in building weak bridging ties. In small power distance culture, there is much less tendency for the poor to be dependent on the more powerful which would make them more proactive in building weak bridging ties in their own social networks. However, it should be noted that some of the cultures that have large amounts poverty also are large power distance cultures.

Some of the sari sellers did have strong ties to those who are connected to the sari industry. While they may have had some benefit from this, it seems not to have been very great in general. Of the 28 sari sellers who had these connections, 23 of these were to family members who were sari sellers. It appears that the family members' social networks were similar to the respondents in that they were small and rely on strong ties and therefore were not able to offer non-redundant information. For the rest, 4 were employees of sari shops and the main benefit the sari sellers received was to be able to buy saris on credit. This explains why it is reasonable to assume that there is little brokerage activity by the alters in the ego networks studied with the single, explicable, exception of the Brahman group discussed in Chapter 8. They did not seem to be able to offer non-redundant information to their relatives. One sari seller used to be an employee of a sari shop in Trichy in central Tamil Nadu. She learned how the sari industry operated and also learned how to negotiate with sari shops. Because she was new to the industry, she did gain a lot non-redundant information about saris from this relationship. She is able to take advantage of this with her current business. If weak bridging ties could be established with the other BWDA sari sellers, her knowledge would become very useful non-redundant information to them.

9.4 Implications

The main implication of this research is that if adding weak bridging ties to the business social networks of sari sellers and MFIs can socially intermediate to help sari sellers build these weak bridging ties then this theoretical contribution should work for other low growth, low barriers to entry businesses started by microfinance clients. Therefore, MFIs should look to measuring and understanding the social networks of their clients and then designing the appropriate network interventions.

9.5 Further research

To investigate further the strength of weak ties in microfinance, the methodology used in this research can be enhanced. First, funding is obtained to hire Tamil speaking staff. They can coordinate and monitor the financial diaries. They can also map and record the changes to the social networks at regular intervals. The movement of the alters both closer and farther away from ego can also be recorded. The staff can follow up with the respondents to ensure that the financial diaries are filled in. This will give quality financial data. It may be possible that the data is good enough to use quantitative methods to determine cause and effect. It will also be possible to monitor the effects of BWDA's efforts to implement the five ways to socially intermediate to build weak ties among their clients. In addition, the research can be extended to clients with other low growth, low barrier to entry businesses besides sari selling. Finally, further research could explore the differences, if any, between building weak bridging ties in large power distance cultures and small power distance cultures.

9.6 Chapter Conclusion

This chapter summarised this research. It first described the problem that microfinance had at not achieved the amount of poverty reduction envisioned by its founders. One key reason for this was the low growth, low barrier to entry businesses often started by microfinance clients. While microfinance theorists focused on financial intermediation, the contribution to knowledge this research made was to use Grannovetter's line of reasoning to show the necessity of social intermediation that added weak, bridging ties to the social networks of microfinance clients in order to improve their businesses and increase their poverty reduction. This research identified five ways MFIs could do this. This research also made a contribution to knowledge by extending Burt's operationalization of Granovetter's argument of the informational benefit of weak ties in the context of social hierarchy. The main implication of this research is that if this works for sari sellers, this will work for other low growth, low entry barrier microenterprises microfinance clients start. Ways to further investigate the strength of weak ties in microfinance were discussed. Despite the limitations of the research described, this research indicates how the strength of weak ties in can help microfinance achieve its goal of increasing poverty reduction.

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10 Appendices

10.1 Appendix A – SHG Member Questionnaire

SHG Member Questionnaire

(30 May 2009 UOG)

Identification

	Organisation				Country			Y	Y	M	M	D	D	Staff	
Code															
Ex.	*E*	*D*	*Y*	*F*	*P*	*E*	*R*	*0*	*9*	*0*	*6*	*2*	*6*	*A*	*M*

Interviewer Visits

	1	2	3	4
Date				
Interviewer's Name				
Respondent's Name				
Result				
Next Visit Date				
Next Visit Time				

Results:

1 – Completed

2 – Not Completed to be continued next visit

3 – Respondent absent

4 – Postponed to next visit

5 – Other _________________ (Specify)

Total Number of Visits: 1

We are asking you to take part in a survey which seeks to understand important features of microfinance and contribute to poverty reduction in your region. This is part of a major research project conducted by the University of Greenwich. Your response is very important in enabling us to obtain the right picture of microfinance networks which is vital part of the project. All your responses will be treated in the strictest confidence. An overview of our project can be found via this link: ______________________.

1. General background

1.1 What is the name of your organisation?

1.2 What is the type of your organisation? (You can select more than one option from the options list that follows)

1. MFI
2. MFI Association/Federation
3. MFI Beneficiary
4. Self-Help Group
5. Bank
6. International Financial Institution
7. Donor
8. Microfinance Investment Vehicle
9. Investor
10. Money Lender
11. Insurance Company
12. Rating Agency
13. CGAP
14. Regulator
15. National Government
16. Regional/Provincial Government
17. Local Government
18. Post Office
19. NGO
20. Local Business Owner
21. Retailers acting as a Banking Correspondent
22. Technology Partner (including mobile technology)
23. Clean & Renewable Energy Firm
24. Housing Agency
25. Consultant
26. University
27. Health/Sanitation
28. Social Development
29. Other (please specify) ____________________

1.3 Which year was your organisation established?

1.4 Where are headquarters located?

1.5 At what level of the organisation are decisions made that affect the relationship with the MFI?

1. International ○
2. National ○
3. Local ○

1.6 What level of the organisation implement the decisions made relating to the MFI?

1. International ○
2. National ○
3. Local ○

1.7 How many people at this level of the organisation?

1.8 What is the type of your organisation?

1. Public ○
2. Private for Profit ○
3. Private not for Profit ○

1.9 What are the main institutional objectives of your organisation?

1. Profit maximization □
2. Purely financial sustainability □
3. Primarily financial sustainability □
4. Both financial sustainability and poverty reduction □
5. Primarily poverty reduction □
6. Purely poverty reduction □
7. Other (Specify)____

1.10 How are objectives being achieved? What are the strategic processes in place to attain them? Please explain how processes have evolved over time.

2. Social Networks

2.1 With which organisations you have <u>financial</u> relationships?

Relationships *List of organisations* [01]		*You give subsidied loans to* [02]	*You receive subsidied loans from* [03]		*You give commercial loans to* [04]	*You receive commercial loans from* [05]		*You give grants to* [06]	*You receive grants from* [07]		*You own (partly or totally)* [08]	*You are owned (partly or totally) by* [09]	*Comments* [10]

Referrals to other organisations:

1.

2.

2.2 With which organisations you have service relationships?

Relationships *List of organisations* [01]		*You provide technological service to* [02]	*You receive technological service from* [03]		*You provide health or social service to* [04]	*You receive health or social service from* [05]		*You provide training to* [06]	*You receive training from* [07]	*Comments* [08]

Referrals to other organisations:

1.

2.

3.

2.3 With which organisations you have **informational** relationships?

Relationships *List of organisations* [01]		*You send reports on financial sustain ability to:* [02]	*You receive reports on financial sustain ability from:* [03]		*You send reports on poverty reduction to:* [04]	*You receive reports on poverty reduction from:* [05]		*You transfer knowledge to:* [06]	*You receive a transfer of knowledge from:* [07]	*Comments* [08]

Referrals to other organisations:

1.

2.

3.

2.4 Do you have other important relationships impacting microfinance not captured above?

Relationships *List of organisations* [01]	*Another important relationship* [02]	*Another important relationship* [03]	*Another important relationship* [04]	*Another important relationship* [05]	*Comments* [06]

3. Future Collaboration

3.1 How could institutional collaboration with the organisations you have mentioned in the previous section be improved? Please elaborate in detail.

3.2 Relationship between which organisations, if established, would contribute to poverty reduction in your region?

3.3 Relationship between which organisations, if established, would improve financial sustainability of your region?

Thank you for your time.

10.2 Appendix B – Questions for Sari Seller Interviews

(27 October 2010 UOG)

Identification   SHG =

	Organisation				Country			Y	Y	M	M	D	D	Staff	
Code															
Ex.	*S*	*0*	*0*	*0*	*I*	*N*	*D*	*1*	*0*	*1*	*0*	*0*	*0*	*C*	*J*

Interviewer Visits –

	1	2	3	4
Date				
Interviewer's Name				
Result				
Next Visit Date				
Next Visit Time				

Results:

1 – Completed

2 – Not Completed to be continued next visit

3 – Respondent absent

4 – Postponed to next visit

5 – Other __________________ (Specify)

Total Number of Visits:

1. When did you start your sari selling business?

2. Suppliers
    a. Where do you get your saris from?

Name	**Trust**	**Pyr.**	**Jati**	**Spec.**	**BWDA**	**Help**

    b. For each one, do you get credit from this supplier?
    c. For each supplier, where on the pyramid of Tamil society is this supplier?
    d. Do you know what jati this person belongs to?
    e. Does this person have special influence in the sari business?
    f. Did BWDA help you contact this person?
    g. Do you go to any supplier for help and advice?
3. Financial Sources

Name	**Trust**	**Pyr.**	**Jati**	**Spec.**

    a. Who gives you money for your business?
        - Prompt respondent for following if not in response:
            - BWDA
            - SHG

- o Moneylender
- o Bank
- o Pawnbroker
- o Family
- o Friends & Neighbours
- o Chit Fund
- o Others (including other MFIs)

b. For each one, can you get a loan without giving jewels in return?

c. For each person giving you money, where on the pyramid of Tamil society is this person?

d. Do you know what jati this person belongs to?

e. Do you go to any financial source for help and advice on important matters?

4. Market Information Sources

Name	**Trust**	**Pyr.**	**Jati**	**Spec.**	**BWDA**	**Help**

a. Where do you go to or who do you go to find out information you need for marketing?

b. For each person giving you information, how much do you trust that the information given is accurate?

Totally trusting o o o o o No Trust

c. For each person giving you information, where on the pyramid of Tamil society is this person?

d. Do you know what jati this person belongs to?

e. Does this person have special influence in the sari business?
f. Did BWDA help you contact this person?
g. Do you go to any person giving you information for help and advice on important matters?

5. Customers (100 customers)

a. How many customers do you have? Who are your customers?
b. How much does each customer trust you?

Totally trusting o o o o o No Trust

c. For each customer, where on the pyramid of Tamil society is this person?
d. Do you know what jati this person belongs to?
e. Did BWDA help you contact these people?
f. Do you go to any customer for help and advice on important matters?

6. Other Sari Sellers
a. Do you know any other sari sellers including BWDA SHG members?
b. How much do these other sari sellers trust you?

Totally trusting o o o o o No Trust

c. Does this person have special influence in the sari business?

d. For each sari seller, where on the pyramid of Tamil society is this person?
e. Do you know what jati this person belongs to?
f. Did BWDA help you contact this person?
g. Do you go to any other sari sellers for help and advice on important matters?

Name	**Trust**	**Pyr.**	**Jati**	**Spec.**	**BWDA**	**Help**

7. Reverse Small World Network – Market Information Sources
   a. If you wanted to get information on the following, who would you talk to first?
      i. People who know about upcoming weddings
      ii. People who know about upcoming religious festivals
      iii. Beauty parlour owners, employees and Professional Aunties
   b. For each person identified, how much do you trust that the information given is accurate?

      Totally trusting o o o o o No Trust

   c. For each person identified, where on the pyramid of Tamil society is this person?

d. Do you know the jati of each person identified?
e. Does this person have special influence in the sari business?

Name	**Trust**	**Pyr.**	**Jati**	**Spec.**	**Why?**

8. Reverse Small World Network – Customers

Name	**Trust**	**Pyr.**	**Jati**	**Spec.**	**Why?**

a. If you want to have more customers, who would you talk to first?
b. For each person identified, how much do you trust that the information given is accurate?

Totally trusting o o o o o No Trust

c. For each person identified, where on the pyramid of Tamil society is this person?
d. Do you know the jati of each person identified?
e. Does this person have special influence in the sari business?

9. Reverse Small World – Learning from the Best

Name	**Trust**	**Pyr.**	**Jati**	**Spec.**	**Why?**

a. If you want to make your business better, who would you talk to first?
b. How much do you trust that the information given is accurate?

Totally trusting o o o o o No Trust

c. Where on the pyramid of Tamil society is this person?
d. What jati of is this person in?
e. Does this person have special influence in the sari business?

10. Reverse Small World – Kanchipuram Silk Question
    a. Who would you talk to first to sell a Kanchipuram silk sari worth 25,000 rupees given to you?
    b. How much would you charge knowing you would need to give the giver 25,000 rupees?
11. Sari Seller Personal
    a. What jati does your family belong to?
    b. Where is this jati on a 5 layer pyramid that represents the Tamil social structure?
    c. Does jati social network is a help or hindrance to doing business? Why?

12. Sari Seller Financial
    a. For 2008, 2009, 2010 what was the following financial information?

i. If you sell all your saris for the same price, please answer the following questions:
    1. How many saris did you sell in each year?
    2. What price did you sell them at?
    3. What margin did you make on each sari?

ii. Otherwise answering two of the following questions:

1. Revenues

Amount	2008	2009	2010
0 – 5000 rupees/year			
5000 – 10000 rupees/year			
10000 – 15000 rupees/year			
15000 – 20000 rupees/year			
20000 – 25000 rupees/year			
More than 25000 rupees/year			

2. Costs

Amount	2008	2009	2010
0 – 5000 rupees/year			
5000 – 10000 rupees/year			
10000 – 15000 rupees/year			
15000 – 20000 rupees/year			
20000 – 25000 rupees/year			
More than 25000 rupees/year			

3. Profits

Amount	2008	2009	2010
0 – 5000 rupees/year			
5000 – 10000 rupees/year			
10000 – 15000 rupees/year			
15000 – 20000 rupees/year			
20000 – 25000 rupees/year			
More than 25000 rupees/year			

13. Questions on sari seller's poverty level based on Grameen's Progress out of Poverty Index for India:
    a. How many people aged 0 to 18 were in the household?
        i. Five or more
        ii. Four
        iii. Three
        iv. Two
        v. One
        vi. None
    b. What was the household's principle occupation?
        i. Labourers (agricultural, plantation, other farm) hunters, tobacco preparers and tobacco product makers, and other labourers
        ii. Others
        iii. Professionals, technicians, clerks, administrators, managers, executives, directors, supervisors, and teachers
    c. Was the residence all pucca (burnt bricks, stone, cement, concrete, jackboard/cement- plastered reeds, timber, tiles, galvanised tin or asbestos cement sheets)?
        i. No
        ii. Yes
    d. What was the household's primary source of energy for cooking?
        i. Firewood and chips, charcoal, or none
        ii. Others
        iii. LPG
    e. Did the household own a television?

        i. No
        ii. Yes
    f. Did the household own a bicycle, scooter, or motor cycle?
        i. No
        ii. Yes
    g. Did the household own an almirah/dressing table?
        i. No
        ii. Yes
    h. Did the household own a sewing machine?
        i. No
        ii. Yes
    i. How many pressure cookers or pressure pans did the household own?
        i. None
        ii. One
        iii. Two or more
    j. How many electric fans did the household own?
        i. None
        ii. One
        iii. Two or more

14. Is there anyone else that we should talk to about your sari business?

Notes:

10.3 Appendix C – Sari Seller Questionnaire II

(27 October 2010 UOG)

Identification SHG =

	Organisation				Country			Y	Y	M	M	D	D	Staff	
Code															
Ex.	*S*	*0*	*0*	*0*	*I*	*N*	*D*	*1*	*0*	*1*	*0*	*0*	*0*	*C*	*J*

Interviewer Visits –

	1	2	3	4
Date				
Interviewer's Name				
Result				
Next Visit Date				
Next Visit Time				

Results:

1 – Completed

2 – Not Completed to be continued next visit

3 – Respondent absent

4 – Postponed to next visit

5 – Other _________________ (Specify)

Total Number of Visits:

Thank you for participating again. This will questionnaire will be shorter than last year's. We will be doing three things:

A. Last year you gave a list of organisations you were connected to get supplies, finance, market information and customers. Can you give the name of the person or persons you work with in these organisations such as banks, sari shops, pawnbrokers, moneylenders, etc?

B. You see a target diagram in front of you. The little white circle in the centre is you. We want to place all of the individuals you named today and last year on the diagram around you. Could you indicate how close to you each individual is to you on this diagram?

C. Finally, we need to know which of these individuals know each other. Can you indicate who knows each so that we can draw a line between them to indicate this?

Thank you for your help!

10.4 Appendix D – Transcript of Interview with Mona Sinniah

Transcript of Interview with Mona Sinniah

August 29, 2010

Cornell Jackson (CJ): Hello, this is Cornell Jackson interviewing Mona Sinniah on August 29, 2010. Thank you, Mona, for agreeing to this interview. Let me start with the questions that you have in front of you. When you are in India, where do you normally buy your saris?

Mona Sinniah (MS): I usually go and buy them from very big sari shops. The reason being is that you get a better choice.

CJ: OK

MS: Buying saris is quite an art. We women are quite particular about the saris we wear and the colours and the designs. And, of course, we buy them sometimes for weddings and sometimes for other special occasions. Sometimes I am buying gifts for my relatives: my sisters, my sister-in-laws. So, in that way we go to have a different choice. If I were buying for my auntie, I would buy her a cotton sari. If I buy a sari for myself, I would buy myself a silk sari because cotton saris are worn by younger women, we do not wear them all the time. Maybe to a temple. Maybe for a funeral.

CJ: Right.

MS: We will never wear a silk sari, only a cotton sari to a funeral. So, I will have one or two cotton saris but basically no. Because I wear my saris few and far in between, to temples, for special occasions, for weddings. So, I like to have nice silk saris.

CJ: OK. Just one other question while I'm thinking about it. In the past 10 to 15 years, I know there have been, I don't want to use the word polyester, combining of cotton and other fabrics. Can you buy those or do you stick to the traditional cotton and silk?

MS: No, I have had other type of saris but not polyester. Because in our minds is for the cheap. It's cheaper.

CJ: Yeah. Wrong brand image!

MS: Yes, wrong brand image! Also, the polyester saris come in terrible colours, horrible designs! And if you ask a woman like me to wear such saris, I would never!

CJ: OK.

MS: But, saying that, I do have a Georgette polyester sari and most of the Georgette polyester saris were made in Japan. And, I have one that I have had for about 20 odd years and I still wear it and it's beautifully designed.

CJ: Was this sold in India this Georgette or was this bought in Malaysia?

MS: Bought in Malaysia.

CJ: OK

MS: I have one or two like that, that came out in the late 80's, early 90's where Japan realised that there were women of higher educated class and taste who wanted nicer looking polyester Georgette saris. So, they brought out a lot of Georgette saris and I have actually three. For my 21st birthday, my mother took me to the shop in Malaysia and she said, I said I wanted a sari. I chose myself a Georgette polyester and I still have it.

CJ: OK

MS: And they're good quality too. They're very expensive but good quality.

CJ: OK. You already mentioned on the next question what you look for. You look for colour. You look for design. Silk for certain functions, cotton for others. Is there anything else that you haven't mentioned that you look for when you go buying saris?

MS: We also look at the sequin work that is on it.

CJ: Is that the ziti thread that they use to put the gold on?

MS: Yes. Some of them are very elaborately done and usually they are worn for parties, receptions, wedding reception parties but in my traditional family we only wear silk for weddings. If you want to wear one of these elaborately sequined, beaded saris, you wear it for the reception. So, we do look at clothes, saris that way but I find wearing them very uncomfortable because they tend to a braise your skin under your arms if you have a short blouse.

CJ: Is that because it is also put on the inside.

MS: Yes, that's right. So, I find it very uncomfortable and very heavy and me being very skinny, not a normal fat Indian person. It just doesn't stay on. It's like I'm wearing an armoured suit. So, I stay clear of any sequined saris. I don't even have one at the moment.

CJ: OK. OK. For someone selling you the sari, what is, for you, the most important skills and characteristics that you need?

MS: I like customer service and someone who will show me as many saris as possible. Because saris are folded beautifully and they are not draped. A few saris are draped around a mannequin. Most of them are not hung. They are all beautifully folded in showcases. So, you have to have them opened out. And because the pallu, you know the pallu?

CJ: Yes.

MS: The pallu that goes over one side of your shoulder. Usually, the colour and the pattern varies. So, we need someone who would take it out, open it up and let us drape it on ourselves. Usually most big shops allow that. So, we drape it and if it suits us, we take it. And that is what we want from a salesperson.

CJ: OK. Uh...

MS: Who taught me to tie a sari?
CJ: Yes, who taught you to tie a sari?

MS: My mother and my sisters. You see how your mother ties and when you have older sisters and when they have to tie saris, my mother will teach us how to tie saris and then you watch. That's how I learned to tie saris. Basically seeing my mother put on her sari every morning.

CJ: So, you just watched her and copied it.

MS: Yes, you copied it and then when she's teaching my sisters, I used to listen to all the little tips. You know how you do the pleats?

CJ: Right.

MS: Then you learn. You practice! You take a piece of long cloth and practice and say my mother did the pleats this way. So, you did that. Later on you do have aunts who'll come and give you extra little tips here and there. So, you follow.

CJ: OK. OK. Do you remember, not how many saris you have but the history of and who bought it and particular emotions that come along with each sari?

MS: Yes. Absolutely! Every sari tells a story to me. I have had, as I said, for my 21st birthday my mother gave me a sari. I still have it. It is very precious. I think I must have worn it twice or thrice my whole life and I keep it. The other day I took it out and smelt it and OK, I need a new blouse for it. So, I would wear it. And because it is a Georgette, it's a very see through sari. So, you can't where it to temple because you don't want men to be .....

CJ: Yeah.

MS: So, I would wear it to maybe for a friend's birthday party, a function or a evening out somewhere where everyone is wearing a sari. So, yes. And then I have saris my mother has bought for me from India given me for Diwali

CJ: Right

MS: Or I may have wanted one and I say to her "You know, when you go to India, get me a colour in that". I have had aunties who have given me. My sisters have given me saris that I have. Yes, everyone of them has got something.

CJ: OK.

MS: So, saris are like treasures for an Indian woman. We never wear a sari if we don't like it.

CJ: So, it's almost like a network of emotions or connections that you have with various members of your family and friends.

MS: Yes! That's right.

CJ: OK. It reminded me, when you were talking about your almost see-through sari, there was a phrase or term I came across during my research saying that women don't want to be too austere like a nun or don't want to be too "filmy".

MS: Yes, so that in-between.

CJ: Yes, you want to be in-between

MS: But, we girls love the idea that we can seduce with a see-through sari too. Because when I was much younger I would wear my sari so low on my hips, my mother would say, "Who are you trying to seduce?" You know, I thought "Oh my God! Is this what I am subconsciously doing?" Actually the fact was I was young, I had the figure for it and because my sisters use to do it, I thought I could do it too, never realising the consequences of it.

CJ: Right.

MS: But we did do that when we were much younger. Even now if you had the body and you asked me to do it, I'll say no. I'll rather leave it to the imagination.

CJ: OK. OK. I think you have already answered the next question. Yes, you do remember the history of each of your saris. And you also answered the other one about them bringing up a web of emotions and relationships.

MS: Yes.

CJ: Now onto the next section about possession. The question I have here is for the women your cousin sold the sari to, did she know if the saris remained in the control of the mother-in-laws of the women?

MS: No. Where they grew up and where she was selling, it was a very open community. I the sense that the daughter-in-laws lived with their mother-in-laws, they had the right to buy saris. But, I have heard of homes where the mother-in-law buys and keeps the sari and dishes it out as and when she thinks they should have one. But this village I have gone to ...

CJ: That’s not the case.

MS: No. Where she got married and went, the mother-in-law does not do that.

CJ: OK.

MS: But, saris are seen as possessions because they are expensive. Like you said, they are kept under lock and key. It’s almost as good as gold for a woman, an Indian woman. I get very upset when anyone wants to borrow my sari and doesn’t look after it properly. I don’t know what it is. After reading your questionnaire, it made me think what is it? I think it’s to do with tradition and customs. That if you wear a sari, you’re a woman. You’re supposed to act like a woman. You’re supposed to act like a goddess. The more I go to temple and I yearn for the goddess’s sari. I must tell you something. In India they do it too but here in London they do it a lot. What they do is like me, I say prayers for my mother. I would buy a sari, a beautiful silk sari take it to the temple and say today’s my mother’s prayer and use this sari for the goddess. So, they will tie the sari for the goddess and they’ll use it two or three times and then I will say to them, I want it back. I want to wear it because the goddess has worn it in honour of my mother. And before they give it to me, they ask me to put in a donation to the donation box at the temple. So, like that, I have one or two saris. Sometimes I’ll give it away. Actually I have three such saris and those saris mean a lot to me.

CJ: A lot of sentimental attachment to those saris.

MS: Because we believe that when we tie our saris, we become like the goddess. We adorn ourselves and we are pure. Our soles have to be pure and clean and beautiful. And when you see how the goddesses are adorned at the temple, it’s amazing! I have to show a photo. I‘ve got it on my camera. It’s amazing! So, I think that is what they try to instil in us. So this sari is something that makes an Indian woman sort of like a goddess.

CJ: OK

MS: I think that is why the poorer people yearn for silk saris because the goddess is never, ever ...

CJ: In a cotton,

MS: In a cotton, in a polyester or even a Benares silk. It is always Kanchipuram. See if you buy for the temple it has to be.

CJ: Is Kanchipuram just for Tamil women? If you go to Kerala or Karnataka or Andhra Pradesh, would it be the same?

MS: Andhra Pradesh would be the same because my mother is from Andhra. Tamil Nadu would be the same. Kerala I cannot tell you. Kerala is very poor and they always live in cotton saris. So, if you, silk saris may be very expensive for them. And so they only do cotton loom industry there. So, I think they get married there, as you know, in white saris. You know that don't you?

CJ: I probably read it but can't remember it.

MS: In the Hindu religion, white is used for mourning and for

CJ: Widows.

MS: Widows, yes. So, I don't know where that comes from for Kersalites. So, I cannot tell you within Kerala. A lot of Keralan women do wear Kancipuram silk, beautiful silk. I got good friends.

CJ: I knew that Kanchipuram was renowned for its silk saris but I wasn't sure how far widespread those saris went in South India.

MS: Central and South India. Kanchipuram also, where the silk saris are made, has got the famous Kanchipuram Meenakshi Temple.

CJ: OK.

MS: I believe that these looms were initially initiated for silk for the goddess.

CJ: OK

MS: It then became a huge industry and I have two saris from Kanchipuram. I went to Kanchipuram a few years ago in 2003 or 2004 and I went there and bought two to three saris there.

CJ: OK.

MS: And for me, it was like my mother used to come to buy it here. For me it was to come to see how it was done.

CJ: Your family is from Trichy so it is not a short trip from Trichy to Kanchipuram.

MS: No, it’s not.

CJ: Cause Kanchipuram is just west of Chennai if I remember right.

MS: Yes. We went to Kanchipuram. We were going to Bangalore by car so we stopped in Kanchipuram.

CJ: OK. Now your cousin, I didn’t realise your cousin married the president of another village.

MS: Yes.

CJ: So, she would have had access to, because of her status, the wives of the important men of the village.

MS: Yes.

CJ: It would have been relatively simple to sell to those women.

MS: Very simple. That’s right.

CJ: I know that you talked about this before in our previous conversation but could you remind me of the common festivals where saris would be given?

MS: The first time a girl wears a sari is when a girl comes of age. You know that in the Hindu tradition. And usually after that, it depends on wealthy the family is, she might get a sari for the New Year which is the Hindu Tamil New Year. I have the calendar here and I’ll show you. Then you get Pongal. I told you Pongal, a whole month of harvest festivals. Every day is in honour of something or other. Then Dewali and then weddings. These are the five times I can think of giving and maybe birthdays too. Six I would say.

CJ: OK.

MS: It depends on whether a girl wants a sari. But, I do not know what it is like in the village. Cause sometimes in time after you come of age and before the time you get married, you may not wear a sari. You still wear the skirt, the blouse and the little cloth. Pavarathalimi it's called.

CJ: I have also seen described something called a shalwar kamiz.

MS: A shalwar kamiz is Punjabi where there a trousers and the blouse comes down to the knees and then you have the sash. But, in the village, girls wear a long skirt and they wear a blouse and that is a Pavarathalimi. That is more Tamilian.

CJ: OK. I have actually seen a shalwar kamiz worn by some of the young women in Villupuram who were not married yet. And, also as a school uniform in some schools.

MS: Yes. That's right they do. But, in India it's like this. In India it's cut like that and it usually has a skirt. (Showing a picture of Pavarathalimi).

CJ: OK

MS: And it goes with a sash.

CJ: Right.

MS: It's like a little mini sari. I have one. Although I'm a grown woman, I love it! So I have stitched one for myself. I had it done and I bought the material in India. So, it's like that. And it's tucked in here, retreated and taken around just like a sari.

CJ: You put it over your right shoulder. Most saris are worn in the Nivi style which the pallu is over the left shoulder.

MS: No, it's actually the right shoulder. I've always worn mine over the right shoulder. (Starts pantomiming putting sari on and putting pallu over the shoulder) Oh, left shoulder! Yes, sorry! Yes, of course! It comes this way and goes over the left shoulder. Yes.

CJ: OK.

MS: It's over the left shoulder sorry.

CJ: That's OK.

MS: Forgive me, I forgot.

CJ: That's OK. How common is it for wealthy women to give away saris?

MS: It is very common. It's for temple celebrations usually.

CJ: Connected with a festival?
MS: It is usually connected with a festival. Or, if something good has happened in their family, they want to give thanks and say we give this to the poor.

CJ: OK. OK.

MS: Those are the two reasons.

CJ: OK. And how one find out about these women who wanted to do this?

MS: Usually they would send word by word-of-mouth saying "I'm going to do this on such and such a day" and usually it would be with a temple celebration.

CJ: OK
MS: So, people will know and people will turn up. And that's how they do it.

CJ: So, you would have to be somehow connected to her network in order to get her word-of-mouth, to be able to get the word that this is going to happen in the temple on a certain day.

MS: Yes. Recently someone had a festival in the temple. I think it was earlier this year but she only gave out to married women.

CJ: OK.

MS: So, if you were single or if you were divorced or whatever, she didn't do it. She didn't give it to you. So, she brought, I think, 36 saris or something. And all the women there who were married, got a sari each.

CJ: OK. OK. Sometimes saris are given as an act of religious piety. Again, how often does this happen and how would you find out about this?

MS: Usually there are certain times of the year when you have certain celebrations where it's given out. And if you go on that day. Say you were my friend and you were going to give it out, you'd say, "Mona, I'm doing this on such and such a day, come up, come in and get it, because it is good for my soul and good for your soul to receive one." But, I went to temple recently, I was not, I'm single, they didn't tell me. So, when I went there the prayers were going on and she was handing out to those who were ...

CJ: married?

MS: Married. So, all the married women got it.

CJ: OK.

MS: So that how it is. It is usually word of mouth.

CJ: Are there any concern about the saris being given away being ritually polluted or that is not a worry because no one would do that?

MS: When you say ritually polluted, I should have asked you that question earlier on.

CJ: There was some reading I've done that indicated, and this was for a specific situation of a peddler selling second-hand saris, and the women were worried that if they bought it, maybe it was ....

MS: Given?

CJ: Yes

MS: Ah! OK. I think I have never come across such things before.

CJ: OK

MS: Maybe because I don't buy second-hand saris apart from the saris we have donated to the temple.

CJ: Right.

MS: to the goddess. The goddess has worn it. I clean it.

CJ: There's no issue with that.

MS: Yes. That is no issue but I would never go and buy second-hand saris from anybody. It is something that we are not brought up to do.

CJ: OK

MS: So, maybe there are peddlers doing it in India because people are poor and they have to sell their saris. You know, expensive saris. I have no experience of that.

CJ: OK. One other question I forgot to ask you is who do you go to normally when you are buying saris for yourself for help and advice?

MS: No one.

CJ: OK

MS: I decide.

CJ: You have enough experience by now to know

MS: Yes! I never had to ask anyone apart from my mother because she in the beginning, when we used to go to buy saris or went to India, she used to tell us "It looks like Kanchipuram, it's not Kanchipuram. It's got cheaper thread woven into it. It is not pure silk." So, she would tell us how to touch it, to feel it and to feel how good Kanchipuram silk is. So, that we have. But, now we go and we sort of know. And we know big shop owners now. You come to buy and they are not going to cheat you.

CJ: If you establish a trust with these people...

MS: Yes, it's a trust and if you don't like it, you go back and throw it in their face. They will accept it too because they know that once they sell you, they'll have your custom, you'll come back and back and back. So, now when I go Radha Silk in Chennai, wow! I get teas and coffees and everything. Men sit down. They'll assign one man who will show sari after sari after sari until I'm tired and I'll say, "I'm tired." But, they'll say, "No, you have to look at this one too."

CJ: You don't go to India that often but if you lived there you would go often enough that they will know your taste and when you return they would show everything that fits your taste.

MS: That's right.

CJ: All of the reading I have done talks about the sari shops, the emporiums and the men who sell in it. Don't women sell saris?

MS: Yes they do.

CJ: OK.

MS: But, it's just as I said to you before, the businesses were all established by men. Women never worked in India before. And, somehow the sari shops were always run by men. Now if you go to some of the sari shops in Trichy and Chennai, there are young girls who are selling but you find they're not in the sari section. They're more in the section that sell shalwar kamiz and modern clothes for children. I think it's because you have to open up. The stamina. The men have the stamina to open up and saris are heavy. And folding them back

CJ: OK

MS: And the other reason is mulam. Mulam means from their nose to the tip of their hand is a yard.

CJ: OK. You'll have to tell me how to spell that

MS: M-U-L-A-M. It's like a yard. That is how they will show. A sari is 6 yards. They will do that and say "See!" (Acts out seller measuring out mulams) Some of us will ask, "Is the sari 6 yards? Does it have a blouse?" and they'll say, "Yes, this one has a blouse."

CJ: Yes, my reading indicates that most saris are six yards but the more expensive kind tend to be nine yards.

MS: Nine yards? No. They are for a special part of India where the women are very tall. So, they need more. Also, the blouse is woven. The blouse is already weaved in to the saris. Yes, there are nine yard saris.

CJ: OK. The next section, you already answered the first question, saying that puberty is when a girl first wears a sari.

MS: Yes, coming of age.

CJ: Not the school farewell. On the phone, we did talk about the young man who buys his mother a sari with his first paycheque. If you can just go back and say who he would get help and advice from to buy that first sari.

MS: OK. He might ask his aunt or his sisters but I think he will know what his mother is wearing day in and day out. It's like you would know what your mother wears, what colours she would like in a skirt or a blouse. Or, did she like to wear trousers or a dress. So, he would know. He could ask an aunt. He could also go to the shops where they buy and say my mother is this age. He may not have enough money to buy a silk sari so he may buy a ...

CJ: a cotton

MS: cotton. Or she may be a widow so he may buy her a nice ...

CJ: white

MS: White one. Now days all the white saris are a bit untraditional. They come with green borders and yellow borders.

CJ: Is it traditionally white with red borders if I remember right?

MS: No. Just white.

CJ: OK. In your experience do young women sometimes go to traditional aunties to learn how to tie saris?

MS: Yes, they do. More and more women are professionally fashioning themselves as women who know how to tie the sari and go around and teach women and young girls, " It's much sexier ... blah, blah, blah" and earn money. And also we found that long ago when my sisters were getting married, no one came and tied the sari. We did it. The sisters would help each other. The mother would help the daughter. As I have grown up, when I got married, I'm divorced, my aunt, one of my aunties, through marriage, she came and did it. She did all the makeup and the sari and she charged me. I think it was 250 Malaysian dollars. I didn't mind that.

CJ: Right.

MS: I thought, yeah, come and do it. I know my older sister, she tied her own sari. My mother helped her. The makeup was done by my sisters so she didn't have anybody do it. But, I think it's becoming a fashionable trait now, not long ago.

CJ: OK. Would the go to the point of asking for help and advice from such women in buying a sari?

MS: I think it depends on whether the girl is not confident enough or she doesn't have a mother or whatever. Yes, she would ask. But, most women make up their mind on what they like on what they see and things like that. Like, I know. Throughout the age, there were certain things of my mother's saris I liked and I wanted similar saris like that.

CJ: OK.

MS: Which is strange.

CJ: No, not necessarily. No. I read one story where a professional auntie would...

Interviewed interrupted by dog barking. Interview resumes after a short while.

CJ: Where was I? Yes....

MS: About advising purchasing a sari.

CJ: You said ...

MS: Depending on the girl ...

CJ: Right. I hear or read a story about one professional auntie who if a girl saw a woman on a TV soap or movie and they wanted her sari tied like that, she (the auntie) could tie it like the TV soap star or the movie star and that is how she got her fame.

MS: It is very easy to learn how to tie a sari because there is only one basic technique in tying a sari. But, it's how you fine tune. It's how you get the pleats beautifully in the middle and how, you know, some women do not cover their belly because they want to seduce and they bring up the pallu in a much smaller way.

CJ: Right.

MS: This is all. Yes, if you see, yes. There are some women who are very clever because women in the village are not thinking of seducing any men. They tie to cover their modesty.

CJ: Right.

MS: That's the way they are brought up. This is something new for them. Yes. Lots of women go about and teach that. But, if you go and show me something, I would tie it exactly the same. Whether I can hold it with my confidence is a different matter.

CJ: OK. OK. We talked about weddings in our phone conversation. If you could generally say, I know that the parents have a role in buying the saris for the bride and saris for the significant female relatives of the bride and groom. What are the rules? Who buys what for whom?

MS: I found that in weddings it's usually the bridegroom's side that buys saris for all the sisters.

CJ: Not the bride?

MS: No.

CJ: Oh, the bride and groom?

MS: No. The bridegroom always buys the bride's sari.

CJ: OK

MS: Both the engagement sari and the wedding sari is bought by the bridegroom for the bride. At the wedding, the bridegroom, the bridegroom's family, will buy saris for his mother, his sisters and if he has them, his aunts. But, the female side, the bride's side, I don't know. I have never gotten a sari when my sisters got married. Maybe it's because I was far too young to wear a sari. I wore a long Indian dress. So, I am not sure. I can't tell you that.

CJ: OK

MS: I think I have said that before.

CJ: Who would these people normally go to for help and advice in buying these saris?

MS: They would go, the bridegroom's mother and the bride's mother will go to buy the bride's sari together. Usually that's what they do. But, I have heard in the villages that the bridegroom will just go with his mother, his father and maybe his aunt. Because when they buy the sari, they look at the time. Because the time has to be correct, The day has to be correct. And they will never buy it on a bad day. If they feel that the day is a bad day, they won't buy it. They will go and choose the sari. Usually they will think the girl is dark, we'll get a lighter colour. The girl is fair; we'll get a darker colour. But, usually, as you know, saris are always red. Red, then blue and sometimes green. But, they never use any other colours.

CJ: OK.

MS: Basically it's red. If they are going to buy saris for the mother and sisters and all, they'll just go to the shop together.

CJ: OK

MS: It's the men in the shop who say, "Wow, that's a wedding delegation that has come to the shop. OK, it's a good occasion; you've come to buy saris and shoes"

CJ: OK. OK. Do friends and work colleagues join together to buy a sari for the bride?

MS: In our Indian tradition in Malaysia, no.

CJ: No.

MS: Maybe in India yes.

CJ: OK. We have already talked about widows...

MS: Yes, it is usually white.

CJ: Do widows buy their own widow's saris or is it given to them?

MS: No. When they become a widow, it is usually given to them. It's usually the husband's side that will bring it to them, the kolitkodi. Kodi means gift. It's like she has been a part of the family. Now they will give the white sari. Usually widows, I don't think, will go out and buy their own. I'm sure they have children. Each year they'll get one for Diwali and Pongal. I know my aunt, my mother's sister, because she didn't have children, she used to buy her own. She used to wear light brown. And now I have seen a lot of them on my mother's side, who are Andhra people who wear between white and brown.

CJ: OK, OK.

MS: Maybe because white gets dirty. They're going to work on their farm. They wear brown.

CJ: OK. Does your cousin have maids?

MS: Yes, she has.

CJ: Has she ever given them saris?

MS: She has given away saris to her maids. You asked me what importance? Very! Because they are all poor and they work and toil on the land. So, that any sari given to them is very important to them.

CJ: OK. Does your cousin ever consider the taste of the maid when giving away saris?

MS: No, I don't think so.

CJ: OK.

MS: No, whatever she wanted to give, she would give. But, then she'll think it's a silk and oh my God it's very expensive. Usually they'll get cotton saris. Some silk saris are given.

CJ: OK. Where would the maids buy their saris when not given them?

MS: In the village, I have seen peddlers come on motorbikes. Where my uncle lived, two villages away, there is a little village which is quite big. It's called Chittikollam. They have one or two sari shops. There is enough for him to carry stock and make a little bit of profit so he doesn't have a big turnover. So, they do go there.

CJ: OK. OK. So where would they get help and advice? From their mothers? From their sisters?

MS: Yeah, maybe in the material type. As I said, they have a mind of their own from seeing movies. They see someone having a sari or they see a picture and think they want something similar.

CJ: Right.

MS: But, they may not get everything that they see.

CJ: OK. Next section. I ask about an individual woman selling a sari. What advantages do they have? What disadvantages do they have in selling a sari?

MS: I think advantage is that the woman wants to be independent of their husbands and make some money on her own. The disadvantage I feel is, one, her husband may not....

CJ: Appreciate?

MS: Appreciate her spending her time going out shopping, bringing it back and selling it. He may feel that she is the housewife and he is the president like in the case with my cousin. She can stay at home and look after the children, cook and clean but why does she have to do it. The second disadvantage is that if they don't carry enough stock, then the villagers may not go to her. And sometimes she will go and have only cotton saris. One year when I went, I said I have to give gifts for the aunties. She said I have saris. I only have cotton saris. I said, no, I don't want all cotton. I want some silk. I looked at the cotton saris and they were not to my choice. If I were going to give them away, I would buy beautiful ones.

CJ: OK.

MS: So, that's me.

CJ: The last question in this section is on skills and characteristics a woman sari seller you feel they would need to be able to be successful doing that?

MS: I think one is, she should be wearing saris in a nice way. Showing off....

CJ: Herself?

MS: Showing off herself and being a role model and two is the quality of the saris. Although they may be poor, they are always looking to see if the quality is good. That's something with Indians. I don't know if you realise that. Everything there is a quality attached to it. I think these are the two things. Of course, the third one is whether they can afford it. Whether she is bringing saris and bringing an exorbitant rate or is she putting a small margin and selling more saris to make a profit. So I think these will be the three things.

CJ: OK. Now on producers and designers, I don't know....

MS: I don't follow any designers let me tell you that because I think I'm shrewd. I know with designers you have to pay a premium for their name, all right? I have not come across many designer saris that I have liked because they are far too outrageous. Or they are too conservative. OK? Because I buy conservative saris to wear to temple, I like sometimes the middle of the range saris. So, no, I do not follow them.

CJ: OK.

MS: Though I like to look at them. That's it. Has Kollywood ever influenced me buying my sari? Never!

CJ: OK.

MS: Never. Are you aware of Tamil TV soaps? No. I hardly ever watch Tamil TV soaps. I don't have time for them. Though, I do watch them when I go to see a friend.

CJ: OK. That's fine. Which of the sources I have listed, when your cousin was selling saris, did she use and how strong was the relationship with them?

MS: OK. There was more about giving the saris away for religious reasons. I know she did go for handlooms but I do not know what type of relationship she had with Co-op-Tex. I can't tell you that. As far as cooperatives, I don't think she was a part of any cooperatives.

CJ: Did she go to the cooperatives to buy saris?

MS: Yes she did. She went to handlooms.

CJ: Any particular style?

MS: I think it was Kanchipuram and Coimbatore because we wear a lot of Coimbatore cotton.

CJ: It's not that far away from Trichy.

MS: No, it's not that far. I think it's about three to four hours. It was more the sari. It was Coimbatore cotton. If people weren't talking about Coimbatore cotton, it was in Madurai. Madurai cotton was very important. Because I told you that is where my father is from. I have brought back saris from that area. I can't tell you about Salem or Tranvapore. I don't know where Tranvapore is?

CJ: I think it is somewhere in southern Tamil Nadu.

MS: I think it's Kerela. Is it?

CJ: I did look it up on Google Maps but I can't remember.

MS: The other thing is sari shops. She went to sari shops, I know. I don't think she went to any weaving mills because there weren't any weaving mills around there. I don't think she went to sari middlemen. Maybe entrepreneurs but what do you mean by entrepreneurs? Because sari entrepreneurs and sari shops are the same for me.

CJ: The way they described it in the literature is people who sort of built the network up between the weavers, the handlooms, the mills, the shops, emporiums....

MS: She only went to sari shops.

CJ: Did she go to a particular sari shop?

MS: She went to a few different sari shops in Trichy.

CJ: Do you know if she had a strong relationship with these people?

MS: She would come in and say she was coming in to but in order to sell. She would buy them in bulk. She didn't have a very good choice. I wouldn't buy them.

CJ: OK. In her negotiations with them, do you feel she had a strong relationship with them?

MS: Yes. She was going back to them for quite a few years. She was going to the same shops.

CJ: And the handloom weavers like Kanchipuram, Coimbatore and Madurai, did she have a strong relationship with them?

MS: No, I don't think so.

CJ: OK. You said you weren't sure she went to Co-opTex at all.

MS: No, I don't think so. If she did, she would have told me. Because I asked her where she'd go to buy them and she told me.

CJ: You said that women giving saris away for a religious reason was a source. I assume it was a strong relationship with those women.

MS: Yeah. They will know that she has the saris and they would not have to buy it and she would bring it and they would just pick it up. Being older women, they do give away a lot of cotton saris.

CJ: Who financed your cousins business?

MS: Her whole family.

CJ: Her family did.

MS: Money from herself. So, she did not get money from anybody.

CJ: OK. OK. Where did she get her information from on customers and ...

MS: It was networking actually.

CJ: Networking. And who did she network with?

MS: All the people. The friends and relatives of the wives of important men.

CJ: OK.

MS: There were professionals. Professional aunties? No. I think it was upcoming weddings. Religious. For "e"(upcoming weddings), "f" (upcoming local religious festivals), "g"(upcoming school farewells), "h" (Friends and relatives of the wives of important men). There were no professional aunties, “n”(Women that other women turn to for advice about saris) and that’s about it.

CJ: OK

MS: It was a very small village. It was a very small village.

CJ: She would network among all these and because of her status.....

MS: Everybody would say Nimi had it. Go to Nimi. And she was a very slender girl like me. Pretty and dressed and tied her sari beautifully. She wore beautiful gold earrings and always looked neat and tidy.

CJ: OK. Just curious. This is another section, 13.

MS: The first one is who did your cousin socialise with? All the villagers. There was nobody else.

CJ: Who did she go to anyone particular for, I am thinking specifically in two ways? One, help and advice generally. Also, help and advice in her sari business.

MS: I think the local headmen. That would be her husband and father-in-law who was the president before.

CJ: OK.

MS: And anybody who would finance her. I know she was talking to a few insurance people.

CJ: OK.

MS: I don’t think in the end she did that. Cause she was also selling insurance. And she would ask advice from friends and relatives and say, “I’m selling and do you know anyone who wants to buy?” So, that’s how she did it.

CJ: You said, if I remember right, that your cousin was doing OK but it wasn’t a wildly successful business.

MS: No

CJ: But, it was not unsuccessful either.

MS: No. It was neither successful nor unsuccessful.

CJ: OK. Obviously being married to one of the local headmen gives her an advantage.

MS: Yes, because she was at the top. She was the wife of the president. She’s right at the top.

CJ: Most of her customers, where did they fall in the pyramid?

MS: Below.

CJ: Below.

MS: Some on the same level some below.

CJ: If I were to draw a pyramid, I’ll make it relatively simple, we have five levels here. I put your cousin here at the top. Where?

MS: All levels.

CJ: Her customers straddled all levels of society.

MS: I know that all different kinds of people used to buy from her.

CJ: OK. And the shop owners who supplied her, were they....

MS: They were big powerful sari shop owners

CJ: Would they be in the top two levels?

MS: I think they would be at the top.

CJ: Top. OK. What jati did the family belong to?

MS: My cousin belonged to? Right at the top because they are Reddiars.

CJ: I have a list. This list comes from Pulicat which is, of course, north of Chennai. I don’t know if you recognise all these jatis.

MS: I recognise all the names here. No, they do not come under these. They come under Reddiars.

CJ: Originally most jatis had an occupational or craft basis. What did the Reddiars do back in the past?

MS: Reddiars were land owners and collectors.

CJ: What did they collect?

MS: Money for the land owners. They were known as land collectors.

CJ: OK.

MS: Do you have them on there?

CJ: I don't have Reddiars on the list.

MS: This is very interesting.

CJ: This is from a different area of Tamil Nadu

MS: Yes.

CJ: I think that Pulicat is very near the border of Andrha Pradesh.

MS: But, it doesn't matter. I recognise all the Kammalrs, Saliers, Vanniars, Tailors. Vanniars were also adobe men.

CJ: OK. Did your cousin consider herself an outsider or insider in the sari business.

MS: I think inside.

CJ: You think inside. OK.

MS: Because everyone came to her for saris.

CJ: This set of questions is to see, not now, but when she was selling saris.

MS: The first one is "a", five or more.

CJ: So that was how many people aged 0 to 17 were in the house. And the principal occupation of the household?

MS: It's the first one, agricultural. They owned land.

CJ: They owned land OK.

MS: They were land owners. So, would you put it under “Others”?

CJ: I think I will put it under “Others” because her husband was not a labourer.

MS: No, he wasn’t.

CJ: OK. Now the house they were living in, was it all pucca?

MS: Yes. It was all bricks.

CJ: Primary source of energy for cooking?

MS: They had firewood and they had LPG.

CJ: Did your cousin have a television?

MS: Yes, they did.

CJ: Bicycle, scooter or motorcycle?

MS: Motorcycle.

CJ: Did they have an almirah?

MS: Yes they had an almirah.

CJ: A sewing machine?

MS: Yes, they did.

CJ: Pressure cookers, any?

MS: I think they had one or two. I can’t tell you but I think it is at least one.

CJ: At least one.

MS: Every Indian house seems to have at least a pressure cooker.

CJ: Electric fans?

MS: Electric fans, yes. They had two or more.

CJ: OK. The last question is who I should talk to about the Tamil sari trade?

MS: The priest.

CJ: The priest. At any particular temple?

MS: There is an Indian priest at an Indian temple in Stoneleigh. He can tell you a lot.

CJ: I know the big one in Neasden.

MS: No, no not Neasden. This is Tamil. Neasden will not know anything about the Tamil sari trade.

CJ: I remember Neasden having every god and goddess for every Indian from all over the subcontinent.

MS: I don't find that a temple. When I go there, I find that there is no spirit. It's built huge as a show but Al Mandir is very small but that doesn't matter. There is no, how shall I say this, me being a Tamil. When people come to my altar, they say, "Oh my. We can feel the energy!" Like that in a temple, you have to instil the spirit by saying the prayers, raising the energy. When I went to Neasden temple, I didn't feel anything. It was like that's it. It was like a show, you know what I mean? That's how the Gujaratis are. Even their funerals, I've been to Gujarati funerals. I think, oh my God, thank God I've not been born a Gujarati! I want my prayers so that when I die I go where I should go. They don't have a proper priest to do the prayers. I know because I have lost my parents and to know what had to be done and why they do it, etcetera. But the cycle of karma, I think I must really wanted to be born a Tamil. We tend to follow our Vedas, the vedic culture, the scripture must more closely. There is a reason for each one of that way. That's why I want you to see the priest in Stoneleigh. The trouble is that he is so busy. But I'll ask him. He'll be a really good one because he recently got his son married as well. And he lives in Chennai as well. Although, he is formerly from Pondicherry. I don't know of anyone else.

CJ: Well, if you do think of anyone else, you'll let me know.

MS: I will.

CJ: Thank you very much for your time. I really appreciate it.

(Stopped at 14:44 into the 2nd interview file.)

10.5 Appendix E – PPI Probability Tables for India

PPI Score	Total Below National Poverty Line (about $0.31/Day)	Total Below USAID Extreme Poverty Line (about $0.26/Day)	Total Below $0.75/Day Poverty Line	Total Below $1.00/Day Poverty Line	Total Below $1.25/Day Poverty Line	Total Below $1.50/Day Poverty Line	Total Below $2.00/Day Poverty Line
20 – 24	28.7%	14.0%	18.0%	53.3%	78.7%	90.2%	98.0%
45 – 49	4.5%	1.3%	1.0%	5.8%	24.0%	48.0%	79.0%
55 – 59	5.7%	1.3%	1.0%	3.0%	16.0%	38.7%	69.9%
60 – 64	6.1%	2.2%	1.2%	3.3%	12.2%	22.7%	55.2%
70 – 74	1.5%	0.2%	0.1%	0.3%	6.4%	16.3%	42.9%
75 – 79	1.6%	0.4%	0.0%	1.1%	2.1%	7.9%	27.3%
80 – 84	0.7%	0.2%	0.0%	0.2%	0.7%	3.6%	15.5%
85 – 89	1.2%	0.5%	0.0%	0.0%	1.9%	4.0%	12.9%
90 – 94	0.0%	0.0%	0.0%	0.0%	0.1%	1.7%	8.3%
95 - 100	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	4.4%

Table 3 (Schreiner, 2008)

10.6 Appendix F – Sari Seller SHG Member Questionnaire

(27 October 2010 UOG)

Identification SHG =

	Organisation				Country			Y	Y	M	M	D	D	Staff	
Code															
Ex.	*S*	*0*	*0*	*0*	*I*	*N*	*D*	*1*	*0*	*1*	*0*	*0*	*0*	*C*	*J*

Interviewer Visits –

	1	2	3	4
Date				
Interviewer's Name				
Result				
Next Visit Date				
Next Visit Time				

Results:

1 – Completed

2 – Not Completed to be continued next visit

3 – Respondent absent

4 – Postponed to next visit

5 – Other __________________ (Specify)

Total Number of Visits:

15. What percentage of the time do you socialise with each member of the SHG?

Name	**Percentage**

16. Who in the SHG do you go to for help and advice on important matters?

Name	Name

17. Recommendations

Name	Trust	Pyr.	Jati	Spec.	Help

a. Have ever recommended the sari seller to your friends, family and neighbours?

  a. If yes, For each person identified:

    i. How much do they trust your recommendation? Did they buy a sari?

Totally trusting o o o o o No Trust

ii. For each person identified, where on the pyramid of Tamil society is this person?
iii. Do you know the jati of each person identified?
iv. Does this person normally come to you for help and advice on important matters?

10.7 Appendix G – Network Intervention Questionnaire

(27 October 2010 UOG)

Identification SHG =

	Organisation				Country			Y	Y	M	M	D	D	Staff	
Code															
Ex.	*S*	*0*	*0*	*0*	*I*	*N*	*D*	*1*	*0*	*1*	*0*	*0*	*0*	*C*	*J*

Interviewer Visits –

	1	2	3	4
Date				
Interviewer's Name				
Result				
Next Visit Date				
Next Visit Time				

Results:

1 – Completed

2 – Not Completed to be continued next visit

3 – Respondent absent

4 – Postponed to next visit

5 – Other __________________ (Specify)

Total Number of Visits:

18. Here are the people you named in May that you were connected to for your sari selling business. Has anyone new come in or has anyone no longer there?

19. Are your sari sales for Diwali 2011 higher, lower or the same as the sari sales for Diwali 2010?

20. What percentage of household income comes from sari selling?

21. How do you feel about the future of your sari business?

    a. Very Optimistic
    b. Optimistic
    c. Neither Optimistic or Pessimistic
    d. Pessimistic
    e. Very Pessimistic

22. Questions on sari seller's poverty level based on Grameen's Progress out of Poverty Index for India,. We want to see if anything has changed since last year:
    a. How many people aged 0 to 18 were in the household?
        i. Five or more
        ii. Four
        iii. Three
        iv. Two
        v. One
        vi. None
    b. What was the household's principle occupation?
        i. Labourers (agricultural, plantation, other farm) hunters, tobacco preparers and tobacco product makers, and other labourers
        ii. Others
        iii. Professionals, technicians, clerks, administrators, managers, executives, directors, supervisors, and teachers
    c. Was the residence all pucca (burnt bricks, stone, cement, concrete, jackboard/cement- plastered reeds, timber, tiles, galvanised tin or asbestos cement sheets)?
        i. No
        ii. Yes
    d. What was the household's primary source of energy for cooking?
        i. Firewood and chips, charcoal, or none
        ii. Others
        iii. LPG

e. Did the household own a television?
    i. No
    ii. Yes
f. Did the household own a bicycle, scooter, or motor cycle?
    i. No
    ii. Yes
g. Did the household own an almirah/dressing table?
    i. No
    ii. Yes
h. Did the household own a sewing machine?
    i. No
    ii. Yes
i. How many pressure cookers or pressure pans did the household own?
    i. None
    ii. One
    iii. Two or more
j. How many electric fans did the household own?
    i. None
    ii. One
    iii. Two or more

23. Do you have your financial diary?
24. The sari sellers were asked if they are willing to train other BWDA sari sellers on any of the skills below:
    a. How to successfully negotiate with sari shops
    b. How to buy saris in bulk with other sari sellers and still be competitors
    c. How to set up your own sari shop
    d. How to be successful in running a sari shop
    e. How to get customers into your sari shop
    f. How to price saris to maximise your profit
    g. How to use embroidery to increase your profits
    h. How to create a successful business strategy
    i. How to develop the business
    j. How to do marketing
    k. How hire and manage employees
    l. How to successfully get credit from sari shops
    m. Accountancy training

n. General sari seller training

o. How to sell silk saris

p. How to do sari painting and sari embroidery

10.8 Appendix H – Sari Seller Data from the 4th Research Field Trip

Sari Seller	Prev PPI	PPI	Diwali Sales	% Income	Optimism	Reason Diwali Sales	Reason PPI Change
S005	48	48	↓	50	1	Elections	N/A
S008	93	93	↓	20	2	Sari Design	N/A
S011	86	86	↑	50	1	Customers	N/A
S012	73	77	↑	50	1	Customers	+Fan
S017	68	63	↔	90	3	Don't Know	-Scooter
S025	80	80	↔	100	1	Don't Know	N/A
S032	72	72	↔	30	3	Competitors	N/A
S045	77	80	↑	40	2	Weak Link	+Cooker
S051	44	44	↔	100	1	Don't Know	N/A
S052	86	86	↔	20	2	Don't Know	N/A
S053	74	74	↔	25	2	Don't Know	N/A
S055	100	100	↔	25	2	Don't Know	N/A
S056	91	91	↔	35	1	Don't Know	N/A
S057	94	94	↔	25	2	Don't Know	N/A
S058	62	66	↔	25	2	Cattle	+House Pucca
S062	28	33	↔	40	1	Don't Know	-Child
S063	72	72	↔	50	1	Don't Know	N/A
S064	88	88	↔	25	2	-Partner	N/A
S065	75	75	↔	50	1	Don't Know	N/A
S066	78	78	↔	70	1	Don't Know	N/A
S067	71	71	↔	30	2	Don't Know	N/A

S068	**60**	**60**	**↔**	**40**	**1**	**Don't Know**	**N/A**
S069	**91**	**91**	**↔**	**30**	**2**	**Don't Know**	**N/A**
S071	**75**	**80**	**↔**	**30**	**2**	**Don't Know**	**+Scooter**
S072	**76**	**76**	**↔**	**100**	**1**	**Don't Know**	**N/A**
S073	**88**	**100**	**↔**	**60**	**1**	**Don't Know**	**+Sewing** **+Professional**
S079	**77**	**77**	**↔**	**90**	**1**	**Don't Know**	**N/A**
S083	**79**	**71**	**↔**	**80**	**2**	**Don't Know**	**-LPG** **+Cooker**
S085	**81**	**73**	**↔**	**70**	**2**	**Don't Know**	**-Others**
S087	**78**	**71**	**↔**	**70**	**1**	**Don't Know**	**+Child**

For Optimism Level:

1. Very optimistic about future of sari business
2. Optimistic about future of sari business
3. Neither optimistic nor pessimistic about future of sari business
4. Pessimistic about future of sari business
5. Very pessimistic about future of sari business

For Diwali Sales:

↑ - Diwali sari sales in 2011 > Diwali sari sales in 2010

↓ - Diwali sari sales in 2011 < Diwali sari sales in 2010

↔ - Diwali sari sales in 2011 ≈ Diwali sari sales in 2010

10.9 Appendix I – Sari Seller Network Shapes Comparison and Examples

Network Shape	Value Type	PPI	Ego #Strong	Ego #Weak	Total #Strong	Total #Weak
Stars	Minimum	41	6	0	3	1
	Maximum	94	6	3	6	5
	Average	79.55556	4.666667	1.555556	4.666667	3.555556
Simple Modified Stars	Minimum	23	3	0	3	3
	Maximum	89	6	6	7	11
	Average	63.09091	4.772727	2.863636	5	6.045455
Complex Modified Stars	Minimum	24	4	0	4	4
	Maximum	100	8	5	10	11
	Average	73.59375	6.59375	2.34375	7.34375	7.625
Two Stars	Minimum	62	6	4	6	18
	Maximum	62	6	4	6	18
	Average	62	6	4	6	18
Diamonds	Minimum	40	1	0	2	4
	Maximum	100	7	6	7	12
	Average	72	4.5	2.3	4.65	7.65
Boxes	Minimum	56	2	0	2	4
	Maximum	100	5	2	6	10
	Average	80.33333	4.083333	1.166667	4.25	6.666667
Cliques	Minimum	56	7	2	9	5
	Maximum	80	9	3	25	6
	Average	72.5	7.5	2.25	13	5.75
Others	Minimum	40	3	0	4	4
	Maximum	100	6	6	7	14
	Average	71.09091	4.181818	1.909091	5.090909	7.818182

Table 38 – Sari Seller Network Shape Analysis Part I

Network Shape	Value Type	Density	Strong Ties Density	nEgoBet	EffSize	Size
Stars	Minimum	0.0818	0.0455	0	5	5
	Maximum	0.1429	0.119	0	8	8
	Average	0.1031	0.060467	0	6.222222	6.222222
Simple Modified Stars	Minimum	0.0769	0.0769	0	4.933	5
	Maximum	0.125	0.125	12.5	11.867	12
	Average	0.1016	0.048832	3.648636	7.585545	7.636364
Complex Modified Stars	Minimum	0.0662	0.0208	0	4.92	5
	Maximum	0.1389	0.985	23.81	13.963	14
	Average	0.105838	0.053403	5.48625	8.7605	8.9375
Two Stars	Minimum	0.0494	0.0119	0	9.841	10
	Maximum	0.0494	0.0119	0	9.841	10
	Average	0.0494	0.0119	0	9.841	10
Diamonds	Minimum	0.0824	0.0273	0	4.541	5
	Maximum	0.1607	0.0778	0	9.933	10
	Average	0.115775	0.04361	0	6.7014	6.8
Boxes	Minimum	0.0909	0.0273	0	3.567	4
	Maximum	0.1964	0.0833	14.2900	7.0000	7.0000
	Average	0.140225	0.0541	1.190833	5.226667	5.333333
Cliques	Minimum	0.0879	0.0549	0.0000	8.3410	9.0000
	Maximum	0.2125	0.1917	27.27	9.684	12
	Average	0.1264	0.0937	6.8175	8.74925	10
Others	Minimum	0.0833	0.0303	0	4	4
	Maximum	0.1806	0.0778	75	8.712	9
	Average	0.135009	0.052764	15.02545	5.940909	6.090909

Table 39 – Sari Seller Network Shape Analysis Part II

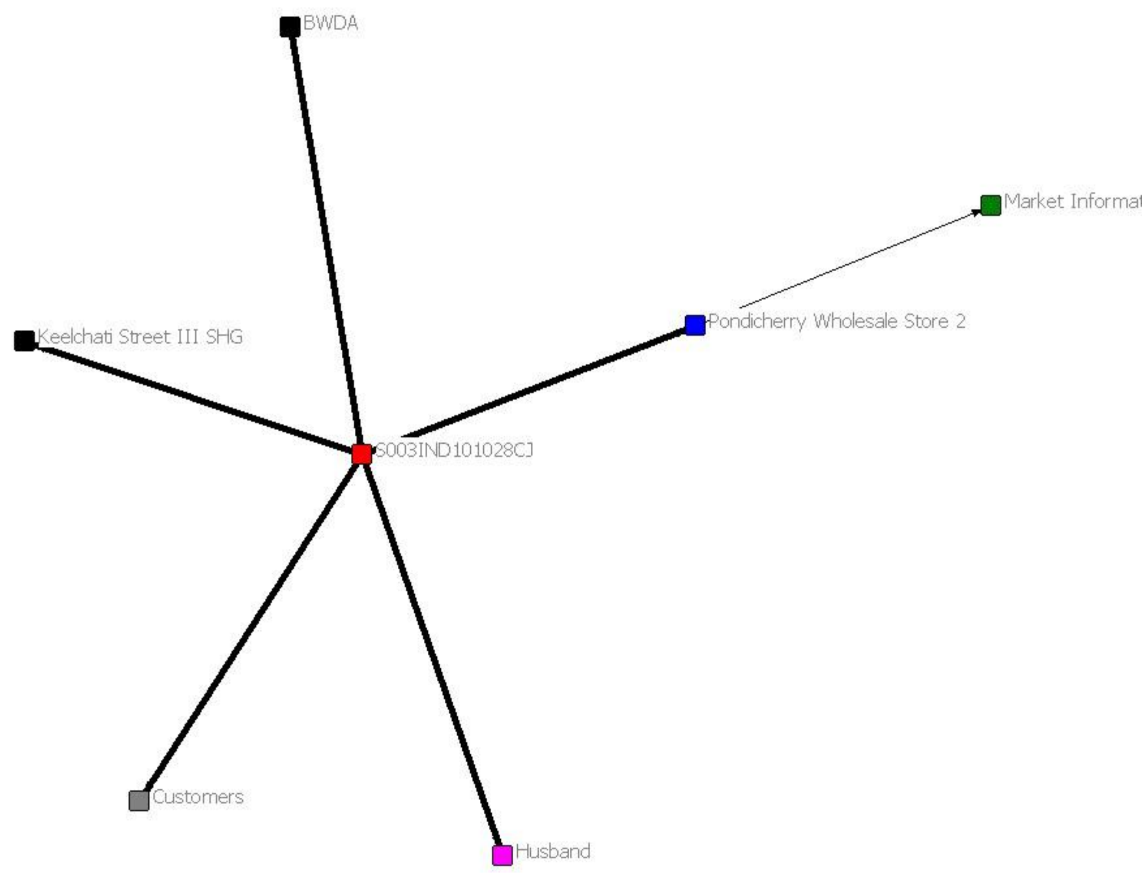

Figure 31 – Star Shaped Network Example

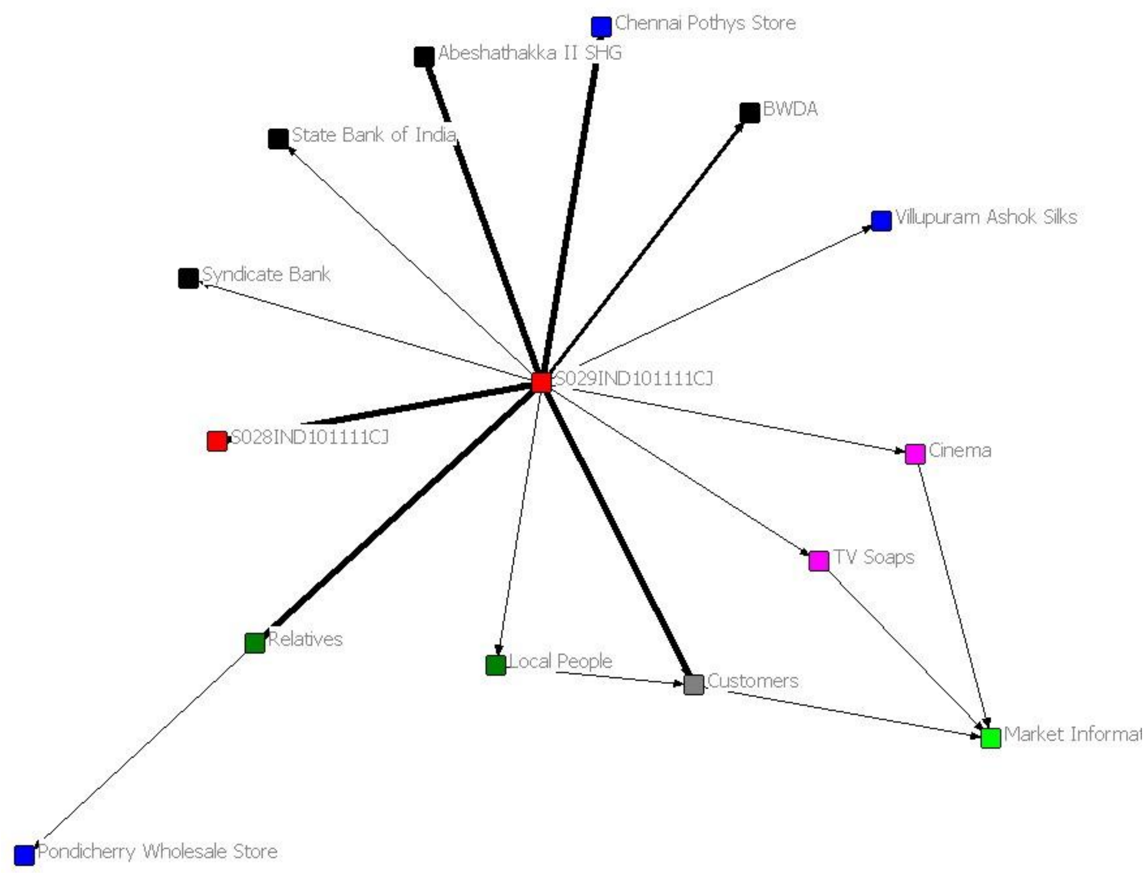

Figure 32 – Simple Modified Star Shaped Network Example

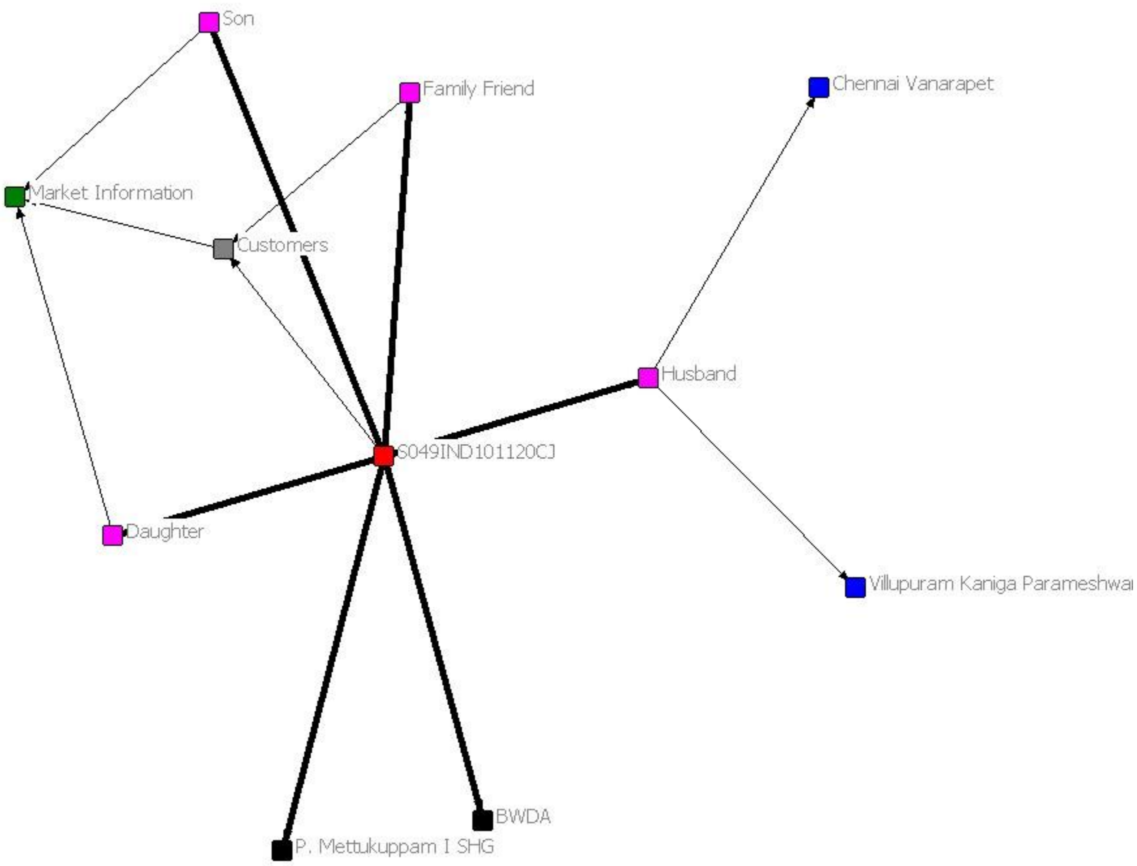

Figure 33 – Complex Modified Star Shaped Network Example

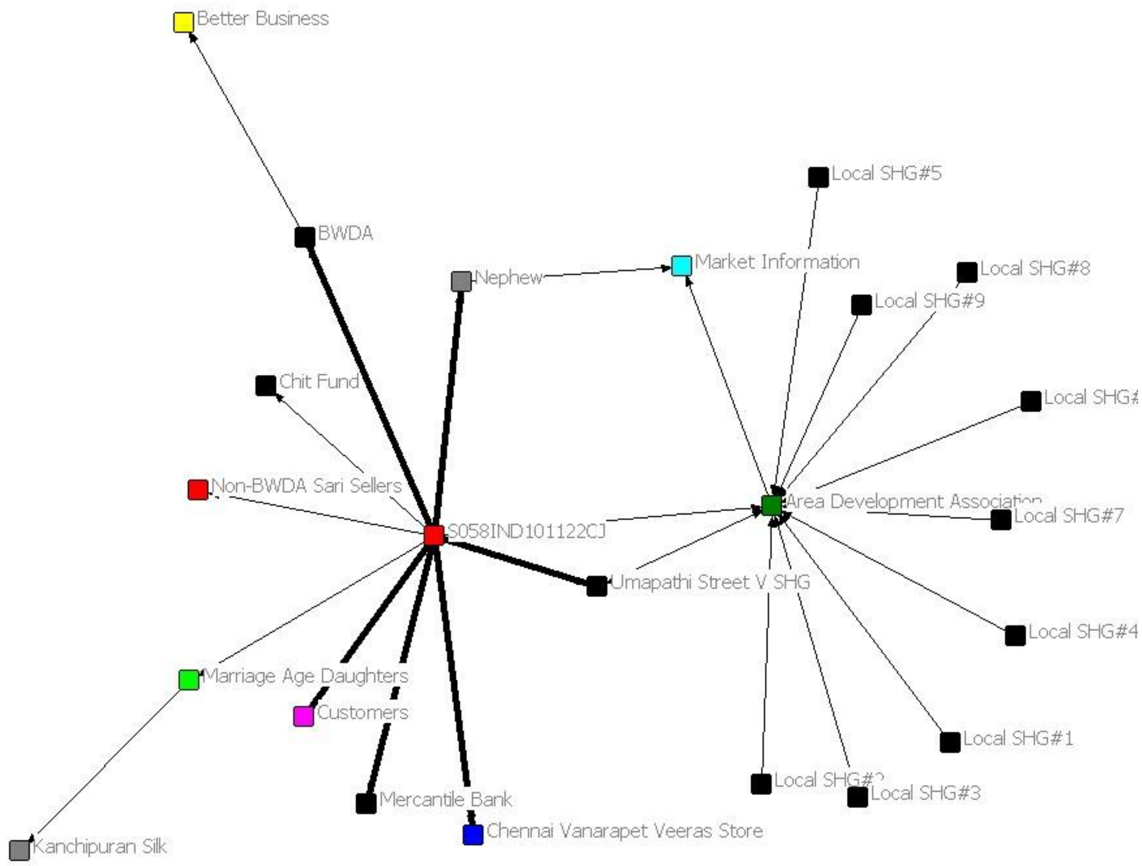

Figure 34 – Two Stars Shaped Network Example

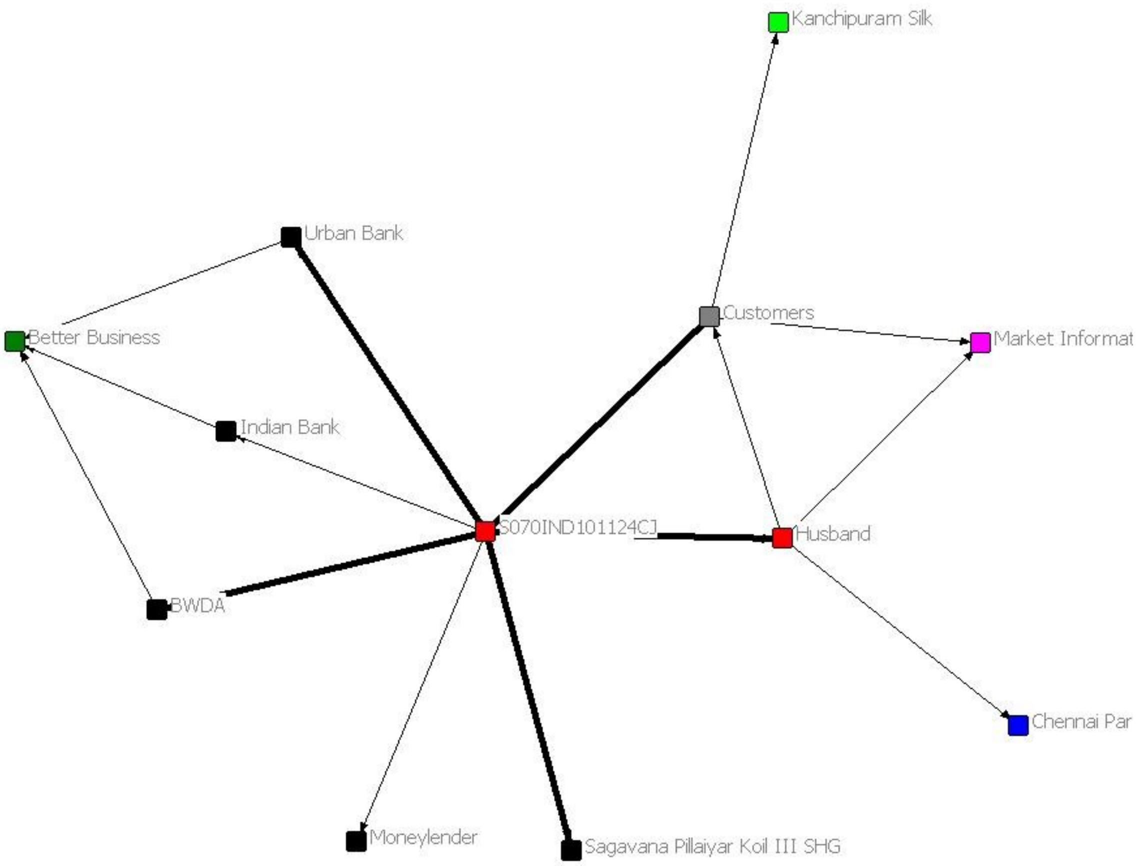

Figure 35 – Diamond Shaped Network Example

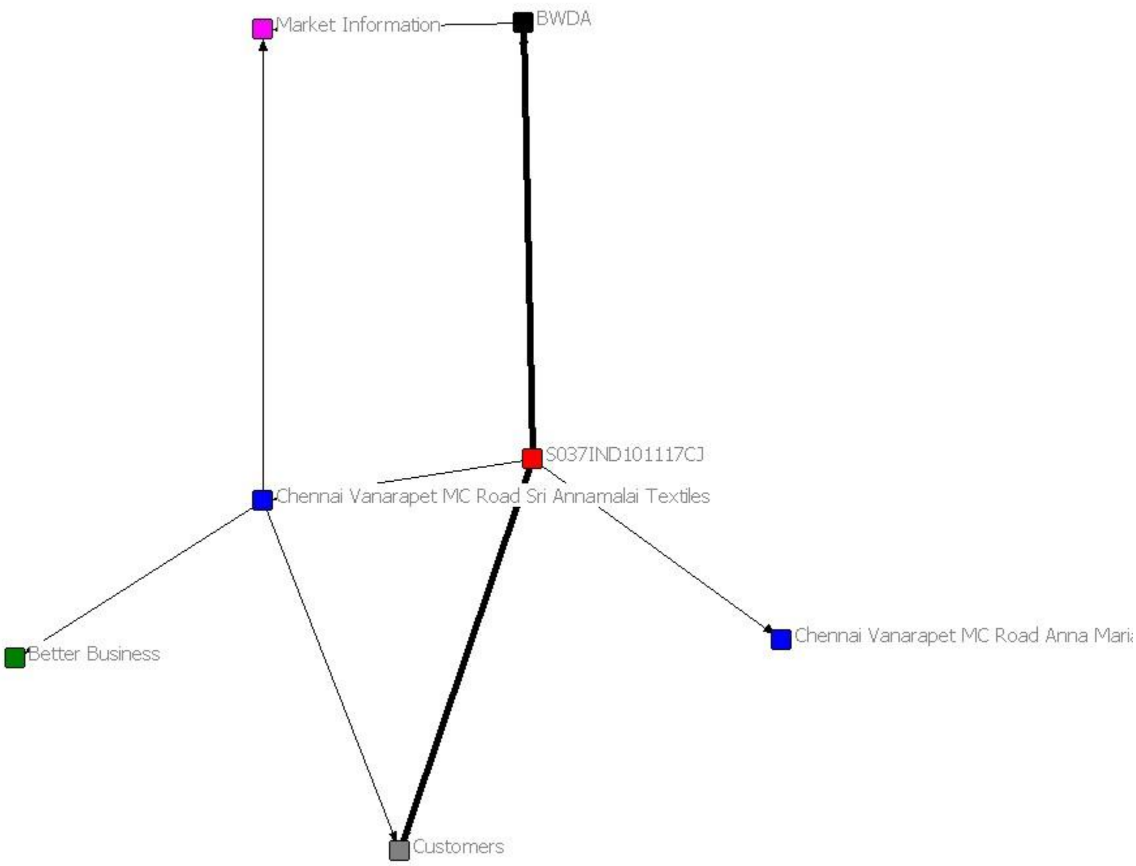

Figure 36 – Box Shaped Network Example

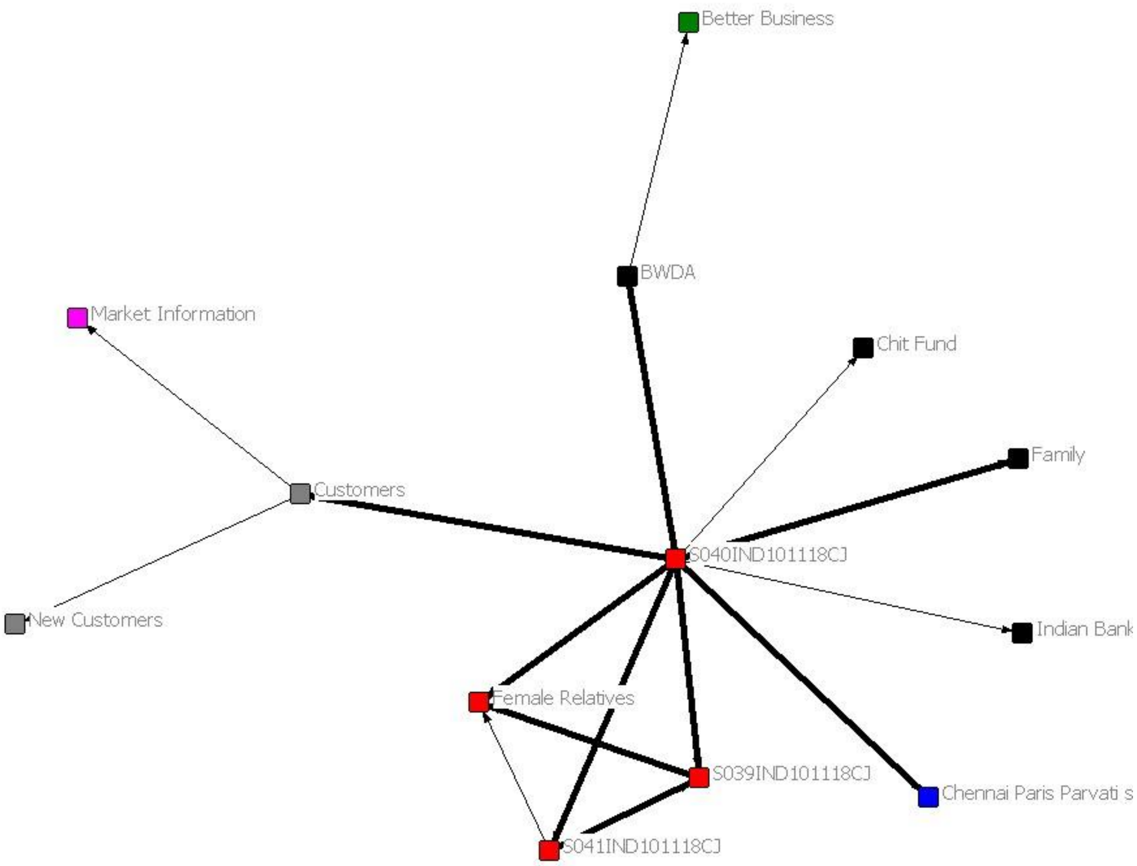

Figure 37 – Network Containing Clique Example

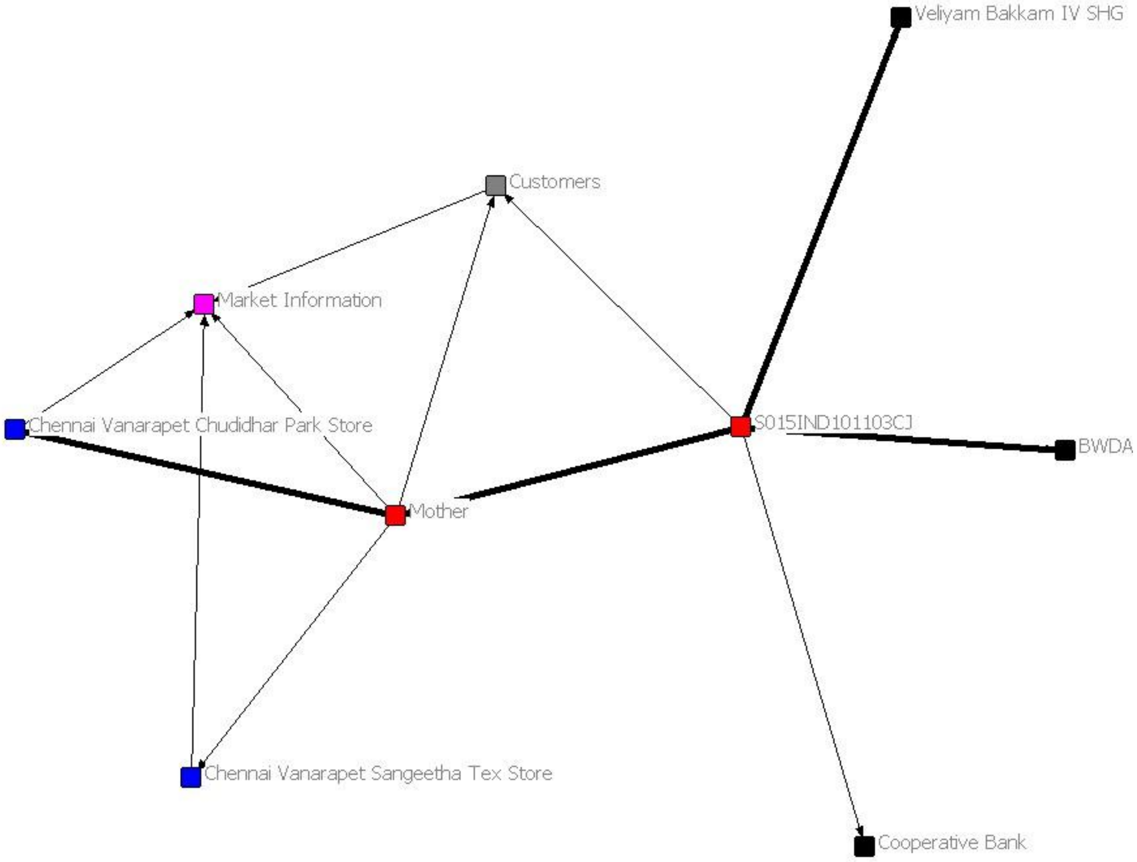

Figure 38 – Other Shaped Network Example

10.10 Appendix J – Information Sheet for Microfinance Beneficiaries

INFORMATION SHEET FOR

MICROFINANCE BENEFICIARIES

(If you have problems in reading this, the content will be read to you in your own language)

You are cordially invited to take part in a research project conducted by the University of Greenwich, as the microfinance institution that you belong to is part of our research project.

What is the project all about?

Title: "Optimising the Dual Goals of Microfinance: A Social Network Analysis and Simulation"

Purpose: To investigate how different actors in the microfinance industry collaborate in order to help microfinance institutions to achieve their social and financial goals. Once this is understood, the research proposes to identify areas in which collaboration can be improved so that every actor in the industry benefits.

Duration: Feb 2009-January 2012. Visits to participating group members will be held once a year.

What is required from your participation?

In order to get a good understanding of the research issues, we plan to conduct interviews with beneficiaries of microfinance institutions like you. In this regard, details are:

Your time commitment for each interview: about one hour.

Number of interviews: one or two per visit.

We would like to reassure you that all information you provide will be treated in the strictest confidence. We will also ensure the anonymity of all participants.

In turn, the research team will make available the research findings to all participating individuals which will also be invited to take part in events when scheduled.

We would like to stress that any data which is collected during the course of the research project will be used for academic research or statistical analysis. The data may be held indefinitely, and may only be made public in a form which identifies individuals with the consent of the individual. It will be held securely according to the principles of the UK Data Protection Act of 1998.

We thank you very much for agreeing to participate in this research project.

If you have any question or comments, please do not hesitate to contact me.

Yours sincerely,

Dr. Ana Marr BSc MSc PhD

Principal Investigator and Project Leader

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