

# Doctoral Thesis



University of Trento  
School of Social Sciences

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## **Social Capital and the Urban Informal Economy: The Case of Street Vendors in Addis Ababa, Ethiopia**

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## **Abstract**

Microenterprise development has become one of the most important approaches to reduce poverty in the LDCs. Like other LDCs, in Ethiopia microenterprise development forms the major component in the promotion of broad based growth and improvement of the well-being of the poor by providing income generating opportunities. Accordingly, formalizing informal sector activities has become one of the priorities of microenterprise programs. The main aspect of microenterprise programs is the use of social capital as a substitute for collateral in providing credit and forming enterprise groups. Despite the significance of social capital in microenterprise programs in particular and the informal economy in general, its nature and potential contributions remain under-investigated in Ethiopia. The purpose of this study is, therefore, to examine the configuration of social capital among the poor street vendors in Addis Ababa.

The study has employed the network approach to social capital. Data were collected from 154 street vendors living in Addis Ababa. Multi-stage sampling procedures involving purposive and systematic random-walk techniques were used to draw samples. The study applies a mixed-methods research design. Accordingly, quantitative and qualitative data were collected through name and position generator surveys and in-depth interviews. While the quantitative data were analyzed through social network analysis procedures and statistical techniques, the data from interviews were transcribed, classified, and presented in a narrative form. Two-sample T-test, one-way-ANOVA, and OLS and Instrumental Variable regression models were used as statistical tools for the study.

The results of the study reveal that homophily in religion and ethnic lines forms the strongest divide among street vendors' personal networks followed by sex and marital status homophily. However, street vendors exhibit heterophilous networks regarding income, age, and occupation. Street vendors demonstrate dense, less effective, less

efficient, and highly constrained network structures. They also exhibit greater proportion of strong ties in their personal networks. Street vendors have most of their relationships with people of lower occupational prestige. In addition, they have low access to high prestige positions, low resource heterogeneity, and low social capital volume.

Comparisons of networks between gender and among ethnic groups show the presence of significant differences. Women's network exhibits larger percentage of strong ties and more ethnic and religious homogeneity than men. Also, women exhibit small network size, less effective, and highly constrained networks. Network characteristics by ethnic group shows that the *Gurages* exhibit high proportions of strong ties and high levels of ethnic homophily but embedded in networks of diverse education, occupation, and income compared to the *Amharas* and the *Oromos*. Conversely, the *Amharas* have diverse ethnic and religious contacts and demonstrate relatively high proportions of weak ties than others. Structurally, while the *Gurages* exhibit large network size with dense and less effective networks; the *Amharas* display small network size and less dense networks. The overall heterogeneity index shows that the *Gurages* exhibit more heterogeneous networks than the *Amharas* and the *Oromos*.

By examining network dynamics, the study also reveals significant changes in the number and nature of ties kept, ties lost, and new ties created over the phases of enterprise development. There have also been changes in network composition and structure over the three entrepreneurial phases. The study further investigated the effect of social capital in enterprise performance. Four separate regression models were fitted to predict the effect of relational, structural, and embedded resources dimensions of social capital on enterprise performance. After controlling the potential endogeneity problem of social capital, the estimation results revealed that the resources embedded in networks contribute positively to enterprise performance compared to the strength of ties and the structural constraint.

Human capital measures, on the other hand, do not significantly predict enterprise performance.

The implications of the outcomes of the study is that in providing credit and establishing enterprise groups, microenterprise programs should evaluate the trade-off between strong versus weak ties and homogeneity versus heterogeneity of networks. While religion, ethnicity, gender, and marital status homophily as well as strong family and friendship ties are worthwhile for credit delivery and forming enterprise groups, network heterogeneity is central for enterprise success. Overall, it is unlikely that social problems can be resolved without analyzing the social ties of individuals in particular and the community in general. Thus, it is imperative to conduct further studies in a broader scope to advance the significance of social capital for poor targeted development interventions in Ethiopia.

**Keywords:** Social Capital, Personal Networks, Informal Economy, Street Vendors,

Addis Ababa, Ethiopia.



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## **List of Abbreviations and Acronyms**

BDS	Business Development Service
CSA	Central Statistical Authority
ILO	International Labor Organization
ISEI	International Standard Socio-Economic Index
LDCs	Least Developed Countries
EEA	Ethiopian Economic Association
ETB	Ethiopian Birr
MFIs	Microfinance Institutions
MoFED	Ministry of Finance and Economic Development
MSEs	Micro and Small Enterprises
NG	Name Generator
NG/I	Name Generator/Interpreter
NI	Name Interpreter
PG	Position Generator
PNRD	Personal Network Research Design
PNs	Personal Networks
SC	Social Capital
SLF	Sustainable Livelihoods Framework
SN	Social Network
SNA	Social Network Analysis
SNs	Social Networks
UNDP	United Nations Development Program

# **Chapter 1**

## **Introduction**

### **1.1. Background of the Study**

Population growth accompanied by globalization of the world economy and social and technological advances have facilitated the process of urbanization across the world (Alaci, 2010). Many developing countries in the world are currently experiencing rapid rates of urbanization. By 2010, more than 70 percent of urban residents in the world were found in developing countries (UN-Habitat, 2012). It is also estimated that, between 2010 and 2015, 200,000 people will be added to the world's urban population each day and about 90 percent of this daily increase is projected to take place in developing countries (UN-Habitat, 2012). The process of rapid population growth in the cities of developing countries is, however, mainly due to high rate of rural-urban migration leading to a significant increase in the urban labor force. In nearly all developing countries, the rate of urbanization surpasses the population growth rate of the national average demonstrating that migration is a major factor for the process of urbanization (UN-Habitat, 2012).

Rapid growth in rural-urban migration together with a slow expansion of employment in the formal sector has forced the largest share of the workforce into the informal economy (ILO, 2002; Lyons and Snoxell, 2005). Cognizant of the problem of informality, since the 1960s, policy makers and development agents have begun to recognize the persistence of unemployment as a major challenge of development in the cities of LDCs (Tanga, 2009). In response to this, the International Labor Office (ILO) initiated a study on urban employment by organizing and allocating multi-disciplinary employment missions to different countries of the world of which Kenya was the first (ILO, 1972). The first ILO mission to Kenya recognized that the informal economy has not only persisted but also expanded in LDCs. Since then, the sector has continued to show significant growth and expansion in the LDCs of the world (ILO, 2002b).



The informal economy is the chief source of livelihood for the majority of the urban poor in LDCs (ILO, 2002a). Its growth has been more rapid in sub-Saharan Africa (SSA) cities than elsewhere in the world (Lyons and Snoxell, 2005). In the last decade, for example, informal employment rose by 6.7 percent in SSA and the sector has been constantly changing (ILO, 2002a). According to ILO (2002a) estimates, the share of informal employment outside agriculture to the total non-agricultural employment accounts for about half or more in all regions of the developing world. In SSA, it accounts for about 78 percent; in Asia 65 percent; in Latin America 51 percent; and in North Africa 48 percent. The sector's share of GDP is 41 percent in SSA; 31 percent in Asia; 29 percent in Latin America; and 27 percent in North Africa (ILO, 2002a).

In Ethiopia, the informal economy accounts for about 50-60 percent of the urban employment (UNDP, 2012) and about 42 percent of these informal sector operators earn their livelihoods from microenterprises<sup>1</sup>(CSA, 2005). The Central Statistical Authority (2010) report indicates that while the growth rate of urbanization in Ethiopia is about 4 percent, the national population growth is about 2.7 percent. The Central Statistical Authority of Ethiopia (2003) report also reveals that about 90 percent of rural-urban migrants to the Ethiopian cities do not get formal employment and thus are forced to join the urban informal sector. Lack of skill, lack of working capital, and lack of working premises force rural-urban migrants to join the informal and low-earning economic activities such as street vending, domestic work, home-based work, and others (CSA, 2003). Among informal activities, street vending constitutes the lion's share and has become a global phenomenon where millions of poor people build their livelihoods by selling goods and services in the streets (ILO, 2002b).

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<sup>1</sup> A working definition of microenterprises in the Ethiopian context is that they are the smallest, usually informally organized businesses engaged in diverse activities including trade, services, handicrafts, etc. They are typically operated by the owner and immediate family (usually unpaid labor) and the income from the microenterprises is in most cases the sole source of income for the family (Desta, 2010).

Despite the contribution of the informal sector<sup>2</sup> to the national economy and supporting the livelihood of the urban poor, informal activities are situated in uncertain and non-conventional places such as private homes, streets, sidewalks, municipal markets, and open spaces (Chen et al., 2005). They are also vulnerable to the hostile attitudes of governments as they operate out of government regulations (ILO, 1993) . They also do not have social protection; they have no access to infrastructure, financial, and physical resources; they have fewer rights and benefits of employment; and are subject to greater exclusion from government institutions (Chen et al., 2005).

Notwithstanding the challenges associated with the informal economy and lack of support from government institutions, the sector becomes the only option for the urban poor to earn a living (ILO, 2002b). Informal sector operators are thus able to start and stay in several types of businesses. Many explanations can be suggested for this state of affairs but this study hypothesizes that entrepreneurs in the informal sector use their social capital (SC) as a strategy to enter into and sustain the existence of their enterprises. In this regard, Woolcock (1999) stated that to manage risks and vulnerabilities in the absence of formal organizations, the poor create their own informal organizations and usually draw upon their social connections to mitigate problems. Street vendors are among the vulnerable groups in the society with their own SC that helps them to survive the harsh street life.

Studies from Ethiopia (e.g., Belay, 2000; Pankhurst and Mariam, 2000; Rahmato, 2004) have shown that small entrepreneurs in the informal sector do not have access to finance from formal financial institutions. Instead, they rely on SC schemes for obtaining finance needed for business ventures. Haftu et al. (2009) also found that the majority of small entrepreneurs in Ethiopia depend on friends, families, and own savings as a source of start-up capital for their businesses. Moreover, a survey made by the CSA (2006) shows

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<sup>2</sup> The terms informal economy and informal sector are of same meaning and are used interchangeably.

that about 89 percent of start-up capital for small entrepreneurs comes from borrowing from friends and relatives, assistance from families, and personal savings. It was only 1 percent and 0.12 percent of small entrepreneurs who have borrowed from microfinance institutions and banks, respectively. Street enterprises are indeed characterized by ease of entry, use of family labor, use of local resources, and low capital input. These attributes are related to the SC at the disposal of poor street vendors (Kinyanjui and Khayesi, 2005).

The Ethiopian government has developed the five years Growth and Transformation Plan (GTP) with the aim to bring structural changes required for the growth of the economy. This development goal is mainly anchored on prompting the development and restructuring of the microenterprise sector (UNDP, 2012). As such, the government has given attention to micro and small enterprises (MSEs) development as an important means to reduce poverty through employment creation. In so doing, formalizing informal sector activities, particularly street vending, through organizing the unemployed youth into enterprise groups has become one of the top priorities of microenterprise development programs (UNDP, 2012).

The main feature of microenterprise development programs is the use of social relationships as a substitute for collateral in credit provision and formation of enterprise groups. This is based on the credence that SC enhances group solidarity and risk sharing behaviour of the poor (Woolcock, 2001). Embracing informality and incorporating it into the mainstream economy, thus, requires, among other things, understanding the SC of street vendors. Given that street vendors depend on SC resources for building livelihoods in general and for their day-to-day business trajectories in particular, analyzing the SC of street vendors can help policy makers and development agencies to reach at successful microenterprise development interventions. It is against this backdrop that this study is designed to examine the nature of SC among the street vendors in Ethiopia.

## 1.2. The Country Profile of Ethiopia

Ethiopia is located between 3' N and 14' 8" N latitude and 33' E and 48' N longitude. Since 1991, the Ethiopian government has applied a federal structure of governance. The 1995 constitution of Ethiopia devises ethno-linguistic measures as the foundation for the federal arrangement. Accordingly, the constitution formed nine ethnic based regional states<sup>3</sup>, and two city administrations<sup>4</sup> (Abate, 2004). Each regional state is divided into zones, districts, and *kebele* administrations. In terms of population, Ethiopia is the second most populous country in Africa next to Nigeria. Its population growth is one of the fastest with an average growth rate of about 2.7 percent per annum (CSA, 2010). Of the 74 million people living in Ethiopia, 84 percent live in rural areas and obtain their income from agriculture (CSA, 2010).

Agriculture constitutes the largest share of the national economy; accounting for about 42 percent of the GDP, 80 percent of the total employment, and 85 percent of export earnings (MoFED, 2012). The growth of the agricultural sector is, therefore, important as it constitutes the bulk of the economy in terms human and material resources. However, the agricultural sector has been suffering from declining productivity. The effect of this decline has been declining incomes, food insecurity, and pervasive poverty (EEA, 2009). Poor economic conditions in agriculture coupled with the seemingly economic attractiveness of urban areas have, thus, forced the rural poor to migrate towards several cities, of which Addis Ababa took the lion's share of rural-urban migrants (EEA, 2009).

Ethiopia is at a very low level of urbanization compared to many sub-Saharan African countries (EEA, 2009). Only about 16 percent of the population lives in the urban areas (CSA, 2010). However, the Ethiopian Economic Association (2009) report shows that the rate of urbanization is one of the fastest in sub-Saharan Africa averaging an

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<sup>3</sup> Tigray, Afar, Amhara, Oromia, Somali, Benishangul-Gumuz, Southern Nations Nationalities and Peoples Region (SNNPR), Gambella, and Harare.

<sup>4</sup> Addis Ababa and Dire Dawa.

annual growth rate of 4 percent. Rural-urban migration has been mentioned as the prime factor for a rapid urbanization in Ethiopia (EEA, 2009). Owing to such rapid rate of urbanization, Ethiopian cities have been grappled with rapid growth of unemployment. Limited job opportunities in the public and private sectors plus the growing urban labor force have increased the expansion of informal sector (Garoma, 2012). According to the CSA (2003) report, the informal sector absorbs for about 60 percent of the urban labor force in Ethiopia.

In Ethiopia, the rapidly increasing and largely the young population have further contributed to an increasing labor force. As a result, employment creation and poverty reductions remain one of the enduring development objectives (EEA, 2009). In response to such problems, the Ethiopian government has undertaken several reforms. The major reforms include the 2002/3-2004/05 Sustainable Development and Poverty Reduction Program, the 2005/6-2009/10 Plan for Accelerated and Sustained Development to End Poverty, and the five years- 2010/11-2014/15 Growth and Transformation Plan (MoFED, 2002; 2006; 2010). These documents reiterated the importance of microenterprise development as a means of reducing unemployment and poverty.

Despite such reforms, unemployment and poverty remained rampant. The EEA (2009) report shows that no improvements have been observed in the livelihood of the majority of the population. Indeed, the living condition of the population have been deteriorating over time (Workneh, 2013). To withstand the ills of unemployment and poverty, relatives, friends, and neighbors, help one another while facing problems. There is also a long tradition of relying on local level institutions and associations as insurances against shocks (Kebede and Butterfield, 2009; Workneh, 2013). Apart from of material assets possessed, Ethiopians are endowed with rich assets of SC, which helps them to endure hardships and challenges of being poor (Workneh, 2013).

### **1.3. Overview of Social Capital Studies in Ethiopia**

In developing countries, the SC approach to urban studies is well documented (Beall, 2001). Evidences drawn from studies of urban areas in LDCs prove that SC is and will remain an important resource for the poor (Berrou and Combarous, 2012). In Africa, in particular, city case studies show that extended family networks span the rural-urban divide and become important sources of livelihood security and support for the poor (Beall, 2001).

Despite the recognized role of SC in addressing urban poverty, studies of SC in Ethiopia have mainly concentrated in rural settings where the majority of the poor are found and hence the emphasis of government and donor agencies has been located (Tegegne, 2011). These studies have shown that SC has been a major means by which Ethiopian smallholder farmers have coped with rural life (Seboka and Deressa, 1999; Adamo, 2001; Hoddinott et al., 2009; Liverpool and Winter-Nelson, 2010; Mogue, 2011; Spielman et al., 2011; Todo et al., 2011; Urbana, 2012). Moreover, these studies have documented the vital role of SC in the transfer of agricultural knowledge, the adoption of new technologies, the provision of support in mitigating income shocks and for obtaining seeds during the planting period.

Hoddinott et al. (2009) and Mogue (2011) found that SC provides mutual insurance for farmers against shocks. Similarly, Liverpool and Winter-Nelson (2010) and Todo et al. (2011) have observed evidence of the positive role of SC in the adoption of agricultural technologies. Todo et al. (2011) found that SC based on strong ties does not promote the adoption of new technologies but networks based on weak ties do. Moreover, Urbana (2012) found that strong ties promote farmers' learning of new farming techniques and learning from strong ties was found to be a stronger motivation than learning from weak ties. Adamo (2001) acknowledged the significance of strong ties in facilitating the

participatory agricultural research process. In the absence of formal institutions to supply improved seeds, farmers in Ethiopia use their SC to get seeds (Seboka and Deresa, 1999). Moreover, Degefa (2007) found that community membership helps farmers to undertake farming activities and obtaining cash and material transfers to maintain livelihoods and food security.

Generally, SC studies in Ethiopia have established how farmers use their social connections to improve their productivity and build livelihoods, but little is known about the role played by SC in building urban livelihoods. However, following the raise of urban poverty, due to rapid rates of rural-urban migration, some studies have incorporated SC in their urban based surveys. For example, Serneels (2007) examined the role of SNs in urban areas and found that SNs help unemployed youth to look for new jobs. Similarly, Kebede and Butterfield (2009) found that poor women in Addis Ababa use their SNs to come together to produce goods and share responsibilities for marketing their products and augment their livelihoods. They also found that SNs serve as centers of skill training and knowledge transfer.

A study by Tegegne (2011) has also documented that SNs are valuable means of livelihood security for the urban poor in Ethiopia. He underlines that the role of SNs in helping the poor is higher in Addis Ababa than in any other major city in Ethiopia. Tseyed (2005), in her study of SC and street children and youth, found that there are complex systems of social relations on the streets that help children to survive the harsh street life. Samson (2010) also revealed that community development in Addis Ababa is related to increased participation in local associations, trust in the community, and reciprocity among inhabitants in the locality. Moreover, Workneh (2013) investigated the configuration of SC in the North Gondar, Ethiopia and found differences in bonding and bridging SC composition between rural and urban residents.

The urban and rural based SC studies in Ethiopia, however, do not specifically address the role played by SC in the informal sector that supports the livelihood of the majority of the urban poor. They also lack rigorous analysis using systematic measurement and collection of network data and they did not apply the recent developments in Social network Analysis (SNA). Studying the role of SC on informal sector operators in the Ethiopian urban context is, therefore, imperative since the majority of the urban poor are engaged in the informal sector for their livelihoods and rely on their SC for business pursuits.

A discussion of the informal economy and migration to cities in Africa should consider the role of ethnicity in the life of migrants (O'connor, 1983:99). Macharia (1988) indicates that ethnicity is an important element in understanding how the informal sector operates. Indeed, in the urban informal sector ethnic identification is one way of forming PNs (Kristiansen, 2004). Urban ethnicity suggests that as individuals depart from rural life and enter into the urban milieu, they strengthen bonds between ethnic members (Wa, 1973). Ethnic identity is not intentionally felt by people living in rural areas where all residents are of the same ethnic group (Macharia, 1988). Migrating to cities and meeting people of other cultures, however, people become aware of ethnic identity. For poor people in urban areas, therefore, ethnicity is a main feature of their SC (Beall, 2001).

Ethnic ties have intense significance in most cities as a source of social protection for the unemployed poor (O'connor, 1983). In third world countries like Ethiopia where there is no social welfare system, ethnic ties play more or less a comparable role to social security (Meagher, 2005). Migrants to the city, for example, may depend on their kin for shelter but may turn to a wider group of co-ethnic ties in search of employment. Those who do not have kin members in the city may rely on others of their own tribe or ethnic group as a substitute (Beall, 2001). The ethnic construct of SC is particularly significant in



Ethiopia where more than eighty indigenous ethnic<sup>5</sup> groups are found. In addition, since 1991, ethnic identification has been used by the Ethiopian government as a way of political administration. The belief here is that this ethnic recognition has been entrenched among informal sector operators in Addis Ababa and ethnic identification fulfills the role of settling migrants to the urban life and is well established in the urban informal sector. Thus, in understanding the operation of the informal sector in Ethiopia, examining the role played by ethnic identity in building SC is important.

To deal with the informal economy, besides ethnic identity, one should be aware of the role of gender in forming SC. In many places, over the last decades women-owned businesses have greatly increased (Renzulli et al., 2000). Studies also show that part of the differences in business start-up rates between men and women are explained by variations in SC accumulation (Renzulli et al., 2000). In a patriarchal society like Ethiopia men dominate social, economic, and political power. Women bear the double responsibility of working for a living and attending to domestic chores. Consequently, women have less time to invest in building SC compared to men. In this context, examining the structure and composition of SC between men and women is imperative in explaining enterprise performance. The literature in other African countries has shown that men have more diverse networks than their women counterparts (Kuada, 2009; Rutashobya et al., 2009). In Tanzania, for example, Rutashobya et al. (2009) found that women depend on strong ties and their ties are mainly composed of kin members. The study has also shown gender differences in entrepreneurial outcomes and that women perform less than men. Women networks are more or less simplex and strong ties (Richards and Roberts, 1998). The question to be raised here is whether same conclusion can be drawn in Ethiopia.

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<sup>5</sup> Indigenous ethnicity in this study refers to those ethnic groups which are indigenous to Ethiopia. It does not refer to migrant ethnic groups from other countries which are not indigenous in Ethiopia.

#### **1.4. Problem Statement and Research Questions**

An examination of entrepreneurship literature has shown that SC provides opportunities for enterprise development and poverty reduction in developing countries (Kinyanjui and Khayesi, 2005). Indeed, in the current condition of the prevalence of the informal sector and institutional malfunction in Africa, SC plays an important role in shaping economic activities (Berrou and Combarous, 2012). SC influences opportunity discovery, entrepreneurial orientation, entrepreneurial intention, and decisions to become an entrepreneur (Hoang and Antoncic, 2003; Rutashobya et al., 2009; Stam et al., 2014).

Although there is a rich and growing literature on the theoretical and empirical issues concerning SC and entrepreneurship in different regions of the world, researchers in the field (e.g., Granovetter, 1973; Coleman, 1988; 1990; Kinyanjui and Khayesi, 2006; Xiao and Tsui, 2007; Berrou and Combarous, 2011; 2012) recommend a need for more empirical assessment in diverse country contexts because SC is an endogenous phenomena in social relations that varies from one situation to another. Indeed, as shown by Kebede and Butterfield (2009) and Tegegne (2011), the contribution of SC is particularly important in poor countries like Ethiopia where informal sector operators do not have access to formal institutions to obtain credit and business development services needed for the development of microenterprises.

While studies in Ethiopia have documented how rural households use their SC to improve their productivity and livelihoods (Liverpool and Winter-Nelson, 2010; Todo et al., 2011; Urbana 2010; Spielman et al., 2011), little is known about the role played by SC in building the livelihood of the urban poor through the development of informal activities. Indeed, the informal sector accommodates the majority of the urban poor and thus formalizing the informal sector through microenterprise development programs has got priority by the Ethiopian government (UNDP, 2012). Also, compared to rural settings,

social dynamics in Ethiopian cities has shown rapid changes. On top of this, economic forces and urbanization tend to encourage the development of interpersonal relations within and outside communities and facilitate the development of heterogeneous networks (Tegegne, 2011). Accordingly, researchers in the field, for example, Kebede and Butterfield (2009) and Berrou and Comamous (2012) recommended a thorough analysis of SC and the informal economy in African cities such as Addis Ababa.

Given that the informal sector constitutes the largest share of the urban poor in Ethiopia, studying how the PNs of street vendors are structured can help development agents and policy makers to understand and support informal sector operators' livelihood strategies and make microenterprise development programs effective and sustainable. A better understanding of the ways PNs function in the informal economy, examining types of networks, analysis of network dynamics, and investigation of the structure and composition of PNs among the different ethnic groups and across gender, is an important yet under-investigated research area in urban Ethiopia.

The objective of this study is, therefore, to examine how street vendors mobilize their PNs to establish enterprises and how PNs are structured among street vendors. It also examines how the structure and composition of PNs influence enterprise performance. Specifically, the study addresses the following research questions:

- a) What does the nature of street vending look like? What causes informality?
- b) What does the structure and composition of PNs look like among street vendors? Which ties characterize street vendors' network configuration? Are they strong or weak ties? Dense or sparse networks?
- c) Do the structure and composition of PNs vary by gender and ethnic group? Do women have stronger and denser networks than men? Which ethnic group is characterized by dense and strong ties?

- d) Do the PNs of street vendors change over the phases of enterprise development?
- e) Do the PNs of the street vendors affect enterprise performance? Which perspective of PNs (relational, structural, or embedded resources) helps street vendors enhances enterprise performance?

### **1.5. Organization of the Thesis**

The dissertation is organized into nine chapters. Following the introduction in chapter one, the remainder of the dissertation is structured as follows. Chapter two presents review of theoretical and empirical literature. Chapter three outlines the research methodology. Chapter four depicts the profiles of respondents, the characteristics of informal microenterprises, the causes of informality and the prevailing debate on street vending. Chapter five provides a discussion on the composition and structure of street vendors' PNs. In chapter six, inequality in SC between men and women and among indigenous ethnic groups is presented. Chapter seven shows change in the PNs of street vendors over phases of enterprise development. Chapter eight presents the causal effect of PNs on enterprise performance. The last chapter provides the conclusions and implications of the results of the study for microenterprise development programs in particular and community development interventions in general.

## **Chapter 2**

### **Review of the Literature**

#### **2.1. Introduction**

The literature review is organized into two sections. The first section deals with the theoretical and conceptual issues and the second shows the empirical literature. In the conceptual literature part, six issues are discussed. In the first sub-section, the concept and definition of the informal economy is presented. The second sub-section outlines the relationship between the informal economy and SC in the context of a livelihood framework. The third part examines the concept and measurements of SC and introduces SNs as measures of SC. The fourth section deals with the advantages and limitations of SC and in the fifth section SC theories in entrepreneurship research are depicted. In the empirical literature section, previous SC studies in developed and developing countries are reviewed.

#### **2.2. Conceptual and Theoretical Perspectives**

##### **2.2.1. The Informal Economy: Concept and Definition**

Rural–urban migration, urban unemployment, and the informal economy have received considerable attention in development economics since the 1960s (Potts, 2007). The discussion starts with the models of Arthur Lewis (1954) and the Harris and Todaro (1970). The Arthur Lewis (1954) model explains the transfer of labor from the agricultural (traditional) sector to industrial (modern) sector. As to the theory, agriculture in LDCs is characterized by subsistence nature. It has low productivity and hence low output, low incomes, and high unemployment. In contrast, the industrial sector is characterized by high productivity and absorbs labor from rural areas. Under such circumstances, people migrate from rural to urban areas. Rural-urban migration is said to have no effect on agricultural production as marginal product of labor is assumed to be zero (Lewis, 1954).

The Lewis model claims that as employment in the modern sector increases, there will be more output and hence more profits. However, the modern sector may invest in capital-intensive methods of production rather than labor-intensive ones leading to surplus labor in urban areas. In reality, rural-urban migration in LDCs is greater than the capacity of the modern sector to absorb additional labor (Todaro and Smith, 2011). Consequently, migrants who cannot be absorbed into the formal sector join the informal economy. According to the Harris-Todaro (1970) migration model, informality exists for two reasons-a) not every migrant can find a job in the formal sector because wages are too high for the formal labor market to absorb rural-urban migrants, however, b) someday there is a probability to find job in the formal sector and this tendency makes people migrate to urban areas. This continues until wages in agriculture and the expected wages from migration are balanced. For a while, migrants might end up in the informal sector with a wage even lower than agriculture. As to the Harris-Todaro model, the informal sector, acts as a counterweight to the attractiveness of the urban formal sector and slows the rural-urban migration. The informal sector is, thus, a refuge for formal job seekers (Potts, 2007)

The concept of informal sector originated in the Third World out of studies on urban labor markets in Africa (Potts, 2007). How to define the informal sector and differentiate it from the formal economy has been an ongoing contest ever since Keith Hart first introduced this concept in his work on Kenya (ILO, 1972) and Ghana (Hart, 1973) four decades ago. The first ILO (1972) mission in Kenya distinguished the informal sector from the formal sector on the basis of seven antipodal traits: easy versus difficult entry; reliance on local rather than foreign resources; family in contrast to corporate ownership; small versus large-scale enterprises; labor intensive and adapted instead of capital intensive and imported technologies; informally rather than formally acquired skills; and unregulated and competitive as opposed to a protected market.

Keith Hart (1973), in his study of the urban labor force in Ghana, identified a dualist model of income opportunities based on the distinction between paid employment and self-employment. He used the concept of informality to describe those owners of small businesses who were self-employed. Hart used the term 'informal economy' to refer to small-scale activities undertaken in urban areas and were not formally recognized. He also noted that the informal economy is a survival strategy which provides an entrepreneurial function and offer services that are not provided by the formal economy. Following studies by ILO and Hart, different scholars defined the informal economy in various ways.

According to Suthuraman (1989), the informal economy is defined as an urban way of earning a living distinguished by easy entry in terms of skill, capital, and organization; family ownership of enterprises; small-scale of operation; labor-intensive production; and unregulated markets. In their study of informal sectors of West Africa, Webster and Fidler (1996:6) define the informal sector as a marginal economy providing income for the poor. They describe the informal sector workers as "survivist (very poor people who work part-time in various non- farm, income generating activities); self employed people who produce goods for sale, purchase goods for resale or offer services, and those engaged in microenterprises, which usually operate in fixed locations with regular hours".

Portes and Haller (2005) point out that the informal sector comprises small scale, labor-intensive, and family owned enterprises. In a study of informality in Addis Ababa, Fransen and Van Dijk (2008) also found that informal entrepreneurs are often underemployed persons living below the poverty line and scuttling to survive in a saturated market. They further note that informal sector workers are self-employed with no or very low levels of education and that the largest share of employees are unpaid family laborers.

In sum, after a number of studies by the ILO, the main features of the informal sector were identified. The main defining elements of the informal economy include: ease of entry; small scale activity; self-employment; high percentage of family workers in enterprises; little capital and equipment; labor intensive technologies; low skills; low levels of education and training; low levels of organization; no access to organized markets; no access to formal credit; cheap provision of goods and services; low productivity, and low incomes (ILO, 1993).

According to the ILO (2002b), informal employment includes both self-employment in informal enterprises and wage employment. The ILO (2002a) report indicates that in all LDCs, self-employment accounts for the largest proportion of non-agricultural informal employment than wage employment in informal jobs. The informal sector comprises of street vendors, domestic workers, home-based workers, construction workers, transport workers, and waste pickers. Street vendors and home based workers make up the largest group of informal sector operators. While home-based workers are invisible but numerous, street vendors are the most visible and self-employed entrepreneurs (ILO, 2002b).

Street vending is an important part of urban economies. It provides affordable goods and services with accessible retail choices to the poor section of the population in LDCs (ILO, 2002a). Street vendors are entrepreneurs who sell goods or provide services in the streets. They sell a wide range of goods and services on a retail basis in streets and sidewalks. They may have fixed booths such as kiosks and semi-fixed booths like folding tables (Tanga, 2009). They may work from barred enclosures, collapsible stands, or wheeled pushcarts that are moved and stored quickly. Other vendors sell from fixed locations without having any structure, displaying their products on plastic sheets. Lottery and mobile vendors, on the other hand, walk through the streets (ILO, 2002b). In general,



street vendors form a significant part of urban livelihoods particularly in the developing regions of the world of which Ethiopia is not an exception.

### **2.2.2. The Informal Economy and the Livelihood Framework**

In order to conceptualize how street vendors undertake their activities and to locate the role of SC for the poor, the study uses the sustainable livelihoods framework (SLF). The SLF considers SC, among others, as one of the key resources utilized by the poor to build livelihoods (Scoones, 1998). In the development discussion, interest in the livelihood approach has grown due to the failure of income/consumption measurements of poverty to address the processes and multidimensional nature of poverty (Tegegne, 2011). The SLF is holistic in its approach. It focuses on the assets of the poor and the strategies they employ to make a living. It identifies actions, constraints, and resources affecting the livelihoods of the poor in the face of adverse conditions (Scoones, 1998). The term *livelihood* refers to the ways by which people earn a living. It comprises capabilities, assets, and activities required for a means of living (Chambers and Conway, 1992). In this definition, assets refer to the five types of capital: natural, physical, human, financial, and social (Scoones, 1998). The poor combine and transform these forms of capital in different ways to build their livelihoods (Scoones, 1998; Lyons and Snoxell, 2005). The SLF approach was first developed for rural settings. Subsequently, it has been employed in urban context (Tegegne, 2011).

The SLF has five key elements (see Appendix I): (a) vulnerability, which refers to the insecurity of individuals or communities in the face of changing circumstances; (b) assets, referring to the resources on which people draw to perform their livelihood strategies; (c) policies, institutions, and processes that determine people's choices in shaping livelihoods; d) livelihood strategies which are the actions that the poor undertake

to build livelihoods; and (e) livelihood outcomes which refers to the results of livelihood strategies including increased incomes and reduced vulnerability (Scoones, 1998).

The first component in the SLF is the vulnerability context. In the urban environment, the causes of vulnerability include the urban social context and the urban economy (Tegegne, 2011). Due to high unemployment rates in urban areas, migrants to cities are vulnerable to unemployment problems. As a result, they resort to the informal activities to earn income and maintain their livelihoods. Informal sector activities provide the poor with low incomes (Lyons and Snoxell, 2005). The poor are, however, less educated and have almost no physical and financial capital that can be used at times of emergency. In addition, the poor have few, if any, assets that can be used as guarantee to get credit from financial institutions (Tegegne, 2011). Under such conditions, rural-urban migrants use their SC to mitigate negative shocks and take advantage of opportunities to uphold their livelihoods (Lyons and Snoxell, 2005).

The urban poor rely on SC to obtain resources such as knowledge, information, and money. These resources enable migrants to withstand the problems of poverty (Lyons and Snoxell, 2005). SC minimizes risks of livelihood insecurity and reduces the effects of adverse conditions and it is a key asset for both urban and rural poor (Woolcock, 1998; 1999). Indeed, it is recognized that there are variations between rural and urban areas in SC composition and reciprocity (Odella, 2012), and there are debates on whether SC is weak or strong in urban areas (Phillips, 2002). Some argue that cities are socially and culturally diverse from rural areas. Accordingly, community and kinship ties are weak in urban areas (Schütte, 2009). Moser (1998) has shown that in urban areas, SC can be dissolved by social and economic heterogeneity. Consequently, social fragmentation and community breakdown can worsen the situations of the urban poor and increase their vulnerability.

A divergent view about social fragmentation in urban settings is based on the acknowledgment that SC is a key asset for the urban poor (Tegegne, 2011). In this regard, Richards and Roberts (1998) documented that SC is a mechanism that help migrants to cities establish their livelihoods. Likewise, Fischer (1982) indicates that the urban poor are not deprived of opportunities gained from SC as PNs are always there even outside kinship circles. Moreover, Odella (2012) has documented that while people migrate to cities their ethnic ties provide social supports such as casual work, accommodation, and emotional support. She further underlines that while traditional communities are based on kinship ties, networks in modern societies involve both kinship and non-kinship ties.

Beall (2001) has argued that due to the prevalence of wider unemployment and poverty in LDCs, individual survival is difficult. Therefore, people need to rely on others to achieve livelihood goals. Beall further notes that evidences drawn from studies of urban areas in LDCs prove that SC is and will remain an important resource for the poor. In Africa in particular, the city case studies show that extended family networks span the rural-urban divide and become important sources of livelihood security and support (Meagher, 2005). Despite the contradictory views on the role of SC, there exists a consensus that SC is a critical resource that helps the urban poor to build their livelihoods (Tegegne, 2011). This study is, therefore, based on the acknowledgement that SC helps the urban poor to mitigate shocks and risks of unemployment and helps them establish livelihoods systems.

### **2.2.3. The Concept and Measurements of Social Capital**

The recent interest in the application of SC in the field of development originates from the limitations of an utterly economic approach towards achieving economic growth and good governance (Portes and Landolt, 2000). Since the 1970s and 1980s, SC has become one of the most important and popular ‘metaphors’ in social science research

(Boari and Presutti, 2004; Durlauf and Fafchamps, 2004). An increasing number of researchers have used the concept of SC to answer questions related to their own specific fields of study in line with the idea that social phenomena can influence economic activities (Moran and Ghoshal, 1997). After the popularization of the concept in the 1970s and 1980s, several schools of thought were developed. Most researchers in the field agree that there are three traditions concerning the concept and measurements of SC (Adam and Rončević, 2003).

The first school of thought is associated with the work of Bourdieu (1986: 284) who defines SC as “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintances and recognition”. Bourdieu emphasizes the importance of SNs in conceptualizing SC. The second school traces its origin to the work of Coleman. Coleman (1988) defines SC as resources embedded in social relations that permit individuals and communities to achieve their desired goals. He argues that distinct from other forms of capital, “social capital inheres in the structure of relations between actors and among actors” (Coleman 1988: 8). The third tradition is associated with the work of Putnam, who defines SC as “the features of social organization such as trust, norms, and networks that improve the efficiency of society by facilitating coordinated actions” (Putnam, 1993:167).

The initial definitions of SC have been further elaborated by others. For example, Portes (1998: 8) defines SC as “the ability to secure benefits through membership in networks and other social structures”. For Woolcock and Narayan (2000), SC refers to the norms and networks that enable people to act collectively, while Lin (1999a:35) defines it “as resources embedded in social structures which are accessed and/or mobilized in purposive actions”. Despite several attempts, the definition of SC has remained subtle (Durlauf and Fafchamps, 2004). Lack of a clear definition has led to the problem of

measuring SC. However, a review of the literature has shown that there are two approaches upon which many of the empirical studies have been conducted. The first focuses on behavioral variables and attitudes including trust, norms, and values. The second approach focuses on measuring the position of individuals in networks (Adam and Roncovic, 2003).

Owing to the elusiveness of the concept, there are problems in the treatment level of SC. For some scholars, for example, Putnam (1993) and Fukuyama (1995), SC is a quality of groups including the rule of law, social integration, and trust. For others such as Lin (1981), Granovetter (1983), and Burt (1992), SC is a value of an individual’s social interaction. While the group level analysis considers SC as ‘the collective good’, the individual level stresses the ‘private good’ (Borgatti et al., 1998). In fact, individuals or groups can establish social relationships either inwardly or outwardly. As framed by Borgatti et al. (1998), a combination of the individual versus group level treatment of SC and the internal versus external relationship generates four levels in the treatment of SC (see the Table below).

Table 1: Different conceptualizations of social capital

Type of Actor	Type of Focus	
	Internal	External
Individual	Human capital	Individual social capital
Group	Intra group social capital	Intergroup social capital

Source: Borgatti et al. (1998).

As shown in Table 1, the top left and right cells display the individual level analysis of SC. The top left box does not indicate the presence of SC because an individual is interacting with him/herself. Under such circumstances, instead of SC what matters is an individual’s asset of human capital (Borgatti et al., 1998). But, the top right cell of the figure depicts the individual’s interaction with the outside world and this denotes the

individual level SC. The bottom two cells match with the ‘groupist’ feature of SC. While the left bottom cell shows intra group SC, the bottom right cell depicts the intergroup analysis of SC (Borgatti et al., 1998). This study is in line with the private facet of SC.

As the above discussion indicates, there are several competing measures and treatment levels of SC. This is clearly the result of unsettled issues related to its theoretical construct. Given the conceptual and measurement problems of SC, Grootaert and Van Bastelaer (2001) drew a distinction between structural and cognitive forms of SC. Structural SC refers to objective and externally evident structures such as networks, associations, and institutions. Cognitive SC, in contrast, consists of subjective and intangible facets including attitudes, norms of behavior, shared values, reciprocity, and trust (Grootaert and Van Bastelaer, 2001: 3). SC can also be analyzed at three levels: micro, meso, and macro. At the micro level, observations are made on individuals and households; at the meso level, the focus is on groups; and at the macro level the focus is on national level institutions and the political context (Grootaert and Van Bastelaer, 2001) . The figure below shows the schematic summary of the forms and scope of SC.

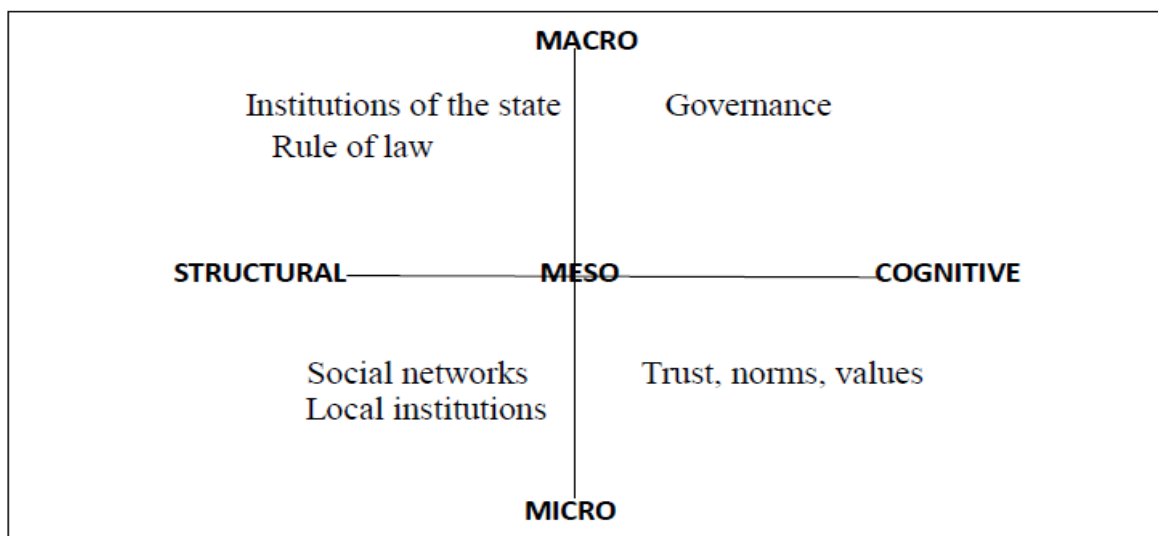


Figure 1: Forms and scope of social capital  
Source: Grootaert and Van Bastelaer (2001: 27)

Figure 1 above shows a conceptual and methodological basis for research and practice in SC. Many researchers suggest that SC is a multidimensional concept, and that a single measure cannot provide a complete picture. Kinyanjui and Khayesi (2005) note that measures of SC have to be as inclusive as possible should balance between the structural and cognitive dimensions of SC. In other words, the best approach in measuring SC would comprise all four quadrants shown in Figure 1. In practice, however, “the state of the art has not advanced to that stage” (Grootaert and Van Bastelaer, 2001: 27). Researchers have, therefore, focused on one or a few dimensions of SC (Kinyanjui and Khayesi, 2005). Durlauf and Fafchamps (2004) also argued that it is more feasible for empirical analysis to set back from grand approaches and focus on specific components of SC.

Departing from the cognitive and meso and macro level analysis and giving emphasis to the individual level of SC, this study has applied the SN approach in measuring SC. This is based on the conviction that SC exists in SNs and SNs facilitate expectations and trustworthiness among the actors in a network (Coleman, 1988). Durlauf and Fafchamps (2004:5) indicated that “the study of SC is network-based process that generates beneficial outcomes through norms and trust”. Similarly, Lin (1999a, 35) points out that “SC is rooted in SNs and social relations and must be measured relative to its roots”. The network dimension of SC is micro oriented focusing on individuals and their ability to secure benefits by virtue of positions in a network (Portes, 1998). Moreover, the SN approach has a well developed empirical methodology compared to trust, values, and norms (Adam and Ronvević, 2003; Chiesi, 2007). Chiesi (2007) recommends that to measure SC and its significance, it is good to focus on the structure of relations and their contents as it helps to utilize recent developments in SNA techniques. Accordingly, in this study SC is conceptualized at an individual level and emphasis is given to the personal network measures of SC.

#### **2.2.4. Social Capital: Advantages and Limitations**

There are controversies as to the significance of SC in the economy. While proponents of SC acknowledge its positive effects in economic efficiency, others argue that SC exhibits a 'downside' (Meagher, 2005). As argued by Grootaert (1999), although the strength of relationship between SC and welfare outcomes differs by outcome indicator, the overall pattern is that SC correlates positively with household welfare. But a common criticism of the pioneers of SC including Bourdieu, Coleman, and Putnam is that they did not address the negative effects of SC. Pertaining to this argument, Dasgupta (2000) indicates that SC can either facilitate or hinder economic efficiency depending on the uses how and where it is in place. Meagher (2005) also points out that though SC can provide an informal support for better economic performance, it can also function as mechanisms of conspiracy. Moreover, Collier (2002:34) argues that SC is not always good. He points out that "the control of free riding by clubs and hierarchies can produce rent seeking institutions like Mafias". Indeed, the institutional analysis of mafias has indicated that instead of serving as means of economic efficiency, SC can act as means of bribery and opportunism (Gambetta, 1996).

Portes (1998) and Portes and Landolt (2000) have identified three negative effects of SC. The first drawback of SC occurs when groups develop high levels of cohesion and this group solidarity is cemented by a common experience of adversity and opposition to mainstream society. In the second place, SC puts limitations on individual freedoms particularly in condition where strong ties are prevalent. The more strong the informal network, the less scope a person has to undertake activities according to his/her preferences. The third is related to degrading the norm of minority group's participation in mainstream society.



By and large, the claim on the discussion of SC is that a broader understanding of SC should account for both positive and negative effects. The merits and demerits of SC, however, depend on culture and socioeconomic environments which can facilitate or hinder the development of economically efficient networks (Meagher, 2005). In the African informal economy context, the consensus is that SC has been more successful than governments in structuring economies. Evidence have been drawn from informal sectors and ethnic networks, which provide livelihoods, housing, goods, and services in the face of malfunctioned formal economies (Kinyanjui and Khayesi, 2005). Indeed, while Eurocentric development agenda have failed in Africa, indigenous networks based on kinship ties, ethnic identity, and religion have provided efficient forms of economic organization(Meagher, 2005). SC has been increasingly documented as a key resource for the poor and capable of augmenting economic efficiency independently of the state.

In Africa, SC is considered as a crucial asset for pursuing diverse activities of the poor such as securing livelihoods through enterprise development and other means of living (Kinyanjui and Khayesi, 2005). This study is, therefore, based on the recognition of the positive role of SC as a means of enterprise development for poor street vendors in Addis Ababa.

#### **2.2.5. Social Networks and Entrepreneurship in the Informal Sector**

SNs are personal relationships which are built when people interact with each other in families, the work places, in the neighborhoods, in local associations, and a range of meeting places (Granovetter, 1973). SNs affect livelihood opportunities and outcomes as they connect individuals with other people not only in their neighborhood but also outside their environs through the contacts of friends and acquaintances (Granovetter, 1973; 1985; Burt, 1992). SNs are important sources of social support for entrepreneurs (Greve and Salaff, 2003). The urban poor might have ideas and skills but they need additional

resources from others because they cannot have all the resources needed for starting a business. Most resources are obtained from friends, relatives, and acquaintances through PNs (Kristiansen, 2004; Premaratne, 2011).

SNs enlarge entrepreneurs asset base because the entrepreneur can use their relations to connect with other people to share social resources and identify opportunities, build livelihoods, and develop entrepreneurial skills (Gilchrist and Kyprianou, 2011). SNs encourage entrepreneurs to take risks and enhance business success under conditions of uncertainty. They also provide benefits such as joint problem solving, information exchange, resource sharing, etc (Uzzi, 1996).

Many scholars, (e.g., Burt, 1992; Greve, 1995; Uzzi, 1996; Uzzi 1997; Greve and Salaff, 2003) have been using SNA to study the relationship between networks and business development. The major premise of these studies is that a new entrepreneur cannot have sufficient experiences and resources for business start-up. To start a business, an entrepreneur, thus, collects the necessary business resources from other persons through his/her PNs. Burt (1992) indicates that an entrepreneur brings three kinds of capital to establish an enterprise. These include financial capital, human capital, and SC. Among these resources, Birley (1985) and Aldrich and Zimmer (1986) argued that SC is very important component in business development. Adler and Kwon (2002: 29-30) mention three benefits of SNs including “information, influence, and solidarity”. In particular, strong ties are believed to encourage obedience of rules and thus reduce the need for formal controls (Adler and Kwon, 2002).

In informal sector studies, there has been recognition of the role of SNs in the operation of the economy. Scholars have acknowledged the importance of indigenous ethnic and religious networks in providing an environment of cohesion and shared norms capable of organizing trading operations outside the formal system (Meagher, 2005;

Sherifat, 2011). In the current situation of state crisis in LDCs, neo-liberal informal sector literature has focused on the potential role of SNs in substituting the awkward and inefficient regulatory framework of the formal economy (Berrou and Combarous, 2012). Characterized as informal associations and communal networks, SNs serve the poor independently of the state control and are able to respond more effectively as a substitute to state institutions to the economic and social needs of the poor (Sherifat, 2011). In this study the argument is that SC helps the poor street entrepreneurs to start business and pursue their livelihoods.

### **2.2.6. Theories of Social Capital**

Social capital theories argue that social relationships add value to actors in a network by allowing them to obtain the resources embedded in such relationships for their actions (Bourdieu, 1986; Lin, 1999). Within the SC and entrepreneurship studies, Granovetter's (1973) 'strong and weak tie theory'<sup>6</sup>, Lin's (1981) 'social resource theory', and Burt's (1992) 'structural holes theory' have been widely used (Berrou and Combarous, 2012). In his seminal work, Granovetter in 1973 developed the 'Strength of Weak Ties' theory. According to Granovetter (1973) the strength of ties within a network defines the strength and quality of personal relations. By identifying two types of ties, strong and weak, Granovetter (1973) describes how the compositions of networks influence the behavior and actions of individuals.

Granovetter's classification of network ties as either weak or strong is based on the frequency and intimacy of contact among members of the network. Relationships with friends and family are classified as strong ties because of frequent contact and emotional closeness. In contrast, ties with acquaintances, workmates, and business associates were

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<sup>6</sup> Strong ties are links with people that involve frequent interactions. Links with infrequent interactions, the 'weak ties', tend to bridge individuals across social groups of close interpersonal relationships (Granovetter 1973). Strong ties create closed networks whereas weak ties enable access to social circles beyond actors' own direct network. In social capital literature, they are referred as bonding and bridging social capital (Woolcock, 2001)

classified as weak ties because of less frequent contact (Granovetter, 1973). Weak ties of individuals comprise of contacts that are less familiar and having short duration and low frequency of contact. Weak ties exhibit lower levels of trust and are liable to disintegration during the times of crisis(Granovetter, 1973; 1985).

Granovetter (1973, 1983; 1985) indicates that new information flows to individuals through weak than strong ties. This is because close friends tend to move in the same circle and the information they receive overlaps with what they already know. The homogeneity of strong ties is less effective as it breeds local cohesion (Granovetter, 1973). Acquaintances of weak ties, in contrast, know people that they do not know earlier and thus obtain new information and new ideas. Weak ties are, in contrast, as heterogeneous ties and are perceived to help information flow from one to other groups which are distant to each other (Burt, 1992). The strength of weak ties is related to diversity in sources of knowledge and advice. Individuals with strong ties are deprived of information from distant parts of the network and will be limited to the local news and perceptions of their close relations (Granovetter, 1973; 1983; 1985).

Although weak ties are sources of new ideas and information, Granovetter (1973; Uzzi, 1996) argued that individuals' PNs should consist of both strong and weak ties as the nature of these ties influences the operation and structure of networks differently. For example, Granovetter (1985) noted that compared to weak ties the information and support obtained from strong ties offers multiple benefits in that it is cheap, more reliable, and more comprehensive.

Besides content of ties, network structure can influence the creation and utilization of SC (Burt, 1992). Following work of Granovetter, Burt (1992) reformulated the 'weak ties' argument by claiming that what is important is not the quality of ties but the way different parts of networks are 'bridged'. In this regard, Burt (1992; 2000) distinguishes

between two types of network structures that create SC namely, ‘closure and structural holes’. The closure structure is characterized by a network of densely connected elements that enhances collective action. For Burt, however, SC is created by a network in which people can ‘broker’ linkages between disjointed pieces.

The brokerage argument claims that people who ‘bridge’<sup>7</sup> structural holes can get creative ideas and are more likely to look for solutions for business problems. Thus, brokerage is a source of alternative ways of thinking and behaving (Burt, 1992; 2000; 2001). Structural holes are gaps in the network structure across which there are no connections between individuals or groups. Individuals who exhibit large volume of SC bridge the gaps created by such holes. People whose networks bridge the holes are brokers and they have the potential to connect the structural gaps (Burt, 2005).

The third widely used theory of SC in entrepreneurship research is the social resources theory of Lin (Lin, 1981). This theory argues that it is not the strength of ties or network structure that is worthwhile in networks; rather, it is the resources embedded in a network that matters most in the actions of individuals (Lin, 1999a). Taking a hierarchical view of social structure, Lin (1981) argues that *access* and *use* of social resources can lead to better socioeconomic outcomes. The theory states that people with access to better social resources will have the potential to obtain good results (Lin, 1981). In job searches, for example, valuable social resources are those providing access to information about desirable jobs (Lai et al., 1998). In addition, the theory states that high socioeconomic positions and wide-ranging networks provide varied sources of information to actors in a network (Lin, 1981). Valued resources in societies are represented by wealth, power, and status. SC is, therefore, measured by the diversity in occupational prestige of network members (Lin, 1999b). This is based on the credence that occupational prestige is a good

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<sup>7</sup> In a network, abridge is a tie that provides the only path between two individuals or groups of individuals (Burt1992)

indicator of social resources. More specifically, it is argued that individuals having contacts with people of higher occupational prestige are able to obtain more social resources and reach at better outcomes than those individuals who exhibit contacts with lower occupational prestige (Lin and Dunim, 1986).

As stated by Lin (1999a), the measurement of social resources can be classified as *contact resources* and *network resources*. While network resources refer to resources embedded in ones ego-network, contact resources are rooted in contacts used as assistants in instrumental actions. In other words, network resources embody accessible resources and contact resources refer to resources that are actually mobilized for instrumental actions (Lin, 1999a). According to the contact resources approach, the effect of social resources on instrumental outcomes signifies the direct result of reaching a resource-rich alter in an ego's network (Lin, 1999b).

An examination of the above three SC theories show that SC has three components: relational, structural, and embedded resources. While Granovetter emphasizes the relational features, Burt and Lin focus on the structural and embedded resources components respectively. Each of these theoretical stance is not complete by itself and the efficiency and effectiveness of a network depends on the activities and challenges that an individual entrepreneur faces (Klyver and Schøtt, 2011). In addition, except the recent effort by Berrou and Combarous (2011; 2012), the application of these theories in the African informal economy context has rarely been the subject of empirical analysis and assessment. In this study, therefore, an integrated version of these three theories is used as analytical framework in studying the configuration of street vendors PNs among street vendors in Ethiopia and evaluates the effect each of the three SC perspectives on enterprise performance.

### **2.3. Empirical Literature**

While the theories of Granovetter (1973), Burt (1992) and Lin (1981) have become established paradigms, questions and disagreements arise over their applicability in indicating the use and value of each tie in enterprise success (Jenssen and Koenig, 2002). Researchers have explored the comparative roles of weak and strong ties. The potential role of weak and strong ties and also the ‘brokerage’ role of SNs is still debatable and is not adequately understood (Williams and Durrance, 2008).

The empirical literature in developed countries has shown the important role that SC plays in influencing entrepreneurial processes and outcomes. For instance, in research on small-to-medium-sized firms in the US, Zaheer and McEvily (1999) found a positive association between weak ties and greater acquisition of capabilities in the metalworking segment of the automotive industry. In their study in Canada, Baum et al. (2000) observed that business partner heterogeneity has a positive effect on firms’ financial performance and their innovative capability. Similarly, Singh et al. (1999) observed that entrepreneurs in the information technology industry with weak ties have got more opportunities than those firms with strong ties.

In contrast, in a study on German firms, Brüderl and Preisendörfer (1998) have shown that strong ties are more significant than weak ties in explaining firm success. In their German based research, Cantner et al. (2010) have also shown that networks help to facilitate firm innovation but being in an open position with a high level of SNs does not present a positive correlation with innovative capacity and firm growth. Moreover, a study from entrepreneurs in Norway has shown that strong ties are important channels for new information when compared to weak ties (Jenssen and Koenig, 2002).

Research has also shown that individuals who can effectively span structural holes gain greater advantages. Loan officers with networks that span structural holes have shown

to be more likely to bring a deal to closure (Mizruchi and Stearns, 2001). In a French chemical firm, salary increases were more likely for individuals who span structural holes (Burton et al., 2010). Mehra et al. (2001) found that supervisors in a small technology company who span structural holes obtained higher performance evaluations than employees whose networks bridged otherwise disconnected parts of their organizations. Burt (2000: 33) also notes that “a simple count of bridge relationships seems to work in that people with more bridges do better”. Empirical research (e.g., Lin et al., 1981; Marsden and Hurlbert, 1988; De Graaf and Flap, 1988; Bian and Ang, 1997) studied the contact resources perspective of social resources and the findings of these studies show that higher socioeconomic position of a contact persons is associated with better outcomes of a person who seeks support. Lin and Dumin (1986) found that higher socioeconomic status allows access to better network resources.

The literature on entrepreneurship in Africa has shown that SC plays an important role in addressing livelihood problems of the poor and supporting entrepreneurship behavior. In a study carried out in Guinea, Lourenco-Lindell (2002) observed that SNs play a positive role in crisis management. While weak ties are more flexible and easily manipulated at the time of crisis; they are more vulnerable to calamity unlike strong ties. Strong ties were found to be more prominent in managing crisis. In their case studies of agricultural traders in Madagascar, Fafchamps and Minten (1999; 2001) found that weak ties are significant in accessing and sharing market information for entrepreneurs. They underscore the importance of strong ties in risk sharing when compared to weak ties. The role of strong ties in accessing finance was also demonstrated by the study.

Moreover, Barr (2000) found that network diversity among manufacturers is an important factor in explaining productivity differences between enterprises in Ghana. Barr (2002) also studied entrepreneurial networks in Ghana and she identified solidarity and



innovation networks. The results showed that while innovative networks facilitate better enterprise performance, solidarity networks help enterprises to reduce uncertainty.

In the study of SNs and the informal economy in Burkina Faso, Berrou and Combarous (2011) found that strong ties are positively related to economic outcomes of entrepreneurs. They also found that weak ties with people of high social status have a positive effect on the economic performance of entrepreneurs. Using data from seven cities of Western Africa, Grimm et al. (2013) found that strong ties enhance the utilization of labor and capital resources to start microenterprise. In addition, in a study carried out in Zimbabwe, Zuwarimwe and Kirsten (2010) found that rural non-farm entrepreneurs use their SNs for information and other resources needed to establish and expand enterprises. The findings show that in the start-up phase entrepreneurs use their strong kinship ties for start-up capital but in expansion stages they use their weak ties with other entrepreneurs outside the study district.

In sum, studies in African countries document the positive role of SNs in enterprise development. Durlauf and Fafchamps (2004), however, indicate that most of the SN studies in sub-Saharan Africa focus on rural households with less attention paid to urban households. In view of this, Berrou and Combarous (2012) recommend rigorous analysis of SC and entrepreneurship studies in African cities.

## **Chapter 3**

### **Research Methods**

#### **3.1. Introduction**

This chapter presents the methodological approach used to collect and analyze data. It also shows the data collection process and the challenges of the field survey. The chapter is sub-divided into nine parts. Following the introduction, section two presents the analytical model of the study. Section three gives description of the study area. Section four shows the research design. Section five depicts samples and sampling procedure. While section six presents the nature of data and data collection tools, section seven and eight depict the field work and the challenges of data collection respectively. The last section deals with the methods of data analysis which elaborates the SNA methods and statistical techniques.

#### **3.2. Analytical Model of the Study**

There are two main approaches in SN studies: whole network and egocentric network approaches( Marsden, 1990; Chung et al., 2005). An ‘ego-centered’ or ‘personal network’ is defined as an actor’s set of relations with other actors. It is composed of a focal actor (‘ego’), the ego’s direct contacts (‘alters’), and the ties between them (Marsden, 1990; Odella, 2006). In SN language a person that one is interested in is referred to as an ‘ego’ and the persons referred by an ‘ego’ as his/her affiliate, advisor, friend, or relative, are known as ‘alters’ (Chung et al., 2005).

The ego-center perspective conceptualizes networks to decouple the social context in which individuals are embedded and is based on ‘methodological individualism’. It examines local network structure (Chung et al., 2005; Odella, 2006). On the other hand, in the ‘sociocentric paradigm’, SNs are investigated from a socio-centered viewpoint that has a pre-defined set of actors and relations between them. This is called ‘whole’ or ‘complete’ network (Marsden, 1990; Chung et al., 2005; Odella, 2006). In a whole network research

design, one begins with a set of nodes and then measures all of the ties among those nodes (Marsden, 1990).

Both the ego and whole network approaches do have strengths and weaknesses. The ego-centered approach has advantages over the whole-network approach in that in the first case researchers can draw samples at a random and generalize the results to a defined population. It also permits secrecy of respondents and alters so as to reduce privacy issues and promote response rates (Borgatti and Halgin, 2012). In addition, in the ego-centered approach data do not have statistical problems such as lack of independence that must be addressed while analyzing full network data. Ego-centered approach is, however, not free from problems. For example, data contains only nominations by ego and it is difficult to determine the availability of all alters in ego's world. In addition, alter-alter ties may be perceived by ego but might be inaccurate (Borgatti and Halgin, 2012).

Actors in whole networks are named in closed lists, usually specified in advance and known before or easily determined (Marsden, 1990; Carrasco et al., 2008). In many cases, this approach has been taken as the gold standard in SN studies because of its ability to collect data for the full network (Borgatti and Halgin, 2012). However, since these boundaries are very difficult to define in urban settings with large numbers of street vendors and where close lists are not pre-defined, examining the whole network of study subjects such as street vendors is impractical (Carrasco et al. , 2008). This makes ego-center network data collection to be the only feasible option (Marsden, 1990; Wellman and Faust, 1994; Marsden, 2005; Rauf and Mitra, 2012). This study, therefore, is framed within the ego-centered approach and data were collected from individual street vendors. PNs, in this study, refer to regular relations that street vendors have/had in establishing and obtaining resources for enterprise development and their day-to-day business trajectories.

Given the three SC theories and following the ego-centered network approach, the analytical model of the study is developed (Figure 2 below). The main message of the analytical framework is to show how PNs are formed and how they influence enterprise performance of poor street vendors in Addis Ababa. It is used to analyze and evaluate the structure and composition of street vendors PNs and how different configurations of PNs (relational, structural, and embedded resources) tend to influence enterprise performance. The analytical model has three components: (1) foundation and guiding principles, (2) configuration of street vendors' PNs; and (3) enterprise performance.

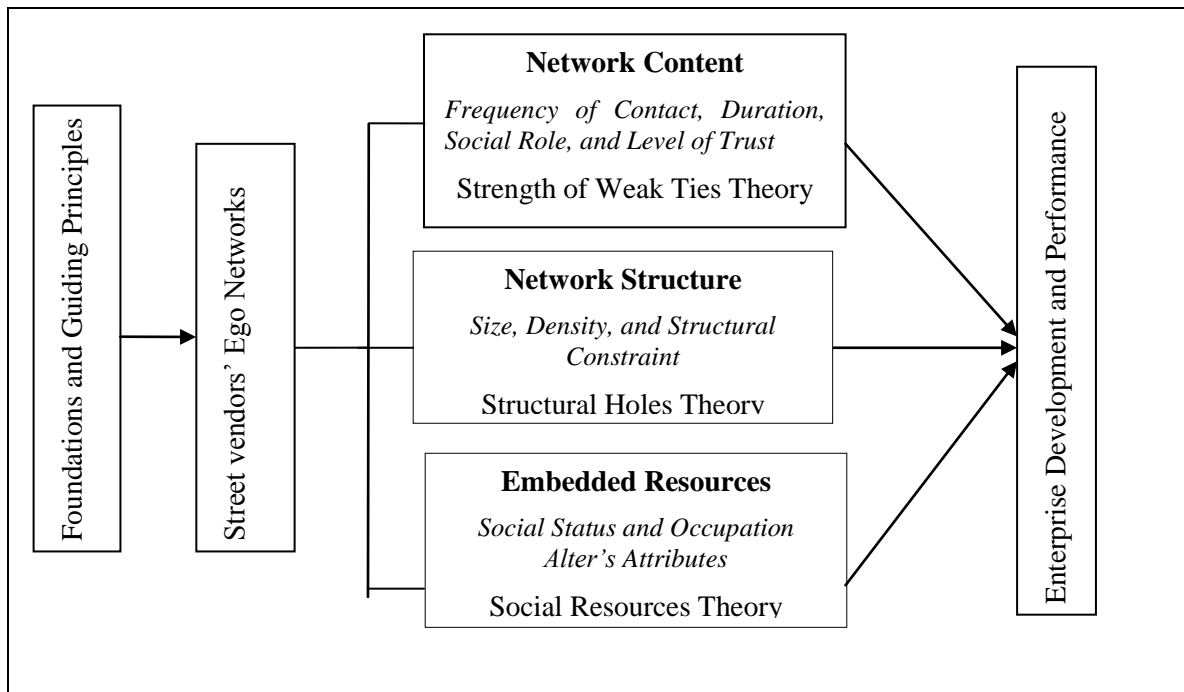


Figure 2: Analytical model for analyzing the configuration of street vendors' personal networks

Source: Adapted from Kinyanjui and Khayesi (2005) and Berrou and Combarous (2012)

As shown in Figure 2, the foundation and guiding principles refer to the sources of SNs (ethnicity, religion, family, friendship, gender, etc) and the values and norms that guide transactions, resource sharing, and interactions (Kinyanjui and Khayesi, 2005). The hypothesis here is that the sources of PNs might vary among street vendors. This variation in the sources of PNs may lead to variations in PNs configurations among street vendors

depending on their ethnic background, gender, religion, etc. In the model, PNs are described according to the three main dimensions: network structure, content of ties, and embedded resources. These three dimensions explain the structure and composition of PNs embedded in street vendors.

By and large, the statement in the analytical model is that there might be variations in the composition and structure of PNs among street vendors and these differences will have differential impact on enterprise performance. To test this assumption, first the composition and structure of PNs among the three indigenous ethnic groups and across gender was examined and then the effect of PNs (relational, structural, and embedded resources) on enterprise performance is evaluated. To do so, enterprise performance as a dependent variable will be measured with respect to net enterprise income.

### **3.3. Description of the Study Area**

The study is conducted in Addis Ababa, the capital and the primate city of Ethiopia. Addis Ababa lies between 9°1'48"N latitude and 38°44'24"E longitude. It is located at the geographic centre of Ethiopia. It has an altitude ranging from 2,100 meters at *Akaki* in the south to 3,000 meters at *Entoto Hill* in the North. The city has a total area of 540 Km<sup>2</sup> (City Government of Addis Ababa, 2013). Established in 1887 by emperor Menilik II and with a population of three million (52 percent females and 48 percent males), Addis Ababa is one of the oldest and largest cities in Africa (CSA, 2010).

Addis Ababa is a seat of regional and international organizations such as the then Organisation of African Unity (OAU) and the now African Union (AU) and the United Nations Economic Commission for Africa (UNECA) (UN-Habitat, 2008). Consequently, it has become a centre to many people coming from all corners of the country looking for employment opportunities (City Government of Addis Ababa, 2013). With rapid natural population growth and high rate of rural-urban migration, Addis Ababa is one of the fastest

growing cities in Africa. This creates critical problems such as unemployment and shortages of housing in the city (UN-Habitat, 2008).

Addis Ababa serves both as a city administration and a state. It is the seat of the federal government of Ethiopia and a chartered city. For administration purpose, it is divided in to ten sub-cities (see Figure 3 below), which are the second administrative units next to city administration. The sub-cities are further sub-divided in to *weredas* (districts), which are the third and smallest organizational units in the city. There are 116 *weredas* in the city administration (City Government of Addis Ababa, 2013). The Figure below shows the administrative map of Addis Ababa.

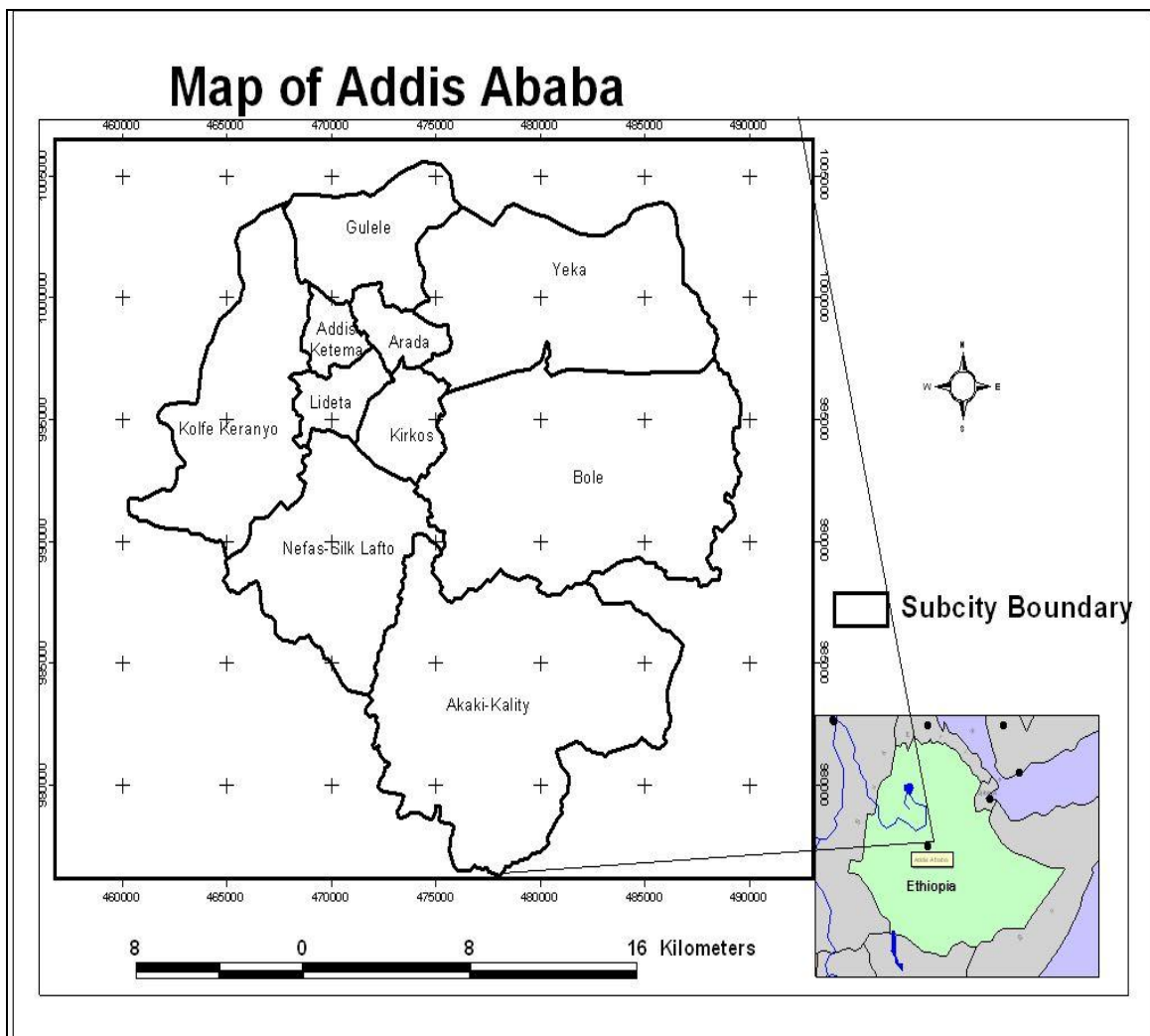


Figure 3: Location and administrative map of Addis Ababa

Adds Ababa accounts for about 4 percent of the population of Ethiopia and 25 percent of the urban population of the country (CSA, 2010). The population density of the city in the year 2011/2012 was about 5,645 people per km<sup>2</sup>, making Addis Ababa one of the most densely populated areas in the country (CSA, 2012). About 41 percent of the residents in Addis Ababa are poor (Muzzini, 2008). What is more problematic is that the growth of the population exceeds the jobs created by both the public and private sector. Unemployment is a pressing problem for the city which is mainly exacerbated by the rural-urban migration. In Addis Ababa, the unemployment rate has reached about 31 percent (UN-Habitat, 2008). The rate of unemployment of women is greater than men (City Government of Addis Ababa, 2013).

The monthly average income for 60 percent of the employees in both public and private sectors is about USD 68 per employee (UN-Habitat, 2008). Due to the combined effect of high rate of rural-urban migration, high unemployment level, and high dependency ratio, street vending is most prevalent in the city and it accommodates a large portion of the visible informal sector operators in Ethiopia. Being the capital, Addis Ababa is a centre for diverse ethnic groups. The three major ethnic groups: the *Amharas* (47 percent), the *Oromos* (20 percent), and the *Gurages* (17 percent) account for about 84 percent of the total population of Addis Ababa (CSA, 2010).

### **3.4. Research Design**

The study employs the Social Network Analysis (SNA) approach as a method of analyzing PNs. The use of SNA for the purpose of studying the configuration of PNs and their outcomes has emerged as a method of analysis ever since Granovetter (1985) work on 'structural embeddedness'. SNA is a research method dealing with the measurement and analysis of social relations (Butts, 2008). SNA helps to analyze the structure of relationships among social entities and the effect of network composition and

structure on social and economic phenomena (Butts, 2008). Individual actors' interaction with their contacts usually involves exchanges of information and other material resources. By focusing on the composition and structure of networks, thus, SNA enables researchers to understand the social circumstances where an individual operates his/her actions (Edwards, 2010).

In SNA, quantitative and qualitative methods have been applied by researchers in the field. Quantitative methods measure networks by simplifying social relations into numerical data reproduction (Edwards, 2010). Relational and structural network data are primarily collected using quantitative methods such as NG surveys which can produce numerical data showing the presence or absence of ties and tie characteristics such as intimacy, duration, and frequency of contact (Wasserman and Faust, 1994). But these methods are unable to address the processes of social relations in networks. Qualitative methods, in contrast, allow researchers to focus on the process of network creation and reproduction (Edwards, 2010). Ethnographic studies, in-depth interviews, and focus group discussions provide insights to examine the process and content of networks among entrepreneurs (Lievrouw et al., 1987).

Mixed-methods research design is used in this study because SN studies involve analyzing the structure of social relations and the processes of interaction, which have to be understood by investigating the nature and content of networks (Edwards, 2010). Qualitative methods are appropriate to explore the types of networks, the ways in which these networks are created, and the contribution of networks to business development. Quantitative methods are, on the other hand, useful for comparing networks and tie characteristics across subgroups of entrepreneurs such as gender and ethnic groups. They are also important to examine the causal effect of PNs in enterprise performance. The



integrated nature of quantitative and qualitative research design, therefore, captures the relationships between social structure and the contents embedded in PNs (Edwards, 2010).

There have been many SN studies (e.g., Lievrouw et al., 1987; Dolcini et al., 2005; Bernardi, 2011), which have combined quantitative techniques with qualitative methods. The techniques in which these researchers have combined quantitative and qualitative methods are different. There are three main techniques of combining quantitative techniques with qualitative methods (Edwards, 2010). The first involves a ‘multi-staged method’ wherein the qualitative method is a first stage that informs the quantitative method or vice versa. The second technique involves the mixing of methods only at the level of data analysis, i.e., mixing qualitative methods of data collection with mixed-methods of data analysis (Edwards, 2010).

The third approach involves mixing quantitative and qualitative methods both at the level of data collection and data analysis (Edwards, 2010). This is what is called ‘triangulation’ (Lievrouw et al., 1987). Triangulation is defined as the mixing of data or methods so that diverse viewpoints can emerge on a given issue (Olsen, 2004). The objective of triangulation is to obtain confirmation of findings through the convergence of different perspectives. By combining different types of data and methods of analysis, researchers can overcome the weaknesses and the problems that emerge from a single method. The mixing of survey data with interviews is a more sound form of triangulation (Olsen, 2004). In this study, the triangulation technique is used in that survey data were mixed with key informant interviews. This data triangulation helps the researcher to be aware of the context of network formation and to take account of this context when analyzing quantitative network data. It also provides the researcher with an ‘outsiders’ perspective of the structure and composition of the network and an ‘insiders’ view including the content, quality, and meaning of network formation (Edwards, 2010).

### **3.5. Samples and Sampling Procedure**

Determining samples and sampling procedures is a difficult task in SN studies (Marsden, 1990). In complete network analysis, a complete account also called ‘saturation sampling’ is required (Marsden, 1990). However, in ego-center network analysis, ‘saturation sampling’ is impractical since the sampling populations are not pre-defined. In this situation, random sampling procedures can be used to gather ego-centered network data and generalize results to a larger population (Marsden, 1990). In fact, ego networks can be collected either by drawing from a full network or by using the personal network research design (PNRD). PNRD involves sampling a set of unconnected respondents and asking them about the people in their lives (Borgatti and Halgin, 2012). In this study PNRD is used to collect data from street vendors in the informal economy.

The study focused on informal microenterprises carried out on the streets of Addis Ababa. The target populations are individual street vendors and hence the unit of analysis is an individual street vendor. Street vendors are chosen as the study subjects because they represent the most visible form of informal sector operators in Addis Ababa. Standard sampling and estimation techniques require the researcher to select samples with a known probability of selection. This condition means that a researcher should have a sampling frame before drawing samples (Salganik and Heckathorn, 2004). Unfortunately, street vendors in Addis Ababa are not recorded and documented in the government statistics. This has created a problem when it comes to getting sampling frame for the study.

The common way to deal with the problem of lack of sampling frame is to conduct a census on the entire study population (Kinyanjui and Khayesi, 2005). However, conducting a census of street vendors in Addis Ababa was impractical for various reasons. First, being informal, street vendors were suspicious of giving their names to establish a sampling frame. They were afraid to disclose their identities to the researcher thinking that

it may expose them to government bureaucracies and enforce them to pay taxes and other government obligations. Second, most of the street vendors do not have permanent working places; rather, in most cases, they are mobile. Due to their mobile nature, conducting a census and establishing a sampling frame became difficult. Third, conducting a census by a single researcher was costly in terms of energy, time, and research fund.

The special populations that cannot be studied using the standard sampling and estimation techniques are called '*hidden populations*' (Salganik and Heckathorn, 2004) or '*hard-to reach*' populations (Muhib et al., 2001). Examples include commercial sex workers, illegal immigrants, the homeless, participants in social movements, etc (Salganik and Heckathorn, 2004). One of the features of hidden populations is that no sampling frame exists so the size and boundaries of the population are unknown (Heckathorn, 1997; 2002; Salganik and Heckathorn, 2004). Street vendors are among the groups of hidden populations with no complete list of their population. Where no list exists from which a random sample can be drawn using conventional probability sampling techniques, a combination of 'time-space' (Muhib et al., 2001) and 'random-walk'(Singh, 2007) sampling techniques can be used.

Prior to drawing samples from of the hidden population, a researcher has to specify the time and space where the hidden population could be found. Under this method a researcher should detect the place where the hidden populations are found and the time when members of a target population congregate at specific locations (Muhib et al., 2001). These specific place and time arrangements are the primary sampling units and can be used to construct a sampling frame. These units are then randomly selected with probabilities that members of the target population entering the place are randomly captured and interviewed. Since the space-time arrangements are sampled with a known

probability, it is possible to make statistical inference about the population under study (Muhib et al., 2001).

Once the space-time arrangement is completed, what follows was drawing samples using random-walk sampling procedure. Random-walk describes a procedure for obtaining a sample from an unknown population and is classified under the probability sampling techniques (Singh, 2007). Hackathorn (1997, 2002) explains that the reason for using the random-walk sampling technique is to go deep into the unknown population and obtain respondents who are more representative of the population. A random-walk method follows three steps. The first step involves randomly choosing a starting point and a direction of travel within a sample site. Second, conducting an interview on the nearest respondent; and third, choosing the next respondent following specified arrangements until reaching the target number of interviewees (Singh, 2007).

Multi-stage sampling procedures using a combination of purposive and systematic random-walk sampling techniques were applied to draw sample street vendors. First, the researcher consulted people and relevant documents from the Addis Ababa micro and small enterprises development agency and other informants in the city. The discussion was made to get evidences about street vendors in the city and to gather information as to how the researcher proceeds with the sampling procedure. Based on the consultation with officers and other informants, in the second stage, the researcher organized a two days (June 23 and 25, 2013) tour in the ten sub-cities of Addis Ababa to identify street vending cluster sites. For this purpose, the researcher rented a taxi. Identification of cluster sites was done with the help of two persons from Addis Ababa micro and small enterprises development agency (as they know the street vending sites very well) and with colleagues. Following the tour, ten cluster sites (one from each sub-city) were identified and located purposively. Figure 4 below shows the location of the selected street vending cluster

sites.

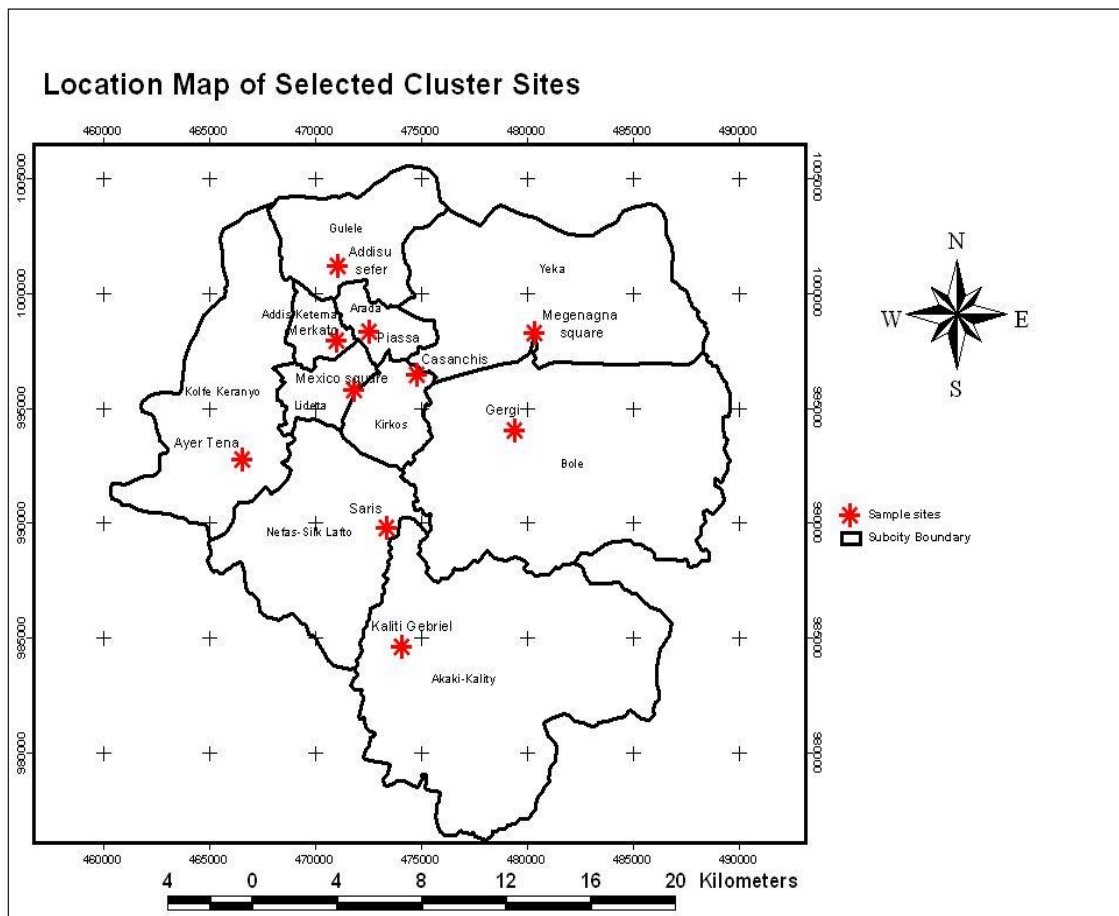


Figure 4: Location of the selected street vending cluster sites

Third, after identifying street vending cluster sites, the researcher together with his colleagues observed the date and time when street vendors congregated in the selected cluster sites. We found that street vendors work every day and the times of their massive gathering were from 5pm to 8pm. This is the time when people get out of work. Street vendors, thus, use this particular time to sell their products and services. Fourth, once the space-time preparation for sampling is fixed, sampling of individual street vendors was in place. Samples were drawn using the systematic random-walk sampling technique.

The researcher coached data collectors to follow specific random instructions depending on the nature of the cluster sites. The instruction includes taking the first road right or left of the sample site and then interviewing every 2<sup>nd</sup>, 5<sup>th</sup>, 7<sup>th</sup>, or 10<sup>th</sup> street vendor or interviewing every street vendor after a 2, 5, 7 or 10 feet walk right or left of the road. The application of this procedure and the number of samples drawn has of course varied from one cluster site to another depending on the pattern, size, and density of street vendors in each location. Indeed, since the total population of each of the cluster sites was unknown a priori, depending on the size and density of the cluster site, a ‘quota’ was fixed in order to draw a sample in each selected cluster. Table 2 below shows the identified cluster sites with their respective sub-cities and number of samples drawn.

Table 2: Distribution of samples with their sub-cities and cluster sites

Sub-city	Cluster site	Frequency	Percent
Addis Ketema	Mercato	23	14.94
Akaki-Kality	Kality Gebriel	11	7.14
Arada	Piazza	23	14.94
Bole	Gerji	10	6.49
Gulele	Addisu Gebaya	14	9.09
Kirkos	Kazanchis	13	8.44
Kolfe-Keranio	Ayer Tena	11	7.14
Lideta	Mexico	16	10.39
Nefas Silk-Lafto	Saris	10	6.49
Yeka	Megenagna	23	14.94
	Total	154	100.00

Source: Field Survey, April-November 2013.

As indicated in Table 2 above, *Piazza*, *Mercato*, and *Megenagna* are the sites where 45 percent of the samples are drawn. This is because they are places of high concentration of street vendors. *Piazza* is a busy commercial area where one can get many shops selling clothes, jewellery and all types of other goods. *Piazza* is also the place where the city hall (the seat of the city government), the Orthodox St. George Cathedral, and the Greek and Armenian Orthodox churches are found.

*Mercato* is the largest open market in Africa. Here it is possible to find everything, from spices to fabrics, from jewellery to different types of dresses as well as spare parts for cars. The area holds the largest grain market of the city called *Ehil Berenda*. The largest wholesale fruit and vegetable market, called *Atikilt Tera*, is also located in this part of town. The Anwar Mosque and many Orthodox Christian churches are found in Mercato. *Megenagna*, literally meaning the meeting place, is found in Yeka sub-city. *Megenagna* is a place where many people come from different parts of the city and get appointments to discuss personal matters. It is also a place for taxi and bus stations that radiate to various directions of the city.

Since ethnicity and gender matter in the structure and composition of nature of PNs, the sampling procedure addresses the ethnic and gender dimensions of the street vendors. Accordingly, samples were drawn from the three dominant ethnic groups in Addis Ababa: *Amhara*, *Oromo*, and *Gurage* including men and women. Sampling was conducted in such a way that first vendors from one ethnic group comprising men and women were sampled followed by other ethnic groups using the same procedure. At the time of sampling, if every 2, 5, 7 or 10<sup>th</sup> street vender was not from the ethnic group or gender that is intended to be sampled, the next person was selected as a sample. Considering the extensive and detailed nature of the questionnaire and the challenge of collecting SN data using multiple NGs, a total of 154 street vendors were drawn from the ten cluster sites. Table 3 below shows the gender and ethnic composition of samples.

Table 3: Distribution of samples by gender and ethnic groups

Gender	Ethnic Group			Total	% in AA
	Oromo	Amhara	Gurage		
Women	23(52.27)	27(50.00)	27(48.21)	77(50.00)	52.36
Men	21(47.73)	27(50.00)	29(51.79)	77(50.00)	47.64
Total	44(100.00)	54(100.00)	56(100.00)	154(100.00)	100.00
% of total sample	29.00	35.00	36.00	100.00	-
% in AA <sup>8</sup>	19.51	47.05	16.34	82.87	-

NB. Figures in brackets are percentages

Source: Field survey, April-November 2013.

As can be seen in Table 3 above, men and women are equally represented in the sample. Coming to ethnic groups, street vending activities are dominated by the *Gurages* followed by the *Amharas* and the *Oromos* and, hence, the size of the sampling reflects this pattern. The *Gurages* account for about 36 percent of the samples followed by *Amharas* 35 percent and the *Oromos* 29 percent. Here one thing that should be clear is that though the *Gurages* represent a small proportion of residents in Addis Ababa compared to the *Oromos* and *Amharas*, they represent the largest share of street vendors in the city. This is because of different reasons. The first reason is that the *Gurages* are more migrants than any other ethnic groups (Ferework, 2007). In addition, the circulation of migrants by ethnicity shows that while the *Amharas* and *Oromos* prefer to migrate within their regions, i.e., Amhara and Oromiya respectively, the *Gurages* prefer to move out of their region, i.e., Southern Nations Nationalities and Peoples Region (SNNPR) and choose to migrate to Dire Dawa, Harari, and Addis Ababa (Fework, 2007).

In addition, due to their dense ethnic and kinship ties, as Baker (1992) notes, most *Gurage* migrants to Addis Ababa do not suffer from problems of business perplexity. The *Gurage* networks function in such a way that migrants on arrival are provided social support in finding employment. Although newly-arrived *Gurage* migrants to Addis Ababa

<sup>8</sup> AA refers to Addis Ababa. The figures are based on the 2007 Population and Housing Census of Ethiopia(CSA, 2010)



are provided adjustment services, they are expected to contribute economically to support the urban household whenever possible and/ or save money for their rural families (Baker, 1992). This family obligation and networking mechanism helps the *Gurages* to immediately join the informal sector activities.

### **3.6. Data and Data Collection Tools**

SN data have been collected using several instruments such as surveys, archives, diaries, observation, interviews, and focus group discussions. Surveys are, however, the most comprehensive methods for collecting quantitative SN data (Marsden, 1990). The data for this study were collected using questionnaire and in-depth interviews.

#### **3.6.1. Questionnaire**

Quantitative data were collected using questionnaire survey. The data collected during the survey consist of two datasets. The first covers street vendors' dataset which comprises of variables concerning entrepreneur features, socioeconomic activities, and enterprise characteristics. The second comprises of network dataset referring the data collected through NG/Is and PGs. The data provided individual profiles of street vendors' PNs that can be used to demarcate network patterns according to the three network perspectives such as content of ties, network structure, and embedded resources.

Usually PN data are obtained by asking respondents to list individuals with whom they have direct contact pertaining to a specific subject (Marsden, 1990; 2005). In studies of delimited populations, respondents can be asked to name their contacts from population lists, resulting in *complete network data* (Van der Gaag, 2005; Odella, 2006). But when analyzing the social relationship of individuals where there is no list of the population, a clear picture of all actors involved in networks is lacking. In such circumstances, open-ended recall methods which apply the NG/I techniques are more practical resulting in *ego-centered network data* (Marsden, 1990; 2005).

### 3.6.1.1. The Name Generators/Interpreters

For the purpose of demarcating PNs, the Name Generator/Interpreter (NG/I) technique has been used in various SN studies. This is because in SN studies the NG technique can provide detailed PN information (Lin et.al., 2001; Van der Gaag et al., 2004). The NG/I technique has been widely used for about four decades since the 1980s in the General Social Survey (GSS) in the USA (Burt, 1984). Later on, it was introduced to entrepreneurship research and has become the most conventional instrument to measure PNs (Greve and Salaff, 2003). In the developed countries the application of this method is not recent. Greve and Salaff (2003) are one of the main contributors to entrepreneurial network research which apply this instrument. In the field of African entrepreneurship, it has been rarely used except the recent study by Berrou and Combarous (2012).

NGs are a set of questions that egos are asked to draw alters from an ego's network with the aim of identifying members of PNs (Marsden, 1990; 2005; Rauf and Mitra, 2012). The purpose of NG technique is not only establishing the total number of alters in PNs but also drawing a representative sample to identify the core members of a network (Marsden, 2005). Review of the literature has shown that there are two types of NGs: *recognition* and *recall* (Van der Gaag, 2005). In recognition type NGs, respondents are asked to name their contacts from a fixed list of members by 'recognition'. In the recall type, respondents are asked to list alters by 'recall' using a specific indication. The recall technique is appropriate for the measurement of ego-centered networks where no network boundaries are set in advance (Van der Gaag, 2005).

Depending on the nature of investigation, there are various categories of *recall* type NGs: open, affective, role related, and exchange (Van der Gaag, 2005). For this study, exchange type NG is used to define the PNs of street vendors as they rely on resource exchanges in their day-to-day business deeds. This method raises questions that address

support exchanges between people and asks respondents to report names of people with whom they have exchanged in relation to their street business (Van der Gaag et al., 2004). As this type of name generator helps to get social resource information, it is very useful for individual PN measurement (Lin et al., 2001).

Despite their popular application, NGs are not free of shortcomings. One of their weaknesses is that respondents may overlook distant ties and name alters who are closer to them (Krackhardt, 1987; Bernard et al, 1990). The exchange type NG is also inclined to include more frequently contacted network members as it focuses on ongoing PNs (Van der Gaag et al., 2004; Van der Gaag, 2005). However, as noted by Van Sonderen et al. (1990), networks listed by exchange type NGs are larger than those generated by affective and role related instruments. Therefore, exchange type NGs can embody both weak and strong ties and hence exhibit the potential to provide variety in PNs (Van der Gaag, 2005).

Burt (1984) recommends that network surveys should include multiple NGs because they can help to identify relationships clearly and to improve data reliability. Multiple NGs would also create opportunities to study the organization of diverse types of interaction within relationships (Fischer, 1982; Burt, 1984). In addition, Berrou and Combarous (2011) state that every feature for interpersonal relations and every motive for entrepreneurs getting together and obtaining support for enterprises can be used to define NG items. To fully define the PNs of street vendors, therefore, multiple NGs are used in this study.

NG items were defined on the basis of stages of enterprise development and regular interaction of people related to resources needed for street enterprises. Accordingly, nine types of resources were used to construct the nine NGs. The NG questions include, is/are there people who; (i) supported you in getting accommodation and other services while arriving to Addis Ababa; (ii) offer you advice, information, and ideas while planning

businesses or identifying opportunities; (iii) helped you in obtaining financial and other material resources for business start-up (securing resources); (iv) supported you in obtaining legitimacy and expanding enterprises; (v) assisted you in administrative or bureaucratic relationships; (vi) you established regular suppliers; (vii) you created cooperation with other entrepreneurs (in areas of assisting one another, pooling resources and contacts); (viii) you contacted for recruitment of employees if any; and (ix) supported you in improving the service delivery of your products and services.

Finally, after collecting names using the above NGs, respondents were asked to name the very important alters from the list of persons mentioned who helped them in the various stages of enterprise development and in their day to day activities. The core network was, thus, identified with the question, (x) who are the most important persons in your business, i.e., who helped you in various aspects of your enterprise performance and in your day-to-day activities?

NGs are open-ended in nature and this will result in extended surveys (Marsden, 1990). In this regard, Burt and Ronchi (1994) recommend that naming five connections are adequate for analyzing the role of PNs in the establishment process of enterprises. Yang et al. (2009) in their study on the naming of alters found that listing two names generates more diverse network position with unstable structure. They argue that mentioning three names should be the minimum to get more stable network structure. They recommend that listing four or five names are enough to observe the true connections among actors in the network but naming above five names leads to redundancy. In his 1984 General Social Survey, Burt (1984) recommends nominating from three to eight alters as a good proxy to measure PNs. In this study, to minimize the problems related to listing many alters, the number of alters that respondents can mention was limited to five. The response rates to each NG question are presented in appendix IV.

As shown in Appendix V, averaged over the ten NG items, about 73 percent of the respondents reported to know at least one person in response to the questions given. But there are differences among the responses. The items with the highest responses are alters: who provide business ideas and advice (98 percent), you establish business partnership and cooperation (96 percent), and you gave you credit or financial and material support while starting your business (93percent). The items with the lowest number of alters mentioned are items which ask contacts for recruitment of employees (0.01percent) and networks for solving administrative problems related to street business(7.14 percent).

Once the list of alter names is obtained, respondents were asked Name Interpreter (NI) questions. These questions were designed to elicit information about ego's perception of each alter, i.e. alter attributes (sex, ethnicity, religion, marital status, and income) and the nature of the relationship between respondent and alter (relational attributes) such as social role, frequency of contact, duration of acquaintance, intensity, level of trust, geographic nearness, and length of relationship (Burt, 1984; Marsden, 1990; Borgatti and Halgin, 2012). To obtain answers to the NI items, a separate code book was developed. After respondents were asked name interpreting questions for each alter, the answer code was recorded on the network matrix found on the questionnaire. In addition, to know and establish the network structure, respondents were asked to indicate whether the pairs of alters mentioned are (1) strangers, (2) know each other, (3) are friends, (4) are confidant, and (5) family members. This is done for selected NG questions.

#### **3.6.1.2. The Position Generator**

The other widely used instrument of PN data collection is the Position Generator (PG) technique. The PG is designed for the measurement of access to social resources (Van der Gaang, 2005). It consists of the three dimensions of PNs namely the presence of alters, the resources of these alters, and the availability of these resources to an ego (Lin et

al., 2001; Van der Gaag, 2005). PG gives emphasis to access type measures that indicate potentially available resources (Van der Gaag et al., 2004). This method samples positions that are representative of resources valued in a given community such as occupational status or prestige or authority positions (Lin, 1981; 1999b).

In the PG technique, access to social resources is measured by presenting a list of occupations and asking a respondent to answer whether anyone is known to him/her having that occupation. If an ego states that he/she knows a person having a given occupation, the accessibility of social resources is then indicated by the type of relationship through which this occupation is accessed (Van der Gaag, 2005). The relationship can be a friend, a relative, or an acquaintance. The assumption is that the stronger ego's tie to his/her alters, the greater the possibility of these alters to give resources to an ego (Van der Gaag, 2005). Nonetheless, since the PG focuses on accessing network members having occupational titles only, it ignores access to resources from people who do not have positions such as home makers, the unemployed, retired people and students (Van der Gaag et al., 2004).

In many studies of SNs, the construction of PGs is based on occupations sampled from a census listing for a population under study (Van der Gaag et al., 2004). Occupations chosen have to have enough popularity to get a positive response in an interview. In addition the number of occupations to be listed should be as complete as possible (Van der Gaag, 2005). Review of previous studies have shown that the number of occupations listed ranges from ten to forty five (Boxman et al., 1991; Bian and Ang, 1997). In the Ethiopian context, there is no an organized census that lists occupations and their respective prestige. Due to lack of such data, the researcher identified a list of forty occupations which are common in Ethiopia. In identifying the occupations, the researcher

reviewed related literature on the subject and referred the occupational categories of other countries where similar studies were conducted.

After collecting PG data, The International Standard Socio-Economic Index (ISEI) of occupational status was used to determine the prestige of occupations. These socioeconomic indices refer to human resources and economic rewards (Ganzeboom and Treiman, 2003) and they indicate social resource correlated to each occupation (Van der Gaag et al., 2004). ISEI measures exist in many countries and are more widely used by researchers than prestige scales because they capture the basic parameters of the process of occupational stratification better than others (Ganzeboom and Treiman, 2003).

### **3.6.2. In-depth Interviews**

The questionnaire survey which comprises of the NG and PG instruments is aimed at producing quantitative data. To triangulate, supplement, and enrich the results of the survey, in-depth interviews were conducted. As stated by Dilley (2004), interviewing helps to know the context of study subjects' behavior and thus provides a way for a researcher to realize the meaning of that behavior. To gather qualitative data, the researcher developed a semi-structured interview guide containing twelve general items. The interview guide consists of topics on the nature of the informal economy, PN formation, and the role of PN in business activities. It also addressed topics on the livelihoods of street vendors in general and income from street vending activities in particular.

Regarding the number of key informants, there was no predetermined number of participants in the beginning. This is because interviews usually require a flexible and pragmatic approach (Dörnyei, 2007). After initial interviews and records were made and their responses tentatively analysed, additional participants were included. This 'iterative process' went on until the interview data reached a level of 'saturation' (Dörnyei, 2007; Arthur et al., 2012). Following this process, eighteen informants were interviewed of

which, three of them did the interview in groups (code enforcing police). The informants included street vendors, officials from micro and small enterprise development bureau, police (traffic and code enforcers), customers of street vendors, and boutique owners. These informants were drawn using a purposive sampling technique. Table 4 below shows the distribution of interviewees by type and gender.

Table 4: Distribution of interviewees by type and gender

S.No	Category of Interviewees	Gender		
		Women	Men	Total
1	Boutique owners	-	1	1
2	Code enforcing police	1	1	2
3	Customers of street vendors	-	1	1
4	Officials from Addis Ababa Micro and Small Enterprises Development Agency	1	2	3
5	Street vendors	5	5	10
6	Traffic Police	1	-	1
	Total	8	10	18

Source: Field survey, April-November 2013.

The interview was conducted in the appropriate time and place for the informants. Prior to beginning the interview process, informants were asked their willingness for audio-recording of their responses. Fortunately enough, all informants agreed and hence all the interviews were audio-recorded. Each interview on average lasted thirty minutes.

### 3.7. The Field Work

The fieldwork was conducted from April 2013 - November 2013. For collecting data using the questionnaire and semi-structured interview, the researcher primarily contacted officials from the Addis Ababa city administration and obtained their permission to do a survey on the issue at hand. To start with, the researcher presented a letter of cooperation written by his supervisor to the concerned officials. After explaining the objective of the study and its significance, the government officials wrote me cooperation letter to the concerned lower level government officials to collect data from street vendors.



The research clearance helped the researcher to minimize the potential challenges that might occur during the data collection process.

After few days of arrival to Addis Ababa from Trento, the researcher distributed the proposal, the questionnaire, and the interview schedule for colleagues and professors at Addis Ababa University. This is done to obtain feedbacks from local professors on the subject at hand. These colleagues and professors gave their feedbacks particularly on the sampling techniques, the items of the questionnaire, and the interview guideline. Following their comments, improvements were made on the survey instruments. After incorporating the comments, the next stage was translating the questionnaire from English to Amharic. This is because most street vendors are either illiterate or attend primary education and hence do not understand English. Amharic language is chosen because it is the national language of Ethiopia and almost all residents of Addis Ababa communicate in Amharic.

The task of translating the instruments from English to Amharic was given to two Amharic language experts and the process took two weeks. Having the first draft, the translated questionnaire was edited and some adjustments were primarily made by the researcher to address the contextual and subject matter meanings of words and texts. Next, the researcher gave both the English and the Amharic versions of the questionnaire to one Amharic and one English language experts for their feedbacks on the translation. The researcher and the two reviewers discussed if there were any differences between what was stated in English and what is translated into Amharic. Finally, amendments on items showing differences in the meanings of words were made.

As to the data collection task, since it was difficult to administer single handedly, the researcher recruited seven interviewers (three women and four men) from students of the Addis Ababa University. Interviewers were attending their second degrees in

Sociology, Social Anthropology, Social Psychology, and Regional and Local Development Studies. After recruiting interviewers, a six hours training session was arranged to discuss about the procedures of data collection. The purpose of the training was to ensure that all data collectors have a similar understanding of each data collection tool and to give directions in filling out the survey. To make the training session experience oriented, two colleagues of the researcher, who have practical experiences in field research, were invited. They shared their practical experiences about techniques of collecting data and the challenges that interviewers might face in the field. The training agenda consists of contents of the questionnaire, how to use the code book, sampling and sampling procedures, interpersonal communication and ethical issues, skills of approaching street vendors, ways of getting the trust of respondents, techniques of interviewing, phases of data collection, challenges of data collection, and techniques of responding to data collection problems.

Given that the questionnaire and interview guide items are either adapted or newly developed, testing the reliability of the items is important to check and improve the quality of the measures (Creswell, 2003; Dornyei, 2007; Creswell, 2012). To do so, conducting a pilot-test was necessary. Pilot-test is important to test the applicability and clarity of the data collection tools and to learn the time it takes to complete the survey in the local setting (Berg, 2007). Once translating and editing the questionnaire was completed, pilot-test was carried out on randomly selected twelve street vendors. The pilot-test was administered by the seven interviewers and the researcher. The pilot-test helped the researcher to discover pitfalls and to modify the structure and contents of the questionnaire. It also helped to realize the feeling and reaction of respondents to the survey questions. Moreover, the pilot-test gave practical experiences for interviewers before they started collecting the main data.

After all the aforementioned procedures, what is left was the main data collection. To do so, the trained interviewers were distributed to the selected cluster sites. Since most street vendors do not have permanent work place, drawing samples and establishing contact with the selected sample was done simultaneously. After drawing samples<sup>9</sup>, interviewers contacted the selected vendors for the interview. To get genuine responses, interviewers established frequent contact with the respondents following steps of activities. The first step involved knowing the socioeconomic and demographic profile of respondents. In the second stage, data collectors asked the willingness of the respondents to do the full interview. The third stage was the phase of collecting the actual SN data. Unfortunately, all the sampled street vendors were not voluntary to fill the questionnaire. When a sampled street vendor was not willing to respond, the next vendor (left or right depending on the pattern of the cluster site) was interviewed provided that he/she is of the same ethnic group and gender that was intended to be interviewed. Indeed, in the field, interviewers were requested to report the response rate of their interview. Examination of interviewers report showed that about 40 street vendors were not voluntary to fill the questionnaire. This makes the response rate of interviews to be 79 percent.

The place and time of interviews was decided based on the interest of respondents. Accordingly, some respondents were interviewed on their business sites while some others did the interview in their homes, inside cafes, and restaurants. The average length of interview time was 1:30 hours and the range was between 1:00-2:25 hours. The variation in the duration of interview was due to differences in the skill of the interviewer, place of interview, and the nature of the respondent. To compensate the time that street vendors devote in filling the interviews, the researcher arranged compensation fee. The fee ranges

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<sup>9</sup> Refer the sampling procedure in section 3.4.

from 3.00-5.00 Euros (ETB 78.00 -130.00) per respondent. It was given either in cash or kind depending on the interest of the respondent and the place of interview.

Coming to the in-depth interview process, once the researcher developed the interview guideline, pre-test of the instrument was carried out. This is done in two steps. First, the schedule was examined by his supervisor and colleagues. This first step helped to identify poorly worded questions and items with offensive or emotion-laden wording. The second step was pre-testing the schedule before the instrument was used in a real study. This involves practice interviews to assess how effectively the interview will work. For this purpose, four persons for the interview were identified and exploratory interviews were conducted. After the pre-test, the essential amendments on the interview schedule were incorporated.

In-depth interview was made by the researcher and his colleague. Since the researcher has limited in-depth interview experience, preparatory exercise was made with colleagues who have deep interviewing experience. Perhaps the most effective way to learn how to interview is by role-playing with more experienced interviewers (Berg, 2007). The researcher with the help of his colleagues, thus, did role-play exercise and prepared himself ready for the real interview. Once the interview guideline is corrected and the necessary adjustments were made, the main interview was carried out with eighteen informants. While interviewing, we tried to make sure that the locations of the interview were places where informants felt comfortable.

### **3.8. Challenges of Data Collection**

The data collection process was not free of problems. The data collection team had faced many challenges. The subjects of the study were street vendors. While data collectors approached street vendors for the interview, vendors were suspicious of the purpose of the survey and most of them were not willing to give their responses. They fear

that the information will be used to inform the government to levy tax and other legal procedures on them. To solve the problem, however, efforts were made by the researcher and the interviewers to let the respondents know the objective of the study. Indeed, interviewers had the copy of the cooperation letter from the city administration and the University of Trento. While approaching for the interview, interviewers have shown the letter of support to the sampled respondents.

When respondents are voluntary to fill the questionnaire, they were yet suspicious to mention their names and the name of alters as they were doubtful that giving names will bring trouble to them and their alters in the future. To resolve the problem, respondents were requested to provide either the first names or pseudo names while naming alters. Respondents were also reluctant to give genuine responses particularly on enterprise income, expenses, working capital, assets, place of birth, and their ethnic background. Sometimes, while interviews were done on the streets, vendors were chased by the police to leave the streets. This situation disrupted the interview process and made both the respondents and interviewers to feel frustrated and unsecured in the data collection process. At times when respondents were asked to complete the interview they have already started, they felt unhappy to have appointment for the second time.

During the time of data collection, there was internal political unrest in Ethiopia. The government was claiming that there are Muslim radicalism movements in the country. Due to such frustrations, there were predictions that there would be a terrorist attack in the country, particularly in the capital Addis Ababa. To patrol such movements, the government has distributed police and security forces in all corners of the city. Each and every movement of the people was under the surveillance of security forces. This made the data collectors and respondents to feel insecure. For example, while interviewing on the streets, two of the data collectors were caught by security forces and were taken to the

nearby police station for interrogation. Later on, however, the researcher discussed the issue with the concerned officials of various hierarchies and solved the problem.

Coming to the plan of data collection, the schedule was that one interviewer was expected to complete at least two interviews per day. However, some of the interviewers were unable to interview even one respondent per day. This is attributed to various problems. First, owing to the fact that June, July, and August are rainy months in Ethiopia, data collectors were unable to get vendors all the time in the streets. Second, some street vendors prefer the interview to be held in another place and give appointments for another time but most of them failed to keep their words. Consequently, interviewers were forced to have another appointment for the second or third time. These problems consequently delayed the data collection process beyond the schedule time frame. Despite all the above challenges that the researcher and interviewers gone through, the data collection team tried its level best to get genuine responses from sampled respondents.

### **3.9. Data Analysis and Presentation**

Data analysis for the study involved a two stage process. The first phase involved the analysis of SN data using E-NET software. The second involves statistical analysis. In the SNA, the network measures were calculated and estimated. After obtaining the network measures, in the second stage, the results of SNA were used for further statistical analysis using techniques such as ANOVA, t-test, and OLS regression. Data from interviews were transcribed, classified, and presented in a narrative form. For privacy reason, names of the interviewees were not included in the text. Instead, the researcher used codes such as P1, P2....P18. While P stands for a person, numbers that follow letter P indicate the number given to interviewees.

### **3.9.1. Social Network Analysis**

#### **3.9.1.1. Data Entry: E-NET**

Once collected, PN data were analyzed following the application of SNA methods. The data were organized and analyzed using E-NET. E-NET is SNA software that focuses on the analysis of ego-network data (Borgatti, 2006). E-NET accepts data related to three aspects: ego's characteristics, connection between ego and his/her alter, and relationships between alters (Borgatti and Halgin, 2012). E-NET accepts data into two forms: row-wise format and column-wise format. In this study, the data were organized into the column-wise format (see Appendix V). In the E-NET matrix, the rows refer to an ego and columns stand for ego's attributes, ego-alter connections, and alter-alter relationships (Borgatti, 2006). Once PN data were managed in the column-wise format, the file was imported into E-NET and the required network measures were estimated.

The network data collected provided individual profiles of respondents' network measures that are combined into measures of respondents' network configuration pertaining to the content of ties, network structure, and embedded resources. The following discussion deals with how these network measures are constructed and how can they be interpreted throughout the thesis.

#### **3.9.1.2. Measures of Content of Ties**

The content of respondents' PNs was examined using sameness proportion, homophily index, and heterogeneity index. Similarity between egos and their contacts was investigated using *homophily* index. For this purpose, by default E-NET provides E-I statistics (Borgatti, 2006). The E-I statistics measures ego's propensity to have connections with alters in the same group of a given attribute. The homophily index is calculated by totalling ego's contacts who are 'external' to an ego in a given attribute such as sex, religion, etc. and subtracting the number of ego's alters who are "internal" or similar in a

given attribute category and finally dividing the numerator by network size (Borgatti and Halgin, 2012). The formula is as follows:

$$\text{Homophily} = \frac{E - I}{E + I}$$

Where,  $E$  stands for the number of ties who are external and  $I$  is number of ties that are internal. The homophily index ranges from -1 to +1. Respondents with contacts to only those in the same category will have a score of -1 (homophily) and those with ties to those in different categories will have a score of +1 (heterophily) (Borgatti and Halgin, 2012).

*Heterogeneity* index is another measure used to analyse network content. It examines the range of alters in each respondent's PN concerning alter attributes such as sex, age, education, marital status, religion, and ethnicity (Granovetter, 1983; 1985). Heterogeneity examines diversity between respondents' alters. E-NET provides Blau's heterogeneity index computed as:

$$H = 1 - \sum P^2 i$$

Where,  $H$  is the heterogeneity index,  $P$  is the proportion of group members in a given category and  $i$  is the number of different categories of the feature across all groups. The index ranges from 0 to 1. Respondents whose alters are homogenous with respect to some categorical attribute will have small heterogeneity scores near 0 while those with more diversity will have a value closer to 1. For continuous variables such as age and income, standard deviation is computed to measure network diversity (Borgatti and Halgin, 2012). Network graphs, percentages distribution and mean scores were also used to analyze contents of ties.

### **3.9.1.3. Measures of Network Structure**

Measuring structural network properties is another widely used technique in SNA. A first structural measure is *network size*, i.e. the number of different persons with whom a street vendor has talked about his/her business. More networks means that a street vendor



is more likely to receive diverse information that can be used for business performance (Burt 1992).

The second measure of network structure is *network density*. Measuring the density of a network gives an index of the degree of dyadic connection in a population. For binary data, density is the ratio of the number of actual connections divided by the number of maximum potential connections (Marsden, 1987; 1990). It refers the proportion of all possible dyadic connections that are actually present. Network density is calculated as:

$$D = \frac{\text{Actual Connections}}{\text{Maximum Potential Connections}}$$

According to Burt (1992), other measures of network structure are *effective size*, *efficiency and constraint* (Burt, 1992). While effective size measures the amount of alters that an ego is connected minus the redundancy in the network, efficiency is the effective size divided by the observed size (Borgatti, 1997). Effective size shows the non-redundant part of the network and computed as:

$$\text{Effective size} = \sum_j \left[ 1 - \sum_q P_{iq} M_{jq} \right]$$

Where,  $j$  indexes all alters that ego  $i$  has contact with and  $q$  is every third alter other than  $i$  or  $j$ . The quality  $(P_{iq}M_{jq})$  refers the level of redundancy between an ego  $i$  and a particular alter,  $j$ .  $P_{iq}$  is the fraction of actor  $i$ 's relations that are spent with  $q$ .  $M_{jq}$  is the marginal strength of contact  $j$ 's relation with contact  $q$ , which is  $j$ 's interaction with  $q$  divided by  $j$ 's strongest interaction with anyone (Borgatti, 1997). Efficiency is given by:

$$\text{Efficiency} = \frac{\sum_j [1 - \sum_q P_{iq} M_{jq}]}{N}$$

Where,  $\sum_j [1 - \sum_q P_{iq} M_{jq}]$  is effective size and  $N$  is the total network size.

*Constraint* is another measure of network structure<sup>10</sup>. Constraint index shows the extent to which all of a person's network time and energy is concentrated on one contact (Burt, 1992). An entrepreneur with high constraint depends on a small number of contacts within the network. He /she is exposed to redundant information. Entrepreneurs with a high degree of constraint are less likely to be successful in enterprise performance (Burt, 1992). The results of constraint index range from 0 for wide networks of non-redundant contacts to 1 for limited and closely connected networks. See the formula below:

$$C_i = \sum_j C_{ij}, i \neq j \quad 1$$

Where  $C_i$  is constraints index of a street vendor  $i$ , and  $C_{ij}$  is a measure of  $i$ 's dependence on alter  $j$  or the structural constraint of alter  $j$  for ego  $i$ :

$$C_{ij} = (P_{ij} + \sum_q P_{iq} P_{jq})^2, i \neq j \neq q \quad 2$$

Where  $P_{ij}$  is the proportion of street vendor  $i$ 's network time and energy spent on contact  $j$ , i.e. direct investment, or indirectly  $i$ , e.,  $(\sum_q P_{iq} P_{jq})$  (Burt, 1992:54-56).

#### **3.9.1.4. Position Generator Measures**

Social resources are classified as contact resources and network resources (Lin, 1999a). Contact resources are measured by socio-demographic characteristics that an ego can access through relations with different kinds of alters used for enterprise related activities. While contact resource data were collected through NG items, network resources data were collected through PG items. Derived from Lin's SC propositions (Lin, 1981; 1999a), data collected through PG items were analysed using five measures (Van der Gaag, 2005).

The first measure is 'upper reachability', defined as the highest prestige accessed in the list of occupations. This is following the assumption that the social resources are

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<sup>10</sup> An individual can be constrained in a network (a) if he/she has few contacts; (b) if he/she has contacts closely connected with one another; or (c) if he/she shares information indirectly through a central contact (Burt, 1992).

accessed best through contacts that have high social positions (Lin, 1999a; Lin, 1999b; Lin, 2002). 'Resource heterogeneity' is the second measure and is defined as the range in accessed prestige. It is computed as the difference between the lowest and the highest prestige accessed by the respondent. It measures social position diversity in a society (Van der Gaag et al., 2004). The third measure is the 'extensity of network positions'. This indicates the total number of positions accessed in a network (Lin, 1999b; Lin, 2002). It is the sum of all occupations in which a respondent knows (Van der Gaag et al., 2004).

A fourth measure is the SC volume which measures the total accessed prestige of a respondent. It is calculated as the sum of the prestige of all accessed occupations (Van der Gaag et al., 2004; Van der Gaag, 2005). The fifth is average accessed prestige defined as the division of the total accessed prestige by the number of accessed positions that respondent knows. As argued by Van der Gaag (2005), this measure is an attempt to correct the problems related to number of accessed positions and range in accessed prestige. Number of accessed positions and range in accessed positions indicate differences accessed SC of respondents. However, the problem is that two respondents can access the same amount of occupations or ranges in prestige but while one person mainly accesses high prestige positions, the other might mainly access low prestige occupations (Van der Gaag, 2005).

### **3.9.2. Statistical Analysis**

Once SN data were analyzed using SNA methods, the results were then used for further statistical analysis. For the reason that ego-networks can meet the requirements of OLS models and other inferential statistics, the results of SNA were transformed to STATA software for statistical analysis. As such, besides the SNA techniques, OLS and

instrumental variable estimation models were used to examine the causal effect of PNs on enterprise performance<sup>11</sup>.

Comparisons of differences in composition and structure of SNs between gender and among ethnic groups as well as changes in PNs over the phases of enterprise were analyzed using Analysis of Variance (ANOVA) and T-test. Various descriptive statistics such as frequencies, percentages, mean scores, and standard deviations were also form part of the data analysis. For statistical analysis, STATA 12 software was used.

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<sup>11</sup> See the details in chapter 8

## **Chapter 4**

### **Respondents' Profile, Enterprise Characteristics, and Causes of Informality**

#### **4.1. Introduction**

This chapter presents the demographic profile of respondents, enterprise characteristics, and the causes and debates on informality. The chapter is sub-divided into four sections. The first section describes the socioeconomic and demographic characteristics of the respondents. The second section deals with enterprise characteristics. The third section provides discussions on causes of informality and controversies regarding the role and significance of street vending. The last section gives summary of the chapter.

#### **4.2. Demographic Profile of Respondents**

This sub-section presents the demographic profile of the respondents including age, sex and ethnic composition, education, marital status, religion, number of children and family size, and migration status. Men respondents account for about 50 percent of the samples and women represent the other 50 percent. Though the available literature shows that street vending is dominated by women, researcher's field observation revealed that men and women are more or less equally represented with a slight difference of more men than women. Coming to the ethnic background of the respondents, 36 percent are the *Gurages*, 35 percent are the *Amharas*, and 29 percent are the *Oromos*.

##### **4.2.1. Age of the Respondents**

Age of a street vendor is one of the demographic variables that might determine entrepreneurial success through its effect on growth ambition and business determination, (Welter, 2001). Mead and Liedholm (1998) also explain that age, gender, and ethnic background of entrepreneurs have an effect on enterprise success in many ways such as through bearing family responsibilities, growth ambitions, business behaviour, and

location of the enterprises. As shown in Table 5, respondents aged 25-34 years constitute 50 percent of the samples followed by those whose age is 18-24 and 35-44 accounting 24 percent and 18 percent of the respondents respectively. Cumulatively, about 75 percent of the respondents are less than 35 years old. This implies that street vendors are found in the young age cohort. This age constitutes a vigorous group of individuals who are capable of running away from police harassment and confiscation of properties.

Table 5: Distribution of respondents by age and gender

Age Category	Gender		Total
	Women	Men	
<18	0 (0.00)	2 (2.60)	2 (1.30)
18-24	13 (16.88)	24 (31.17)	37 (24.03)
25-34	34 (44.16)	43 (55.84)	77 (50.00)
35-44	21 (27.27)	7 (9.09)	28 (18.18)
45-60	9 (11.69)	1 (1.30)	10 (6.49)
Total	77 (100.00)	77 (100.00)	154 (100.00)

NB. Figures in brackets are percentages

Source: Own Survey, April-November 2013.

The distribution of age by gender shows that women are older than men. As indicated in Table 5, while 39 percent of women are above the age of 34, it is only 10 percent of male respondents that are above 35 years old. On the other hand, while 51 percent of women respondents are less than 35 years old, the great proportion of men respondents, i.e., 89 percent are less than 35 years old. Figure 5 below shows the relationship between age, gender, and street vending participation. The graph indicates that as the age of respondents' increases, participation in street vending increases till the age of 25-34 years. The age 25-34 is the apex in the participation of street vending activities. After the age of 25-34 years, there is a decline in street vending participation.

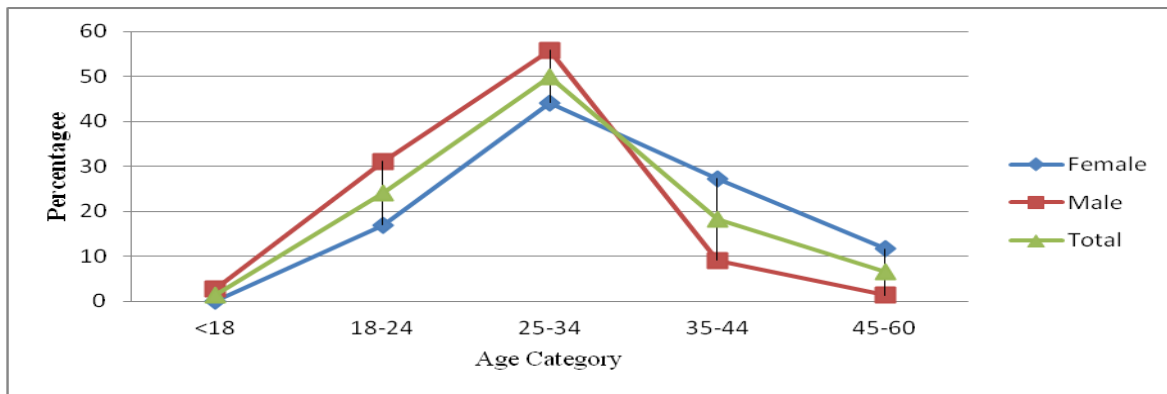


Figure 5: Age-sex composition of respondents

Source: Own Survey, April-November 2013.

Table 6: Means, standard deviations, and frequencies of respondents age by gender and ethnic group

Gender	Statistic	Ethnic group			
		Oromo	Amhara	Gurage	Total
Women	Mean	35.86	31.48	31.59	32.83
	Std. Dev.	9.26	8.08	9.78	9.16
	Frequency	23	27	27	77
Men	Mean	27.09	26.48	27.58	27.06
	Std. Dev.	4.19	5.40	7.01	5.74
	Frequency	21	27	56	77
Total	Mean	31.68	28.98	29.51	29.94
	Std. Dev.	8.46	7.26	8.62	8.15
	Frequency	44	54	56	154

Source: Own Survey, April-November 2013.

As presented in Table 6 above, the mean age of women is 33 years with a standard deviation of 9 years. For men, the mean age is 27 years with a standard deviation of 6 years. From the mean age distribution of the respondents we can discover that women are older than men. The t-test result reveals the presence of mean age variation between men and women and the variation is statistically significant at  $t= 4.6795$ ,  $p<0.01$ . Men tend to join street trade while young and leave early for other jobs, while women join the sector later in life and continue till old age. Ethnic wise, the *Oromos* have the mean age of 32 years followed by the *Gurages* and the *Amharas* with the mean age of 30 years and 29 years respectively. The ANOVA result shows no significant age difference between respondents of the three ethnic groups ( $F=1.46$ ,  $P=0.23$ ).

#### 4.2.2. Educational Level

Education represents one of the chief determinants of growth of output. Modern economic theory explains that improvement in human capital is one of the major sources of endogenous growth of any society (Todaro and Smith, 2011). At a micro level, numerous studies indicate that a raise in income is associated with additional years of education (Ozturk, 2001). The role of education on enterprise performance is explained through its effect on exposure to new information which has an ultimate positive impact on production and/or distribution of goods and services (Garoma, 2012). Bates (1990) explains the positive effects of education through its effects on making good business decisions, exposure to new technology, exploiting opportunities, and thereby contributing to business success. Table 7 below shows the distribution of respondents by gender and educational status.

Table 7: Distribution of samples by gender and educational status

Education	Gender		Total
	Women	Men	
Illiterate	30(38.96)	9(11.69)	39(25.32)
First cycle primary	21(27.27)	14(18.18)	35(22.73)
Second cycle primary	16(20.78)	29(37.66)	45(29.22)
First cycle secondary	6(7.79)	11(14.29)	17(11.04)
Second cycle secondary	2(2.60)	5(6.49)	7(4.55)
College/University	2(2.60)	9(11.69)	11(7.14)
Total	77(100.00)	77(100.00)	154(100.00)

NB. Figures in the brackets are percentages

Source: Own Survey, April-November 2013.

Table 7 shows that about 25 percent of the respondents did not attend any formal education. They are either illiterate or can read and write only. About 52 percent of the respondents have attended primary education, 16 percent have completed secondary school, and only 7 percent have college/university education. From this data we can note that street vending activities provide employment opportunities for both literate and



illiterate segments of the population such as school leavers, primary and secondary school students, and university graduates.

As shown in Table 7 above, there is a difference between women and men regarding educational level. The Table indicates that whereas 39 percent of women did not attend any formal education, it is only 12 percent of men who did not go for formal schooling. Similarly, while 12 percent of men attended college/university education, it is only 2.6 percent of women who went to college/university. Hence, based simply on respondents' level of education, men can have higher probability than women to run a successful business and establish large networks.

Table 8: Distribution of samples by ethnic group and educational status

Education	Ethnic Group			Total
	Amhara	Gurage	Oromo	
No-formal education	6(11.11)	21(37.50)	12(27.27)	39(25.32)
First cycle primary	9(16.67)	12(21.43)	14(31.82)	35(22.73)
Second cycle primary	16(29.63)	20(35.71)	9(20.45)	45(29.22)
First cycle secondary	9(16.67)	2(3.57)	6(13.64)	17(11.04)
Second cycle secondary	6(11.11)	0(0.00)	1(2.27)	7(4.55)
College/University	8(14.81)	1(1.79)	2(4.55)	11(7.14)
Total	54 (100.00)	56 (100.00)	44(100.00)	154(100.0)

NB. Figures in the brackets are percentages  
Source: Own Survey, April-November 2013

The level of education by ethnic group shows significant variations (see Table 8). While 11 percent of the *Amharas* did not attend any formal education, the proportion of respondents who did not attend formal education for the *Gurages* and the *Oromos* is 38 percent and 25 percent respectively. About 43 percent of the *Amharas* have attended secondary and college/university education. But it is only 20 percent of the *Oromos* and 5 percent of the *Gurages* that have attended secondary and college education. Table 9 below shows the mean years of education by gender and ethnic group.

Table 9: Means, standard deviations, and frequencies of respondents' years of education by gender and ethnic group

Gender	Statistic	Ethnic Group			Total
		Oromo	Amhara	Gurage	
Women	Mean	2.69	5.37	1.74	3.29
	Std. Dev.	2.72	4.14	2.78	3.62
	Frequency	23	27	27	77
Men	Mean	5.95	9.40	4.31	6.54
	Std. Dev.	4.24	3.42	3.15	4.16
	Frequency	21	27	29	77
Total	Mean	4.25	7.38	3.07	4.92
	Std. Dev.	3.85	4.27	3.22	4.21
	Frequency	44	54	56	154

Source: Own Survey, April-November 2013.

As Table 9 shows, the mean years of education for men are 6.54 with a standard deviation of 4.16. But, the mean years of education for women are 3.29 with a standard deviation of 3.62. Here we can realize that men have attended more years of education than women. The t-test result reveals significant ( $t=5.15$ ,  $p<0.01$ ) variations between men and women. Regarding level of education by ethnic group, Table 9 shows that there are variations between respondents of the three ethnic groups. The *Amharas* have attended more years of education (7.38) years followed by the *Oromos* (4.25 years) and the *Gurages* (3.07) years. The difference in education is significant at  $F=18.69$ ,  $p<0.01$ . Generally, the data collected on educational level shows that men are more educated than women and the *Amharas* are relatively more educated than the *Oromos* and the *Gurages*.

#### 4. 2.3. Marital Status and Religion

Marital status is another demographic variable that might influence enterprise performance. As shown in Table 10 below, 49 percent of the respondents are single, 32 percent are married, and 16 percent are divorced. There are variations between men and women regarding marital status. While 75 percent of men are single, it is only 23 percent of women who reported as single. The majority of women (42 percent) are married and 32

percent are divorced. This indicates that most of the women do have double responsibility of taking care of household duties and running street businesses compared to men.

Table 10: Distribution of samples by gender and marital status

Marital Status	Gender		Total
	Women	Men	
Single	18 (23.38)	58 (75.32)	76 (49.35)
Married	32 (41.56)	17 (22.08)	49 (31.82)
Divorced	25 (32.47)	0 (0.00)	25 (16.23)
Widowed	2 (2.60)	1(1.30)	3 (1.95)
Cohabiting	0 (0.00)	1(1.30)	1 (0.65)
Total	77 (100.00)	77 (100.00)	154 (100.00)

NB. Figures in the brackets are percentages

Source: Own Survey, April-November 2013

A look at respondents' religious affiliation (see Table 11 below) shows that the majority, i.e., 57 percent are followers of Orthodox Christianity, followed by Muslim (33 percent) and Protestant (10 percent). As regards ethnicity and religion, most of the *Amharas* and the *Oromos* are followers of Orthodox Christianity accounting 70 percent and 57 percent of their population, respectively. The *Gurages*, however, do have more or less equal number of followers of Orthodox and Muslim religion.

Table 11: Distribution of respondents by religion and ethnic group

Religion	Ethnic Group			Total
	Oromo	Amhara	Gurage	
Orthodox	25 (56.81)	38(70.37)	25 (44.64)	88 (57.14)
Protestant	10 (22.72)	3 (5.56)	3 (5.35)	16 (10.38)
Muslim	9 (20.45)	13 (24.07)	28 (50.00)	50 (32.46)
Total	44 (100.00)	54 (100.00)	56 (100.00)	154(100.00)

NB. Figures in the brackets are percentages

Source: Own Survey, April-November 2013

#### 4.2.4. Children, Other Dependents, and Total Family Size

The income gained from the microenterprises of street vendors is a source of livelihood not only for street vendors themselves but also for their children and other

household dependents. Table 12 below shows the mean number of children by gender and ethnic group.

Table 12: Means, standard deviations, and frequencies of number of children by gender and ethnic group

Gender	Statistic	Ethnic Group			
		Amhara	Gurage	Oromo	Total
Women	Mean	1.11	1.40	2.21	1.54
	Std. Dev.	1.18	1.33	1.50	1.40
	Frequency	27	27	23	77
Men	Mean	0.40	0.58	1.90	0.41
	Std. Dev	0.93	1.29	0.51	1.00
	Frequency	27	29	21	77
Total	Mean	0.75	0.98	1.25	0.98
	Std. Dev.	1.11	1.36	1.52	1.34
	Frequency	54	56	44	154

Source: Own Survey, April-November 2013

As indicated in Table 12 above, the average number of children is 1. There are variations between men and women regarding the average number of children. While the mean number of children for women is 1.54, it is only 0.41 children for men. The difference is significant at  $t= 5.75$ ,  $p<0.01$ . Perhaps such variation is attributed to different reasons. One reason might be that women are older than men. Second, the majority of women are married and divorced. Regarding ethnic groups, the average number of children for the *Oromos* is 1.52 followed by the *Gurages* and the *Amharas* with an average number of children of 1.36 and 1.11 respectively. However, the ANOVA result ( $F= 1.64$ ,  $p=0.19$ ) shows no significant differences between ethnic groups

In addition of their children, street vendors are responsible for supporting other dependents<sup>12</sup> in their families. The Table below shows the total family size<sup>13</sup> of respondents which includes both children and other dependents.

<sup>12</sup> Other dependents refer to those members of a household who do not have their own income but depend on the income of the street vendor for their livelihoods.

<sup>13</sup> Family size is the sum of children and other dependents that depend on the income of the street vendor.

Table 13: Means, standard deviations, and frequencies of respondents' family size by gender and ethnic group

Gender	Statistic	Ethnic Group			
		Amhara	Gurage	Oromo	Total
Women	Mean	2.85	3.37	3.91	3.35
	Std. Dev.	1.95	1.49	1.70	1.76
	Frequency	27	27	23	77
Men	Mean	2.29	2.48	1.33	2.10
	Std. Dev.	1.79	2.38	1.55	2.01
	Frequency	27	29	21	77
Total	Mean	2.57	2.91	2.68	2.72
	Std. Dev.	1.87	2.03	2.07	1.98
	Frequency	54	56	44	154

Source: Own Survey, April-November 2013.

As can be seen in Table 13 above, the mean family size of respondents is 2.72. When we add the owners, the average family size is 3.72. This shows that street vending is not only providing income for vendors themselves and their children but also for the survival of their extended families both inside and outside the household. Gender wise, the mean family size of women (3.35) is greater than men (2.10). In other words, the income of women supports more dependents than men. The difference is significant at  $t=4.08$ ,  $p<0.01$ . Concerning ethnicity and family size, the *Oromos* do have an average family size of 3.91 followed by the *Gurages* 3.37 and the *Amharas* 2.85. There are no statistically significant ( $F=0.41$ ,  $p= 0.66$ ) variation regarding mean family size between ethnic groups.

#### 4.2.5. Migration Status

Migration is a process that gets intensified with the process of development. Among the different categories of migration, mobility from rural to urban areas is the most common and ever-increasing phenomenon in the LDCs (Todaro and Smith, 2011). Rural-urban migration has great repercussions to the emergence of the urban informal sector. The data on migration status of the respondents shows that the majority, i.e., 93 percent are migrants to Addis Ababa. Only 7 percent of the respondents were born in the city. This

supports the argument that the informal sector is the source of employment and the last option for rural-urban migrants to earn a living. Perhaps the major factors for the immense migration of people to Addis Ababa are scarcity of farm land caused by population pressure and low agricultural productivity as a push factor and the socioeconomic and political significance of Addis Ababa as a pull factor.

As discussed above, respondents are less educated and less skilled for formal employment opportunities. Most of the street vendors are either illiterate or they have attended only primary and some secondary education. Consequently, the low education level force migrants into informal employment. As stated by Chakraborty and Kuri (2013), there exists a two-way relationship between migration and the expansion of the urban informal sector. Migration exacerbates the proliferation of the urban informal economy and consecutively the development of the informal sector attracts additional migrants to urban areas. This, in one way or another, is linked to the role of SNs in attracting new migrants to urban areas.

The presence of networks influences the choice of destination for migrants. Social contacts at destination not only reduces the psychological cost of migration by providing a supportive relationship during migrants' adjustment period but also reduces monetary costs by providing information on employment as well as material assistance during job search (Chakraborty and Kuri, 2013). The data collected on place of birth shows that most of the respondents are from the same place of origin depending on their ethnic group. For example, the majorities of the *Gurages* are from *Gunchire*, *Enemor* and *Cheha* areas of the *Gurage* land. The majority of the *Amharas* are from the *Agew Midir* and *Merawi* areas in *Gojjam* area of the *Amhara* Region. As the *Oromos* are concerned, most migrants came from few kilometres from Addis Ababa.

### **4.3. Enterprise Characteristics**

#### **4.3.1. Ownership Structure and Employment**

Ownership of an enterprise influences enterprise performance either positively or negatively through risk taking and investments on enterprises. For instance, family owned enterprises might not take risks compared to enterprises owned through partnership. For partnerships, the enterprise is usually an independent body run by employed managers thereby reducing the chance of diverting resources from business to household consumption (Garoma, 2012).

In the case of street vendors, the enterprises are very small-scale and ownership is dominated by single operators. The average number of workers is found to be 1.25 persons per enterprise including the owner. The majority of vendors work as independent self-employed entrepreneurs with no employees. About 99 percent of the respondents stated that they do not have employees in their street businesses. But about 26 percent of the vendors stated that they have family members who work with them. From respondents who work with their family members, about 95 percent reported that they do not pay salary to family members. This means that they are following the logic of family economies that cannot calculate profit directly counting family wage.

#### **4.3.2. Nature of Street Vending and Working Conditions**

Street vending is heterogeneous in character and comprises a wide variety of activities. Street vendors trade a range of commodities including clothes and shoes, cooked and non-cooked food stuffs (fast food, tea and coffee, bread, green peppers, tomatoes, onions, potatoes), and fruits (bananas, apple, and oranges). They also vend lottery and newsletters, books, mobile cards, CDs and DVDs, USBs, umbrellas, posters, jewellery and cosmetics, kitchen ware, plastic products, electrical appliances, school supplies, sweets, chewing gum, brooms, and tobacco. Regarding the nature of products sold by gender,

women generally sell items which need low capital input such as cooked and non-cooked food stuff, jewellery, and cosmetics whereas men are vending cloths and shoes, books, CDs and DVDs, shoe shinning, lottery and newspapers, and electric equipments.

The working condition of street vendors varies. Some vendors place themselves at strategic points with heavy human traffic. About 26 percent of the samples work long hours at the same site on a daily basis having permanent working place. But the majority, i.e., 76 percent of the respondents are mobile in that they alternate among different sites of the city taking advantage of different types of customers and following different patterns of urban movement. The majority of vendors rely on street vending as a regular and primary occupation. In most cases, women are working in a permanent place rather than men. Men move from one corner of the city to another depending on the time and location of streets where there are heavy human trafficking.

The average hours of work for vendors varies from four to thirteen hours a day. My observation shows that most of them are working in slum areas. The vendors have mostly been found to be working for prolonged durations in hostile surroundings which adversely affect their health. On the average, vendors work for 10 hours a day. The average daily working hours of men are 10.35 hours whereas it is 9.68 hours for women. The difference is statistically significant at  $t=2.20$ ,  $p<0.05$ . The reason that women relatively devote less time in street vending is because women do have lots of household responsibilities compared to men. Women are home-makers and thus have to feed their families. Their day starts early in the morning with household work and then going to the streets to sell their products. Then after working for some hours in the streets, they have to go back home to do household activities. An examination of average daily working hours by ethnic group indicates no significant differences ( $F=0.52$ ,  $p=0.59$ ).



Coming to the time length of years in street vending, it varies from a minimum of one year to maximum of 26 years. The average duration in business was found to be 7 years. There is variation in the duration of business between men and women. While women stayed in street vending for an average of 8 years, men have been in street vending for an average of 6 years. This difference is significant ( $t=2.69$ ,  $p<0.01$ ). This means that women exhibit longer years of street vending experience than men. The comparison of street vendors by ethnic background and time span in street vending shows no difference ( $F=0.39$ ,  $p=0.67$ ).

Business training and taking records of business transactions influence the income levels of street vendors. In this regard, respondents were asked if they had any form of business trainings. About 124 (81 percent) of the respondents reported that they did not get any kind of business training. The data collected shows no difference between the two sexes regarding the possibility of receiving business training. Likewise, 84 (55percent) of the cases stated that they do not take records of their business transactions. The data also reveals that men took accounting records of their businesses better than women. While 53 percent of men record their transactions, it is only 38 percent of women who took accounting systems of their businesses. This is perhaps due to the fact that men are relatively more educated than men.

#### **4.3.3. Working Capital and Enterprise Income**

Street vendors were asked if they keep record of their business accounts. The survey result shows that about 55 percent of respondents do not keep accounting records while 45 percent keep partial books of accounts. A poor financial system among street vendors prevents comprehensive collection of data on enterprise income and working capital. As the majority of respondents do not keep record of business transactions, information on enterprise income and working capital was obtained through questionnaire.

Working capital is one of the basic characteristics of microenterprises. The study sought to investigate the sources and amount of working capital and asked respondents if they have got any help in obtaining financial and other materials support for business start-up. About 93 percent of the respondents stated that they have got assistance from their close contacts. They mentioned family members, friends, and acquaintances as source of finance for enterprise start-up. The rest 7 percent reported that they started their enterprise with their own personal savings.

Asked about the sources of working capital, an interviewee P1, male, 34 years, ethnically *Amhara*, who sells liquid soap has said the following:

Most street vendors obtain working capital from their family members and close friends. Acquaintances are rare cases in providing financial and material support for enterprise start-ups. As street enterprises require small amounts of capital, street vendors obtain working capital even from friends who are engaged in street businesses. But as some of the street vendors were wage-employees or self-employed in other activities such as shoe shining, daily labor, security guard, and housemaid, the personal savings from previous jobs help them to obtain working capital to start street businesses.

Many street vendors start their enterprises with very low amount of capital due to the nature of their activities. Street vending activities are originally meant for sustaining the life of migrants who are in a difficult situation. Through time however, some operators turn this into a more profitable and better opportunity sector (Garoma, 2012). Table 14 below shows the working capital of street vendors' enterprises by gender and ethnic group.

Table 14: Means, standard deviations, and frequencies of respondents' working capital (ETB)<sup>14</sup> by gender and ethnic group

Gender	Statistic	Ethnic Group			
		Oromo	Amhara	Gurage	Total
Women	Mean	649.78	850.92	687.77	733.63
	Std. Dev.	742.42	767.06	608.55	703.77
	Frequency	23	27	27	77
Men	Mean	830.95	2130.25	1419.65	1508.27
	Std. Dev.	778.58	2032.71	1451.16	1771.73
	Frequency	21	27	56	77
Total	Mean	736.25	1490.59	1066.78	1120.95
	Std. Dev.	756.52	1653.03	1451.16	1398.67
	Frequency	44	54	56	154

Source: Own Survey, April-November 2013.

As indicated in Table 14, the average working capital of respondents is ETB 1121 with a standard variation of ETB 1399.00. The standard deviation is high implying that there are huge variations in working capital among respondents. The gender perspective on working capital shows that women carry out their business with low working capital than men. While the mean working capital of women is ETB 734.00, it is ETB 1508.00 for men. The difference is statistically significant at  $t=3.56$ ,  $p<0.01$ . The gender gap in working capital is probably because women are engaged in small businesses such as food stuffs and they do not require large amounts of capital. Coming to ethnicity, the *Amharas* do have an average working capital of ETB 1491.00 followed by the *Gurages* with ETB 1067.00 and the *Oromos* with ETB 736.00. There are differences in working capital between ethnic groups and this variation is significant at  $F=3.72$ ,  $p<0.05$ .

The most important reason for participation in street vending is to earn income and support livelihoods. Prior to assessing the income of street activities, respondents were asked if street vending is the main source of income for their livelihoods. Accordingly, 97 percent of the respondents stated that street vending is the main source of income. Likewise, 93 percent of the cases replied that they do not have any kind of income from

<sup>14</sup> Ethiopian Birr is the Ethiopian currency, 1 Euro = 26 Birr.

other activities. Moreover, respondents were asked if they have got assistance from others to supplement their enterprise income. In this regard, about 76 percent of the respondents reported that they do not have other sources of income. It is only 24 percent of the respondents who reported as they do have other source of income. The sources of income include pension, daily labor, support from family, and spouse's salary. Respondents were also asked to report their monthly sales volume and monthly expenses of their street enterprises. The net income is, thus, calculated as the difference between total sales volumes minus total business expenses. To get reliable information on the figures of monthly sales volume and business related expenses, interviewers had created frequent contacts with the respondents. This has helped interviewers to get trust from respondents and hence reliable figures on business turnovers. Table 15 below shows the net enterprise income by gender and ethnic group.

Table 15: Means, standard deviations, and frequencies of mean monthly net enterprise income (profit) by gender and ethnic group

Gender	Statistic	Ethnic Group			
		Oromo	Amhara	Gurage	Total
Women	Mean	610.86	564.44	635.18	603.11
	Std. Dev.	290.75	159.64	343.01	272.68
	Frequency	23	27	27	77
Men	Mean	642.85	866.62	1184.48	925.31
	Std. Dev.	276.71	289.54	346.69	376.84
	Frequency	21	27	56	77
Total	Mean	626.13	715.53	919.64	764.21
	Std. Dev.	281.29	277.29	439.90	365.51
	frequency	44	54	56	154

Source: Own Survey, April-November 2013.

As indicated in Table 15 above, the average net enterprise income is ETB 764.00. The Table also shows that women's average monthly enterprise income, i.e., ETB 603.00 (with a standard deviation of ETB 273.00) is less than their men counterparts who have an average enterprise income of ETB 925.00 (standard deviation of ETB 377.00). The difference in income between men and women is significant ( $t=6.07$ ,  $p<0.01$ ). The low

enterprise income of women can probably be attributed to many reasons. It has already been discussed earlier that women are less educated and are older than men. Women also relatively support many dependents compared to men. Moreover, the working capital of women is typically less than that of men. On top of these, in trying to fulfil their responsibility of being caretakers of their children, women usually carry their children with them to their vending places. As a result, their attention is diverted to taking care of their children and their sales are adversely affected. These entire probable causes contribute for the low performance of women in their street businesses.

A look at enterprise income by ethnic group indicates that the *Gurages* perform better than the *Amharas* and the *Oromos*. While the average monthly net enterprise income of the *Gurages* is ETB 920.00, it is ETB 716.00 and ETB 626.00 for the *Amharas* and the *Oromos* respectively. The data show that there is a significant difference between ethnic groups on monthly enterprise income ( $F=9.66$ ,  $p<0.05$ ). The *Gurages* earn more income than other ethnic groups despite their low level of education and low amount of working capital.

#### **4.4. Causes of Informality and the Debate on Street Vending**

Studies of migration explain that the informal sector is a source of employment and livelihoods for rural-urban migrants. In fact, the causes behind street vending are varied. According to the claims of the ‘dualist’ school of thought, the poor commence street businesses as they cannot find jobs in the formal economy. Street vending, therefore, serves as a ‘refuge occupation’ for them where low barriers to entry make it likely to earn a survival income (Unidas, n.d.). This is what is called exclusionary informality (Fransen and Van Dijk, 2008). Exclusionary informality occurs when people enter into informal activities due to exclusion from legal and formal opportunities. It is associated with poverty, vulnerability, and low labor productivity (Perry, 2007). These groups of people

are victims of unfair treatment from markets and institutions and, hence, are forced to join the informal, unproductive, and low paid work (Fransen and Van Dijk, 2008). Being excluded from government institutions, informal workers are vulnerable to loss of work, evictions, and violence with no institutional support from governments (Perry, 2007).

In contrast to the dualist model, the '*voluntarist*' school of thought asserts that people join street vending because it provides a more flexible and attractive employment choice than salaried work (Fransen and Van Dijk, 2008). This proposition is proved by some empirical studies. For example, Yamada (1996) and Douglas et al. (1995) argued that the informal sector is a better opportunity sector and that informal workers join it to exit bureaucracies and regulations of the formal sector. As discussed by Perry (2007), all activities in the informal sector are not survival strategies. Instead, people may voluntarily join informality to escape government rules and evade regulatory burdens and taxes.

In this study, the data collected concerning the reasons for participating in street vending show that about 76 percent joined street vending because of lack of other means of livelihood opportunities. The rest 24 percent entered into street activities voluntarily either to supplement their meagre income from other sources or because the street businesses are profitable. In addition, about 89 percent of the respondents stated that street vending is their established and whole day job. The other 11 percent reported that street vending is their part-time job. From these results we can understand that the majority of street vendors joined informality because of their exclusion from formal employment opportunities.

Further, respondents were asked if they had previous work experiences prior to joining street vending. About 43 percent of the vendors reported that they had no any work experience before joining street activities. This means that street vending serves as a source of employment and income for those who were not self-employed. But 57 percent

of the respondents had previous work experiences either in self-employed activities or in wage employment. The former occupations were characterized by low economic returns and include daily labour, farming, housemaid, etc. There is variation between men and women regarding previous work experience. While the majority of women were housemaids, most of men were daily labourers before starting street business. Though the majority of respondents joined informality due to their exclusion from formal employment opportunities, discussions with key informant interviewees show that people join informality due to different reasons.

Asked about the causes of informality, interviewee P16, women, 48 years old, ethnically *Gurage*, and engaged in selling charcoal and vegetables alongside has said the following:

I am working as a cleaner in one of the government institutions. My husband has died eight years ago and taking caring of our three children rests on me. My salary which is not more than ETB 500.00 is not sufficient to fulfil our basic needs. To support our livelihood and at least to eat three times a day, I started the street business of selling charcoal and vegetables side by side. I do street business on part-time basis. I have been working almost twelve hours during the weekends. During the working days, I work after office hours. I have started to get good amount of money from the street business and now I am able to feed my children three times a day and able to pay for school fees. The income from the street business is better than my salary. Now, I am thinking of quitting my job and expanding the street business.

Some others as well join street vending as it relatively provides better income than other activities that they used to work before. In this case, interviewee P8, male, 45 years old, ethnically *Oromo* and who sells used clothes said:

It is me who is supporting the family. I have two children and my wife is not working due to health problems. I have been in the street business of selling clothes for the last 8 years. Before joining this business, I have tried other activities. I was engaged in daily labor in the construction sector, loading and unloading. I used to be a security guard as well. But the income from these activities was not sufficient to feed my family. Lately, I joined the street business and now I am able to support my family. Street vending is not only my business but also a means of livelihood.

Similarly, interviewee P5, male, 35 years old, ethnically *Amhara*, who sells fruits and vegetables, said:

I am from a family of many children. Our family consisted of eleven members. We were depending on agriculture for our livelihoods. My life of migration started after the land redistribution which took place in the *Amhara* region of Ethiopia in the year 1994/1995. Because of the land redistribution, we lost many hectares of arable land. Due to this, I decided to come to Addis Ababa in search of employment opportunities. After my arrival, I started to look for jobs but failed to get one. In fact, I have got a job as a guard in a private company, but could not present personal guarantee for the job and I lost it. The only option that I had was to start street business. With some help from my families, I began to sell shoes on streets. Now, I am able to support myself and I am attending school in the night program. I also send money to my parents during holidays and whenever they are in need.

Likewise, interviewee P12, male, 45 years old, and a boutique owner said the following:

I have been selling second hand clothes on streets. I started to sell clothes on streets because I was unable to make profit while I was selling in my shop. People rarely come to my shop because the prices were relatively expensive. Street vendors were tough to compete for they were selling cheap because they do not have extra rent expenses and do not pay taxes. On the streets, however, I am able to sell much and able to make profit. In addition, I have leased my shop with ETB 1000.00 per month. Now, I have got two advantages. First, I am earning relatively good income from the street business and second, I earn money from leasing my shop. Other boutique owners also do either hire or commission street vendors to sell their commodities on streets as it is hard to sell their products competing with street vendors.

From the above interview transcript we can learn that there are four types of street vendors. The first category consists of those who join informality due to the absence of other employment opportunities. This clearly characterizes exclusionary informality. The second group includes those vendors who work on part-time basis to support their meagre income from other sources. The third group consists of individuals who joined street vending because previous jobs did not bring them sufficient income to feed their families. The fourth group comprises of owners of formally registered and large-scale business owners but selling their goods on streets. These street vendors are unable to sell their products in shops as customers do not go there. In this case, either owners of boutiques or street vendors who are employed or commissioned by boutique owners work on the



streets. The last three categories of street vendors are grouped under the voluntary informality group.

Ethiopia's current development strategy gives attention to microenterprise development as a means to address the problems of unemployment, poverty, and economic growth (Muchie and Bekele, 2009). To this end, the government has formulated the microenterprise development strategy. The strategy focuses on the importance of microenterprises support through the provision of working capital, training, and BDS. To do so, formalizing the informal sector activities is given priority by microenterprise development strategies (UNDP, 2012).

Despite the existence of microenterprise development strategies and the establishment of MSE development agencies, the degree of recognition and support provided to the informal sector is inadequate (Mulu, 2009) and many of the informal workers in general and street vendors in particular are still out of reach of the program. The question to be addressed here is that why street vendors do not obtain the necessary support from microenterprise and join microenterprise programs? In this regard, asked about the very objective of the MSE development programs, interviewee P 15, the advisor to the head of Addis Ababa MSE development bureau has the following to say:

The objective of MSE development programs is creating employment opportunities. It also aims at formalizing the informal sector activities. It arranges credit, training, working spot, and other infrastructural service for those who are involved in the program. Except government employees, all unemployed individuals can be beneficiaries of the program. However, beneficiaries of the MSE programs should be residents of Addis Ababa and have to show the identity card of the Addis Ababa city administration. Those eligible candidates should form enterprise groups and have to choose among the growth oriented sectors chosen by the government. These sectors include, the manufacturing sector (wood work, metalwork, textile and garment, leather and handicraft products e.tc), the construction sector (building material production), urban agriculture (animal fattening, poultry farm, and animal food preparation), trade sector (domestic product wholesale and retail trade), and the service sector (solid waste collection and recycling, maintenance service, etc).

From the above interview, one can identify different problems that might prohibit street vendors to remain on the streets. The first is that government employees are not beneficiaries of microenterprise programs. This exclusionary nature of the program leads the low paid government employees to be engaged in informal activities. Second, street vendors who need the support of microenterprise development programs should choose among the growth oriented activities set by the government. This shows that street vendors do not have the chance to choose what they want to do. Third, involvement in microenterprise development programs is not allowed on individual basis unless it is a privately limited company (PLC). The common method is organizing beneficiaries into enterprise groups. Forming enterprise groups is another problem for street vendors as group formation does not address street vendors' needs and priorities and did not consider the SC inherent in them.

As to the low participation of street vendors in the microenterprise development programs, interviewee P16 has said the following:

While working on the streets, I have faced harassment and intimidation every day by the police forces. To get rid of this problem, I decided to take part in the microenterprise programs and went to the nearby branch office. I told officials that I am employed in one of the government institutions as a cleaner. I also discussed with the officials that my salary is not sufficient to support my family. However, the officials refused to accept my application to the program saying that I am a government employee. They suggested that I should quit my job to join the microenterprise programs. However, since I did not have any savings, I was unable to follow their suggestions and give up my job. This is because if I do what the officials suggested, I would be out of any income till I get the benefits of the program, which takes a minimum of a year. This is very hard for poor people like me. Due to this problem, I still work on the streets despite the day- to-day intimidation of the police.

Regarding the reasons why street vendors do not join microenterprise programs, interviewee P8, has also said the following:

To get the services of microenterprise programs, my friends and I formed an enterprise group and went to the nearby office repeatedly. We asked the officials to allow us to engage in activities we used to work but they refused us. They advised us to choose among the priority business areas set by the government. Those

activities set by the government need huge investment in which we cannot get the return over a short period of time. For this reason, we failed to participate in microenterprise programs. Consequently, we all are vending on the streets. What the government talks on media and what the officials actually do in their offices are contradictory. The government is doing a political propaganda of convincing people that it is helping the poor. In reality, the sectors chosen by the government are for the rich not for the poor.

Furthermore, interviewee P5 has the following to say:

To be the beneficiary of the microenterprise programs, I went to the nearby office more than five times. Every time I was asked to show an identity card of the Addis Ababa city administration. Unfortunately, since I came from rural area, I do not have the identity card. I am living with three of my friends leasing a small room. One day we asked the land lord to help us obtain identity card using his house number. So, the land lord processed the identity card application for only one of my friends. Even though my friend has got the identity card of Addis Ababa, he is not participating in the program as he is unable to form an enterprise group of ten people. The mere lack of identity card and absence of people to form enterprise groups are among the challenges that hinder participation in microenterprise programs. Due to such bureaucracies, we are out of the reach of microenterprise services.

Street vendors' reluctance to participate in microenterprise programs is also attributed to the participation of many institutions in the implementation of the program and the inability of the street vendors to meet the requirements of all these institutions. In relation to this problem, interviewee P2 has said:

Many institutions are involved in implementing the microenterprise programs. The MSE development bureau is responsible for organizing and screening beneficiaries and providing business development plans. The Addis microfinance institution is involved in providing microfinance services. The Technical and Vocational Education Training institutes (TVETs) provide business management training. While the Addis Ababa Trade and Industry Bureau is involved in trade and investment licensing, the Design and Construction Bureau is responsible for the design and construction of working sheds. Applicants who want to participate in the microenterprise development programs should, therefore, obtain endorsement from all of these institutions. Going through all the bureaucracies of these institutions takes more than a year and it is beyond the control of street vendors.

The above interview shows that there are many problems that force street vendors not to participate in microenterprise programs. The government officials claim that the government has arranged all the necessary facilities and it is up to street vendors to benefit from microenterprise programs. Street vendors, on the other hand, claim that there are many problems related to the implementation of the program. The number of institutions involved and their bureaucratic channels, the problem of getting identity card from the city administration, the growth oriented sectors set by the government, the lengthy procedure of membership application, and the exclusionary nature of the program are among the problems mentioned by street vendors for the low participation of street vendors in microenterprise programs. Owing to such problems, street vendors remain informal and still work on the streets. Consequently, harassment of street vendors has become a common practice in Addis Ababa.

Pertaining to the action taken by the government on street vendors, there are two opposite views. While some people (owners of formal enterprises and government officials) claim that street vendors should be cleared from streets, others (for example, street vendors themselves and customers of street vendors) argue that street vendors should not be eliminated rather they have to be supported and proper strategies should be devised to make them legal. The interview transcripts below show the two opposite views on street vending. Supporting the elimination of street vendors, interviewee P15 said the following:

The government has arranged different support mechanisms for the poor to get involved in microenterprise programs. Though some street vendors are joining the program, the majority of them prefer to stay on the streets to avoid paying taxes and obey other government regulations. In the contrary, those legally registered entrepreneurs are unable to compete with street vendors for the street vendors sell products in cheap prices. As a result, these days, there is a tendency that formal entrepreneurs are joining street businesses. Street vendors are also creating traffic accidents and they are selling some illegal and unknown products that have health risks to the people. Therefore, the government is no more tolerant of them. We are in favour of the legal and formal entrepreneurs who are paying tax for the government. Street vendors, thus, need to be eliminated from the streets.

Likewise, group interview was conducted with three code enforcing police and they claim that since street vendors are working out of the government order they have to be eradicated from streets. They have said the following:

Our task is patrolling street vendors. In our day to day contact with the street vendors, we have seen many problems they cause to the general public. The first is that they are making legal entrepreneurs to be out of the market. They do not pay tax, they do not pay rent for working places, and they do not pay salary for employees. As a result, they sell products with cheap price. The legal business owners are losing their customers and are complaining of paying taxes unfairly to the government while street vendors do not. Also, street vendors sell unknown products, contrabands, expired and spoiled food stuffs. While street vendors run to escape from us, they become victims of car accidents. On top of these, they are working for their daily survival and they do not have personal savings. If there is no capital accumulation, there is no investment and thereby no poverty reduction. As the aim of the government is poverty reduction and bringing economic growth in the country, street vendors have no input to achieve the development goals of the country. Thus, they should be eliminated from the streets.

Another claim of the government is that street vendors are causing traffic problems and creating congestion in the city. Regarding this problem, interviewee P17, man, 52 years old, and a traffic police has said the following:

As a traffic police, I usually travel to different sections of the city to patrol the traffic condition. Most of the time, it is very difficult for pedestrians to go through the sidewalks of commercial areas such as *Megenagna*, *Piazza*, and *Mercato* because they are full of street vendors. Residents of the city are always facing problems in finding a parking lot for the pedestrians are forced to go off the sidewalks and walk on the designated parking lots. Personally, I do not want street vendors to be eradicated from streets as they are earning a living out of their street business and able to support their families. They also support the low income group of the city by providing lower cost products and services.

In spite of the fact that government officials agree on the idea that street vendors should be eradicated from streets, street vendors and their customers argue against the ideas of government bodies. One of the customers of street vendors, P18, who is male and holds an MA degree, was asked about his views on the government actions of harassing and intimidating street vendors and he has the following to say:

An attempt of harassing street vendors is not a sustainable solution. Rather, it is a temporary solution of covering the fire. Harassing and intimidating street vendors will create social crisis. Most of the street vendors are youngsters. As most street vendors are young, they get easily discouraged and feel hopeless by brutal actions of the police. Therefore, these kinds of governmental action can eventually lead the youth to get involved in criminal activities. The worst thing is that, as the street vendors are supporting themselves and other family members (mother, father, and partners), harassing them may double or triple the number of victims. If children are added, you can imagine the turmoil that may be created because of eliminating vendors from the streets.

Interviewee P18 further claims that:

The beneficiaries of street vendors' services and products are among the issues that need to be considered while taking actions on street vendors. More than half of the populations of Addis Ababa are absolutely poor. These people are purchasing products and services from street vendors at low cost. Street vendors, for example, sell jackets with a price of ETB 300.00 – 400.00, which in the boutiques cannot be purchased without having around ETB 800.00 – 1000.00. They also offer services to the poor such as fast foods, coffee, and tea with lower prices. For instance, coffee vendors sell a cup of coffee for ETB 2.00 – 3.00, while in the cafeterias a cup of coffee costs ETB 7.00 – 10.00. Therefore, eradicating street vendors means that more than fifty percent of the poor will lose the market for services and products from street vendors. In the process, this situation will lead to a social chaos.

Similarly, when asked about an attempt of eradicating street vendors from streets,

interviewee P5 has said the following:

I am supporting my dependents and myself of the income that I earn from street business. If the government is going to eliminate street vending, where will I and my dependents go? We do not have another option. The microenterprise development program is too restrictive for us to join. I have to feed myself and my dependents. It is the question of survival. If the government continues to eliminate street vending activities, I might be forced to get involved in any criminal activity that brings me money.

The above interview analysis shows that while the government officials agree street vendors should be eradicated from the streets, street vendors and their customers stated that street vending is a way of livelihood of the poor and street vendors should not be eradicated from streets unless the government devises viable development strategy that addresses the problem of poor street vendors.

#### 4.5. Summary of Findings

This chapter presented a description of respondents' demographic profile, enterprise characteristics as well as the causes of informality and debates surrounding street vending. Most of the respondents working in the streets are youngsters. The distribution of age by gender, however, reveals that women are older than men. Data on the educational level shows that most of the respondents have attended either first cycle primary education or first cycle secondary education. Significant proportions are illiterate. The data also reveal that men have attended longer years of education than women. Ethnically, the *Amharas* have attended long years of schooling followed by the *Oromos* and the *Gurages*. As regards marital status, while the majority of men are single, the greater part of women are either married or are divorced. Owing to such variation, there are differences in the number of children in that women do have more children than men. Women have also more dependents than men. No significant variation is observed between ethnic groups regarding marital status and number of children and as well as number of dependents.

Street vending constitutes a greater proportion of visible informal sector activities in Addis Ababa. The data collected on migration status shows that the lion's share of respondents are migrants and street vending provides a means of livelihoods for these people. For all the respondents, street vending is the chief source of income and livelihood. Street enterprises are very small-scale and ownership is dominated by a single operator with no employment opportunities but with some involvement of family members. Street vendors start enterprises with very low amount of capital. Being poor, migrants do not have resources to start business. Instead they use their SC mechanisms to start street activities. In this regard, the data collected show that more than ninety percent of the respondents have got support from their close contacts. The gender perspective on the

amount of working capital shows that women exhibit lower amounts of working capital than men. There is also a difference between ethnic groups in that the working capital of the *Amharas* is greater than the *Gurages* and the *Oromos*. Income obtained from the street businesses also shows variation in that men's income is greater than women's income and the *Gurages* perform better than the *Amharas* and the *Oromos*.

Studies of migration explain that the informal sector is a source of employment and livelihoods for rural-urban migrants. In fact, the causes behind street vending are varied. From the respondents of the questionnaire survey it is possible to deduce that the majority of respondents join street vending because they are excluded from formal employment opportunities. However, discussions with key informants revealed that there are many causes of informality corroborating Perry's (2007), argument that all activities in the informal sector are not survival strategies. Despite the prevalence of different causes of informality, the Ethiopian government has been formalizing the informal sector activities through microenterprise development programs. However, due to problems related to the exclusionary nature of the intervention and the bureaucracy in service delivery, many of the street vendors did not participate in MSE development programs.

In reaction to the informality of street vending, the government has been taking actions on vendors to leave the streets. Yet there are debates concerning whether forcing street vendors to leave the streets is a sustainable solution to informality or not. While owners of formal enterprises and government officials claim that street vendors should be eliminated, others, for example, street vendors themselves and customers of street vendors argue that street vendors should not be eliminated but instead they have to be supported and proper mechanisms should be devised to make them legal.



## Chapter 5

### The Composition and Structure of Street Vendors' Personal Networks

#### 5.1. Introduction

Network composition and structure shapes the availability and access to resources as well as the intensity of social control used to enforce social norms (Granovetter, 1973). The analysis of network composition and structure involves four basic components. These include the structural component, the resource component, the normative or relational component, and the dynamic component (Davern, 1997). The structural aspect refers to the geometric shape of connection between actors in a network (Burt, 1992). The resource dimension considers resources embedded in a network. Examples of network resources include ethnicity, prestige, education, occupation, religion, and gender. By analyzing the distribution of resources within a network, one can determine the amount of non-structural resources available to individuals through their connections (Lin, 1981).

The normative or relational aspect of PNs consists of the norms, rules, and sanctions that control the activities of actors in a network (Coleman, 1988). The main normative elements include the level of trust between members of a network and rules and sanctions for detecting and controlling unacceptable behavior. The strength of a tie, as a relational component, is measured by the duration of connections, frequency of contact, and the degree of emotional intensity between actors in a network (Granovetter, 1973). The normative or relational component examines whether the tie is strong or weak which is determined by exploring the social roles of alters (Davern, 1997). Variations in normative features are claimed to have different socioeconomic consequences on person's behavior and associated actions. The fourth, i.e., the dynamic component of networks considers the evolving PNs that change over time (Davern, 1997).

Table 16: Summary of components used to analyze network composition and structure

S.No	Component	Measures /indicators of the components
1	Resource	Ethnicity, prestige, education, occupation, religion, and gender
2	Structural	size, density, effective size, efficiency, and network constraint
3	Normative (relational)	Level of trust among actors in the network, contact frequency, duration of contact, social role.
4	Dynamic	Dynamics of networks following phases of enterprise development such as the planning stage, the resources stage, and the legitimacy stage

Source: Adapted from Davern (1997).

Previous studies considered the composition of PNs (e.g., network homophily and heterogeneity, frequency of contact, level of trust, and percent of kin and non-kin contacts) and the structure of these networks (e.g., network size, density, and structural constraint of connections). Such analysis helps to understand how the properties of networks affect what happens to network members (Davern, 1997). For instance, *homophily* and *heterogeneity* of a network affects the nature of resources accessed by an ego (Burt, 1992). Networks with more socioeconomic resources and high prestige better mobilize network capital (Lin, 2002). While strong ties provide emotional and material support, weak ties provide new information sources (Granovetter, 1973). Likewise, individuals with high levels of trust are able to perform functions more efficiently than others (Davern, 1997).

This chapter presents the composition and structure of networks by analyzing the data collected by NG and PG surveys and through interviews. In accordance with the previous literature, the structural, the resource, and the normative or relational components of networks are discussed. The core networks of street vendors were identified with the NG question, who are the most important persons who helped you in various aspects of enterprise development and in your day-to-day business activities? For this NG question, the 154 respondents (egos) elicited 477 network members (alters). The analysis in this chapter, thus, reflects the information gathered from a total of 631 individuals.

The remainder of the chapter is organized in such a way that the first part deals with network composition. Percentage distributions, homophily and heterogeneity indices, and network graphs are used to describe network composition. The second section deals with the structure of PNs. Network structure is measured by network size, density, effective size, network efficiency, and network constraint. The third section presents results of the embedded resources component of PNs. The last section provides summary of findings.

## **5.2. Network Composition: Homophily and Heterogeneity in PNs**

Network composition and structural inequalities affect the shape and patterns of street vendors' PNs. Usually, owing to various reasons people tend to connect with people having similar characteristics. This is a tendency known as *homophily* which refers to a condition wherein people get connected with those persons who share common experience or characteristics (Krebs and Holley, 2006). The stimulus for homophily is that “similarity breeds connections” and “birds of a feather flock together” (McPherson et al., 2001: 417). Homophily shows that information that flows throughout networks is localized. Similarity of attributes also shortens the process of communication (McPherson et al., 2001). One can, therefore, expect that trust and solidarity are relatively easy to establish with similar than dissimilar individuals thereby reducing the costs associated with forming ties (McPherson et al., 2001). The cost of sustaining established ties is also lower in homophilous than heterophilous ties (Kossinets and Watts, 2009). Indeed, ego-alter similarities are valuable for both obtaining and providing social support.

Despite its positive contribution, however, homophily creates problems in getting a foothold of new ideas within a network because like minded people are connected to each other and usually hold similar attitudes, beliefs, and practices. Consequently, members of a given homogeneous network avoid those who do not share their views which in turn slow

the spread of new ideas. Yet, once a new idea gains a foothold in the network, the trust generated by homophily makes it diffuse quickly (Kossinets and Watts, 2009).

Network *heterogeneity*, in contrast, provides a relative advantage to actors in a network because it helps actors to obtain additional resources through distant contacts that they are unable to access and activate (Burt, 1992). The heterogeneity of contacts refers to the extent to which alters differ from each other in one or more attributes such as gender, age, ethnic identity, education, experience, and occupation (Klyver and Terjesen, 2007). Diversity in a network bridges the boundaries of homogeneous social groups and thereby decreases the degree of in-group constraints on resources (Kalmijn and Flap, 2001). Diversity also leverages the resource differences between privileged and deprived groups as the deprived groups are likely to benefit when they access information from advantaged groups who occupy better positions (Son and Lin, 2012). Diverse contacts offer diverse information and resources that an individual may benefit from and may enable him/her to recognize life opportunities (Aldrich and Zimmer, 1986). High diversity also implies integration into several spheres of society which in turn facilitates instrumental actions (Campbell et al., 1986).

Homophily and heterogeneity indices<sup>15</sup> combine the positional and relational elements of networks. While the positional resource is related to the attributes possessed by PNs, the relational aspects refer to the intensity of relationship and normative elements that exist between actors in a network (Wellman and Wortley, 1990). Culture, tradition, and socio-demographic attributes are among the criteria for selecting members into a network. Major categories include social role, gender, religion, ethnicity, marital status, education, occupation, and income (Kebede and Butterfield, 2009). In this study, analysis of the composition of PNs is done by calculating homophily and heterogeneity indices of

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<sup>15</sup> While homphily measures the socioeconomic and demographic similarity between an ego and his/her alters, heterogeneity indicates the diversity that exists between egos' alters

ego-alter and alter-alter socio-demographic attributes. Table 17 shows the homophily and heterogeneity indices<sup>16</sup> of respondents.

Table 17: Sameness proportion, homophily and heterogeneity indices of respondents

S. No	Attribute	Sameness Proportion	Homophily	Heterogeneity
1	Sex	0.47	-0.17	0.24
2	Education	0.16	0.52	0.28
3	Marital Status	0.28	0.12	0.15
4	Religion	0.68	-0.73	0.00
5	Ethnicity	0.55	-0.39	0.18
6	Occupation	-	-	0.36
7	Social Role	-	-	0.39
8	Composite diversity <sup>17</sup>	-	-	0.20
9	Age	0.046	0.86	4.12 (SD) <sup>18</sup>
10	Income	0.045	0.89	752 (SD)

Source: Field Survey, April-November 2013.

### 5.2.1. Ethnic and Religion Composition

Ethnicity is a social categorization most prominent in heterogeneous societies (Negrón, 2014). It has been recognized that ethnicity has something to do with business start-up and success (Fafchamps and Minten, 2002). Indeed, ethnicity is the main divide in the PNs of entrepreneurs (Kao and Joyner, 2004) and it plays a great role in structuring networks in ethnically diverse societies like Ethiopia where there are more than eighty two ethno-linguistic groups. It is widely recognized that the condition of different ethnic groups may influence people's tendency to associate with others outside their ethnic line (Gilchrist and Kyprianou, 2011). In this regard, Salaff et al. (2003) note that entrepreneurs from the same ethnic group obtain easier access to business ideas than those entrepreneurs who do not exhibit ethnic homogenous networks. They will also be in position to utilize ethnic networks.

<sup>16</sup> Refer the methodology section for the details of calculating the homophily and heterogeneity indices

<sup>17</sup> Composite diversity index was calculated from the categorical attributes including sex, religion, ethnicity, marital status, occupation, and education.

<sup>18</sup> Diversity index for continuous variables is reported by standard deviation.

Pertaining to ethnic homophily in street business, Interviewee P2, male, aged 36 years, ethnically *Gurage*, and involved in selling used clothes reported:

When people migrate to cities, it is natural that they tend to associate with people of the same ethnic group. People of the same ethnic group come closer albeit they do not know each other before and they are not family members or friends. Ethnic homogeneity is also a normal phenomenon of the street vendors' network configuration.

In the domain of ethnicity, alters from the *Gurage* ethnic group account for about 43 percent of street vendors' PNs followed by the *Amharas* (28 percent) and the *Oromos* (24 percent). Other ethnic groups account only 5 percent (see appendix VI). This implies that the *Gurages* are the preferred ethnic groups in street businesses. The homophily index reveals strong ethnic homogeneity on street vendors' PNs. As shown in Table 17, the mean ethnic homophily index is -0.39. The majority of contacts, i.e., 55 percent, whom street entrepreneurs discuss important business matters are within the same ethnic group. About 45 percent of street vendors' PNs are made up of persons from other ethnic groups. For street entrepreneurs there is a benefit to get connected with people who share similar ethnic line as it helps them to obtain business and employment opportunities (Gilchrist and Kyprianou, 2011). Ethnic homogeneity among vendors provides a strong foundation for network formation allowing them to lead new urban life by forming microenterprises.

Asked about the situation of ethnic homogeneity, interviewee P1, male, 34 years, ethnically *Amhara*, who sells liquid soap said:

Whether it is politically motivated or socially constructed, ethnic identity has become a common practice in the day-to-day activities of individuals. Example, I have known a person (by the name of *Dereje*) from a place where I came from. Ethnically *Dereje* is *Amhara* and he is a chemist by profession. *Dereje* owns a small soap factory. One of my close friends (*Debela*), who is ethnically *Oromo* wanted to start street business by selling soap. He asked me to do him a favor to get soap from *Dereje's* factory. I talked to *Dereje* to give *Debela* liquid soap on loan. Unfortunately, *Dereje* was not voluntary to give him soap on loan conditions as *Debela* is ethnically *Oromo*. After six months, I heard that selling soap on streets is profitable and hence I asked *Dereje* to give me soap on loan. Without asking me any kind of guarantee, he gave me 3000 liters of liquid soap for we are of the same ethnic group and same area of origin.

The above interview shows the presence of ethnic homogeneity in street vendors' PNs. Ethnic network helps new comers to adjust themselves to the new environment and to start businesses for their survival. It also helps new comer to get business advice, material and financial assistance, and moral support. In light of this, Portes and Sensenbrenner (1993) state that ethnic PNs contribute to the development of immigrant microenterprises through different arrangements. For instance, ethnic based local associations help to make working capital available to members of a given ethnic group who could otherwise obtain it from other sources.

In Addis Ababa, in previous times informal activities were largely occupied by the *Gurage*, the *Amhara*, and the *Oromo* ethnic groups. Currently there is a new wave of the *Walayta*, the *Hadiya*, and the *Kambata* ethnic group migrants from South Ethiopia to Addis Ababa. The share of these ethnic groups in street vending has been increasing from time to time. The earlier participants to the sector, particularly the *Gurages*, are graduating to formal and higher level activities. However, strong ethnic bonds have led street vendors to specialize in activities where their ethnic group is involved to a larger extent. Enterprises pursued by some immigrant ethnic groups are also sustained through social and entrepreneurial networks what Tata and Prasad (2008) names it 'ethnic social capital'.

Regarding ethnic homogeneity, interviewee P6, male 54 years old, and ethnically *Gurage* stated:

Ethnically I am *Gurage*. I have been in Addis since 1984. I am engaged in selling fruits and do shoe shining side by side. When I started my street business, I obtained business information from a friend of my friend, who has been engaged in similar activities. He is ethnically *Gurage*. He helped me a lot in my day- to - day business activities until I get into the world of street business. After getting along well with my friend, we started to live together renting a small room. The land lord for the leased room was *Gurage* and he leased the room for a lower rent as we told him that we are from the *Gurage* ethnic group. When I started to expand my sales and want to buy more fruits and vegetables, my friend introduced me a regular supplier. This man is ethnically *Gurage*. He is more educated and economically strong. Now I am married to a *Gurage* woman and I am a father of one boy and three girls.

A business that depends on ethnic relations can create value chains within an ethnic group (Tata and Prasad, 2008). Ethnic homogeneity can also lead to ethnic spatial groupings and high ethnic concentration in particular businesses i.e., ethnic economies (Greve and Salaff, 2003). For instance, informal discussions and researcher's observations show that the majority of young *Amhara* immigrants are engaged in lottery vending, the *Gurages* are highly engaged in selling used clothes, shoes, and homemade biscuits. While the majority of the *Oromos* are involved in selling cereals, the *Tigres* are involved in selling brooms and plastic kitchenware. The *Oromos* and the *Tigres* sell their products by moving around residential areas. Shoe shining, as a street activity, is significantly dominated by the *Hadiya* and the *Walayta* ethnic groups. In sum, for street entrepreneurs ethnic networks are of particular importance to maintain social ties and obtain the necessary social support including business advice, finance, and material support.

Ethnic homophily makes street entrepreneurs in particular and the city residents in general to live a particular location of the city. Such residential concentration and clustering by a certain ethnic group is termed as urban ethnic enclave (Greve and Salaff, 2003). In his book, '*the African City*', O'Connor (1983) summarizes his observation and experience of the African cities and notes that Addis Ababa is truly exceptional in its segregation of ethnic groups. He claims that the design of Addis Ababa is based upon sections allocated to particular ethnic groups than any other city in Africa. He further states that residential localities in Addis Ababa have a tradition of providing a self-governing welfare system for people of same ethnic line in pooling resources that help new migrants to the city adjust themselves to the new urban environment.

The researcher's discussion with key informant interviewees also shows that there are urban *ethnic enclaves* in Addis Ababa. In this regard, interviewee P2 said:



Migrants to the city would like to reside in areas where the majority of residents are from the same ethnic group. For example, most of the *Amhara* street vendors are found in *Khazanchis* and *Addisu Gebaya*, the *Oromos* are mostly found in *Saris* and *Akaki-Kality*. The *Wolaitas*, the *Kembatas*, the *Hadyas*, and the *Dorzes* are greatly concentrated in *Shiromeda* and *Afinchober*. The *Tigres* are highly concentrated around *Teklehaimanot* and *Haya Hulet* area. The *Gurages*, on the other hand, are more or less widely distributed in different parts of Addis Ababa but with high concentration around *Mercato* and *Atikilt Tera*.

As argued by Gilchrist and Kyprianou (2011), factors such as lack of social contact, different values and cultures, and lack of understanding about the attributes of each ethnic group might thwart the assimilation of one ethnic group with the other. On top of this, these days the ethnic based regionalization and politics practiced by the Ethiopian government makes people to associate with persons from the same ethnic group. The government is also making ethnic groups to feel suspicious of each other and there is mistrust between ethnic groups. As a result, street vendors tend to form networks with persons of the same ethnic line. It is, however, claimed that ethnic homophily might lead to social segregation and ‘cultural fossilization’ through overdependence on strong ethnic ties (Gilchrist and Kyprianou, 2011).

Asked about the negative effects of ethnic homophily, interviewee P1 stated his experience as follows:

One day I went to the street vendors to buy a kitchenware. The time was so quiet and I found three *Gurage* vendors selling the same type and quality of kitchenware that I was looking for. I went to the first vendor and asked him about the price and he said the price is ETB 110.00. I tried to bargain with him but he told me that the final price is ETB 110.00. I left the first vendor and moved to the second one. The second vendor told me the price is ETB 120.00. Again, I went to the third vendor and the price there was ETB 110.00. While I was moving from one vendor to another, they were communicating with their mother tongue, which makes them to fix the price of the kitchenware. I tried to move here and there but I did not have any choice to choose. Finally, I bought the kitchenware for ETB 110.00.

From the above interview transcript, we can learn that ethnic homogeneity does have a down side in segregating the community. It favors members of a given ethnic group and disfavors those outside of that ethnic group. It also helps street vendors to fix the price

of their services and products. This particularly works in situations where some activities are controlled by few ethnic groups. Regarding the negative effect of ethnic homogeneity in social interaction and in street business, interviewee P1 said:

I want to be a member of *Equb*<sup>19</sup> as it helps me to save money. To do so, I asked one of my acquaintances to be part of their *Equb*. After our talk, he referred me to the chairman of the *Equb* for further information. I went to the chairman and expressed my intention. Unfortunately, the chairman asked me where I am from and from which ethnic group I belong to. When I told him that I am an *Amhara* and from *Wollo* province of Ethiopia, he refused me to register me as a member of their *Equb*. Lately, I found out that all members of this *Equb* are *Gurages*. I then went to another *Equb* that members are all *Amharas* of *Gojjam* province. Though, I am from the former *Wollo* province of Ethiopia, they accepted me just because I am *Amhara* and for the reason that one of their members testified for me that I am *Amhara*.

As to the claim of the interviewee P1, such types of ethnic homogeneity may lead to the situation that market and institutions to be regulated by individuals of same ethnic group not by the market system. In fact, ethnic homogeneity is good for information sharing, getting material and financial resources, emotional support, and other resources needed for business endeavors. However, when a network of a given ethnic group controls the price of goods and services, as interviewee P1 said, it may cause the emergence of a group of mafias who do have the power to decide in market transactions. On the downside of ethnic homogeneity, interviewee P2 has reported the following:

All the time when I go to *Mercato* to buy commodities, I have frequently faced problems due to my ethnic identity. I am from the *Amhara* ethnic group. When I go to *Mercato* and approach the *Gurages* (as they are dominant in *Mercato*<sup>20</sup> and are wholesalers), they usually identify me that I am *Amhara* and they used to raise the price. I have noticed this problem many times and one day I quarreled with one of those people who did such stereotyping on me. After that time onwards, when I want to buy something in *Mercato*, I started to go with my friend. My friend is

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<sup>19</sup> *Equb* an informal institution established voluntarily by a group of people who know each other to collect a specific amount of money from the members on a specific date to be paid on round and lottery basis to the members. The members know each other and thus trust each other to make the *Equb* function smoothly (Rahmato and Kidanu, 1999).

<sup>20</sup> *Mercato* it is the largest open market in Africa located at the centre of Addis Ababa.

ethnically *Amhara* but physically he looks like the *Gurages*. In addition, his accent is similar to the *Gurages* while they speak *Amharic*. He also speaks some words of *Guragegna* - a language of the *Gurages*.

Notwithstanding the merits of ethnic homogeneity, it is argued that people whose networks that reveal different rather than the same ethnic profile are able to have more opportunities to meet possible interethnic ideas. Those entrepreneurs whose contacts are from the same ethnic group may face barriers to meeting potential interethnic relations (Clark-Ibáñez and Felmler, 2004). An individual who has an ethnically diverse set of friends is more likely to obtain new information from his/her networks compared to a person whose friends are ethnically homogenous. But information obtained from persons of same ethnic group lowers uncertainty regarding a potential relationship and enhances the likelihood of interethnic communication (Clark-Ibáñez and Felmler, 2004).

Ethnic diversity in urban setting promotes the formation of interethnic group networks based on mutual interests. The resources that flow along these networks can serve to strengthen relations between groups while contributing to the weakening of ethnic group boundaries (Gilchrist and Kyprianou, 2011). The mean ethnic diversity of street vendors is found to be 0.14 (Table 17) confirming strong ethnic homogeneity in street vendors network configuration. As such, street vendors will obtain limited information from diverse ethnic groups outside of their ethnic circle. But, the interview results of the study confirm the fact that strong ethnic ties are beneficial to enterprise performance. Comparing the networking pattern of different ethnic groups and their business success in Ethiopia, interviewee P2 stated that:

In both formal and informal enterprises, the *Gurages* perform better than other ethnic groups. *Gurages* are successful in whatever type of business they are engaged in. This is partly because *Gurages* are hard workers and do have good business skills. But, in most cases their success emanates from their strong tie configuration of their personal networks. They do have kinship based networks and a strong tendency to associate with people from *Gurage* ethnic group. Their strong kin and ethnic solidarity helps them to exchange business information easily and quickly. They also co-operate each other materially, financially, and emotionally.

They work in groups and their team spirit helps them compete with other competitors. Their business secrets flow within the same kin and ethnic circles. These entire strong tie tendencies help the *Gurages* to perform better than entrepreneurs of other ethnic groups who do have fewer kin and less ethnic ties.

In addition to ethnicity, religious affiliation is among the criteria for selecting members into one's PN. Though religious belief is considered at the individual level, it is fundamentally a social phenomenon (Cheadle and Schwadel, 2012). Social scientists have recognized that religion is not only a social function but it is also a socially produced and reinforced experience. Religion is indeed an important condition in forming relations between individuals (Cheadle and Schwadel, 2012). Interaction in groups creates and strengthens religion by fostering solidarity through the fabric of shared symbols. Religion is a basis for networking of people and is source of social support that leads to network homophily (McPherson et al., 2001).

Religious connections enhance network formation because religious institutions offer opportunities for social interaction between people, fostering friendships, and social ties (Hopkins, 2011). Religious links also encourage both regular contact and supportive behavior. Frequent contact with individuals similar to each other can enhance an individual's access to resources that promote enterprise start-up and performance. Previous studies, for example, Cheadle and Schwadel (2012) found that people prefer friends with religious beliefs similar to their own.

Religion homophily of street vendors is the most prominent of all socioeconomic and demographic characteristics. The mean religion homophily index is found to be -0.73 (see Table 17). Likewise, on average, about 68 percent of street vendors' PN is made up of persons from the same religion. Only 32 percent of alters are external to street vendors' religious affiliation. The mean religion heterogeneity index is zero which is indicative of the situation that all the contacts of egos are of the same religion. About 56 percent of

street vendors network is composed of alters who are Orthodox Christians. The Muslims and Protestants account for 33 percent and 11 percent respectively (see Appendix VI).

Studies have shown that networks characterized by religious homophily tend to provide more support than networks demonstrating religious diversity (Ellison et al., 2001). Street vendors embedded in such homogenous religious networks could have obtained more social support than others. In homogenous religion relationships, network members feel that their own support contributions are investments into an account from which they can draw in the future (Ellison and Sherkat, 1995). As such, as argued by Wellman (1992), religious homophily strengthens the tie between street vendors and their alters and this sense of connectedness is conducive to get support for their enterprises. Ties between people with the same religion are more likely to give emergency help, loaning money, and giving advice and counseling (McPherson et al., 2001).

Regarding religion homogeneity and social support, interviewee P5, male, 35 years of old, ethnically *Amhara*, and engaged in selling fruits and vegetable, reports that:

Religion is a very binding element in PNs. It helps street vendors to get easy access to credit, social support, and customers. For example, you can get many people in houses of worship and you can pray together either on daily or weekly basis. This gives a good platform to know people and discuss important life issues. In the Ethiopian situation, Muslims help each other better than other religious groups. In fact, most individuals engaged in commerce and trades are Muslims. Most of the Muslims are wholesalers and those street vendors, who are Muslims, can get easy access to commodities on loan from the Muslim wholesalers. For instance, I have Muslim friends who get help from Muslim wholesalers and they are doing well in the street business.

Though, same-religion networking is a normal phenomenon, religion homogeneity is one of the highest among street vendors' PNs (see Table 17). In Ethiopia, this high level of religion homophily displays both advantages and limitations. On one hand, religious homophily plays a unifying role among diverse ethnic communities and encourages business cooperation. It also serves as a source of social cohesion and support for the poor. In contrast, religious homogeneity has been claimed to be a source of interreligious

rivalries, contempt, and mistrust (Karbo, 2013). Now days, there is a rise of conflict among religious groups in Ethiopia. It has been common to find movements among the followers of major religious traditions who mobilize their believers in the name of preserving from perceived threat to their religion (Karbo, 2013). This is also reflected in street businesses. This religious conflict is in fact, partly the result of the involvement of the Ethiopian government in religious matters.

Religious homophily has a segregating effect on a given community. Regarding the negative effect of religion homogeneity, interviewee P6 has the following to say:

In previous times, religion was not a subject that divides people from each other in their day -to- day life and in business pursuits. I am Orthodox Christian and I had friends who are Muslims. When the Muslims celebrate their religious holidays, we Christians were celebrating together; we eat food and chat together. The same was true when we Christians celebrate our religious holidays. But since the current government took office, religious fissures started due to the government's intrusion in spiritual matters. The government has prompted and indirectly incited hostile attitudes against each religion through the government controlled media. This has created suspicion among religious groups and forced people to go for religious rivalries and conflicts. This tendency has led the people to associate with persons of the same religion, which is also reflected in street businesses. Hence, unless they have no option, Muslims prefer Muslims and Christians dwell with Christians in their business networks.

### **5.2.2. Sex, Marital Status, and Age Composition**

Since PNs are usually about social interaction and the location of individuals relative to each other, they are also always related to gender. In fact, gender is an important organizing factor in social life. It shapes the patterns of social interaction (Hanson and Blake, 2009). As regards gender, while men account for about 69 percent of respondents' network, women account only 31 percent (see Appendix VI). The composition of street vendors' PNs also shows gender homophily. As shown in Table 17, the mean gender homophily index is found to be -0.17. Besides, mean gender heterogeneity index is found to be 0.24. This implies that egos' alters are gender heterogeneous only by 24 percent.

There are gender differences in sex preference of PNs (see the discussion of gender and PNs in chapter 6).

Distinct from religion, ethnic, and gender characteristics, the composition of street vendors' PNs is heterophilous as regards age, marital status, education, and income. Age and marital status are closely related aspects of one's life course. While age is the gradual component, marital status is the transitional component of the life course (Kalmijn and Vermunt, 2007). Age and marital status play a key role in shaping the network patterns of individuals. For instance, Fischer (1982) found that married respondents more often named married associates, never married frequently named the never married, and that the divorced often named the divorced.

The results of this study shows that about 58 percent and 41 percent of respondents network is made of alters who are married and single respectively (see Appendix VI). The mean marital status homophily is found to be positive, i.e., 0.12 (Table 17). This indicates that street vendors are yet homophilous concerning marital status. But as the result is positive, they are more or less heterophilous compared to religion, gender, and ethnic characteristics. On average, 28 percent of respondents exhibit contacts of same marital status. While married respondents frequently named married contacts, the never married respondents named both married and never married alters more or less equally. For married respondents, about 62 percent of their contacts are married and the rest 38 percent are single. But for never married respondents, 50 percent of their associates are unmarried and 47 percent are married.

The unmarried vendors frequently mention married alters. This is probably because most of the never married respondents are young and these people need help from older relatives and friends. The older the age of an individual, the more likely he/she would be engaged into marriage relationships. Additionally, never married vendors can get better

business ideas and guidance from married and matured individuals and hence the never married establish more connects with married associates compared to the married vendors mentioning unmarried ones. The mean marital status diversity is 0.15. This means that 15 percent of respondents' network members are heterogeneous by marital status. This in turn confirms the fact that egos' alters are homogenous as regards marital status.

Networks on the basis of marital status homogeneity may exist due to a number of reasons. As argued by Kalmijn and Flap (2001) one probable cause is that the contexts, such as institutional membership, in which people get together may be segregated by marital status and age. In Ethiopia, for example, local institutions such as *Iddir*<sup>21</sup> and *Mahber*<sup>22</sup> are mostly focused on specific age and marital status groups. Asked about local institutions and the involvement of street entrepreneurs in these institutions, interviewee P3, male, 50 years old, and ethnically *Amhara*, stated that:

There are a variety of local institutions which provide different services for their members. Mention can be made of *Iddir*, *Equb*, *Mahber*, and a variety of religious associations. Some of these institutions are ethnic based, some are religion based, and some others are age based. These institutions provide social cohesion and are sources of social support for the poor. For example, as street vendors are in short of working capital, they prefer to be a member of *Equb* because being a member of *Equb*, they can get working capital for their business. Indeed, there are some differences in age composition of members of these institutions. The youth are greatly involved in *Equb*, whereas the old and married are mostly involved in *Iddir*, *Mahber*, and other religious associations. This does not mean that the old people are not involved in *Equb*. But in terms of the degree of participation, the youth are more involved in *Equb* than *Mahber* and *Iddir* because of the capital need.

The second probable cause is that vendors may have a preference for interacting with others in the same marital status group. Vendors who are in the same marital status category may better understand each other and share information for their businesses.

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<sup>21</sup> *Iddir* is an informal institution established voluntarily by members of a neighborhood community and is involved in self-help activities. The primary objective of *Iddir* is providing mutual aid in burial issues. These days, *iddir* is also involved in local level community development programs (Pankhurst and Mariam, 2000)

<sup>22</sup> *Mahber* is voluntary and mutual aid community (religious) associations peculiar to Orthodox religion followers. The members gather together at church or in one of the member's house so as to pray together to get blessing from God and saint and discuss their problems and further share information (Dercon et.al, 2005).



Third, marital status homogeneity may occur because people influence each other's life course decisions. For example, if an ego's alter gets married, this may expedite his/her contact's decision to get married thereby increasing the degree of marital status homogeneity (Kalmijn and Vermunt, 2007). Coming to age, the mean age of alters in street vendors network is found to be 34 years. The mean age homophily is 0.86. This implies that street vendors' contacts are heterophilous in terms of age composition.

### **5.2.3. Education, Occupation, and Income Composition**

Education, occupation, and income are the three closely related characteristics in one's PN configuration. As regards education, on average, 16 percent of alters do have same educational level as egos. About 29 percent of street vendors networks are made up of individuals who are illiterate, and 39 percent is made up of those who have attended primary education. The mean education homophily is 0.52. The education homophily index is positive and indicates the existence of heterophily between respondents and alters. This means that about 52 percent of respondents' PNs are heterophilous on education. Looking at education diversity, the mean diversity index is 0.28. This result reveals that, on average, respondents' contacts showed about 28 percent of educational diversity. From this result we can understand that the educational level of alters in respondents PN is more or less homogenous.

A look at the income composition of alters in the street vendors' network shows a very low mean homophily index of 0.89 indicating that street vendors' networks are heterophilous in terms of earning powers. Compared to all other homophily indices (sex, ethnicity, marital status, religion, and education) income homophily is one of the smallest indicating that street vendors are connected to persons of diverse income groups with a standard deviation of ETB 752.00. Theoretically, it is assumed that individuals from relatively similar economic and social categories establish PNs (McPherson et al., 2001).

But this assumption does not hold true for street vendors in Addis Ababa. While the mean monthly income of egos is ETB 764.00, the mean monthly income of alters is ETB 1655.00. This shows that since street vendors are poor in their economic standing, they established networks with people who earn better income than themselves to obtain the necessary financial and material support for their businesses.

An examination of network composition by occupation reveals that alters' occupations are mostly represented by microenterprises (56 percent), private sector employees (13 percent), government employees (12 percent), medium and large scale enterprise owners (9 percent), daily laborers (6 percent) and unemployed persons (3 percent). There are also retired persons (1 percent). The majority respondents exhibit contacts with people of same occupational positions, i.e., with those engaged in micro businesses (see Appendix VI). The mean occupational diversity index is 0.36 meaning that ego's alters are occupationally diverse by 36 percent. This indicates that alters are more or less homogenous in terms of occupational positions with a greater tendency to associate with persons engaged in microenterprises.

#### **5.2.4. Social Role, Level of Trust, and Time Spent in a Relation**

Another aspect of PNs that is of interest to network studies of social support is the presence of different kinds of social roles connecting egos and alters (Schweizer et al., 1998) The social role dimension refers to the closeness or the emotional intensity of a relationship. It is a best indicator of the concept of tie strength (Marsden and Campbell, 1984). While relatives and close friends are said to be strong ties, acquaintances or friends of friends, neighbors, and co-workers have been called weak ties (Granovetter, 1973). Kinship ties represent about 50 percent of street vendors' PNs and about 21 percent are made up of friendship ties. While acquaintances account 19 percent of street vendors PNs, co-workers account for about 8 percent. Neighbors (2 percent) are less significant

members of street vendors' core networks. Overall, about 71 percent of networks are based on strong ties. Bridging (weak) ties account only 29 percent of street vendors' network configuration (see Appendix VI).

The mean closeness diversity is 0.39 indicating that street vendors are homogenous in terms of alters' closeness with high propensity to associate with kinship and friendship ties. Granovetter (1973) argues those people who are weakly tied have better access to job information. Acquaintances, as compared to kinship and close friends, are more prone to move in different circles. Granovetter further claims that those having strong ties are more likely to have the greatest overlap in contact with those ones already known. In consequence, the information they receive is more likely to be redundant. As street vendors highly depend on strong ties, it is less likely to get the benefits from weak ties as claimed by Granovetter. However, strong bonds can lead to three advantages: trust among actors in a network, accomplishing tasks together, and sharing, getting, and offering help during calamity (Granovetter, 1973; 1983).

Despite the conventional wisdom that strong kinship networks are less evident in urban areas and are broken by urbanization process, the results of the study reveal that kinship networks are existent and working well in Addis Ababa. For the young, poor, and less educated street vendors, kinship and friendship solidarity is a crucial asset for their day-to-day business activities. This finding is consistent with other studies in developed countries. For example, Granovetter (1983), reviewing studies on the subject, shows that poor people rely more on strong ties than their rich counterparts. In his review of US based study, Jackson (2012) also noted that the likelihood of less educated people to use strong ties for job search is greater than the educated ones. Jackson further states that the structure of modern society is that the young, the less educated and the black Americans find it advantageous to maintain strong networks.

In the operation of the informal activity in Ethiopia, mainly strong kinship and friendship ties provide social resources such as advice, information, and financial support to street vendors. These resources serve as a social protection for the urban poor. In light of this, Gilchrist and Kyprianou (2011) argued that PNs formed through kinship and friendship ties exhibit 'resilience' capable of crossing physical distance from areas of origin and facilitating chain migration with previous immigrants providing information, financial, and other supports to new comers to the city. Indeed, street vendors use their strong kinship and ethnic bonds to come to Addis Ababa and start street businesses. This process has facilitated chain migration to Addis Ababa. Regarding kinship networks and chain migration, interviewee P3, has said the following:

I have a friend who is ethnically *Gurage*. We know each other for six year. He has been in Addis since 2005 and has been working in the streets for the last nine years. After he worked for three years, he brought his two young bothers aged 16 and 19. He brought them from the rural *Gurage* province to work with him in the street as he found out that street business is profitable. Now, all the three brothers are working together in the streets. They sell clothes, shoes, vegetables, and fruits. They have established good business networks of exchanging customers, money, and other necessary materials. As a result, they are making good amount of money. For this reason, they are planning to call their last two sisters to join them.

Reliance on kinship, ethnic, and religious networks show the degree of relations of trust among actors in the network. Trust is important for entrepreneurs because it speeds up decision making and conserves 'cognitive resources' (Uzzi, 1997). It is the main component in shaping dense networks consisting of kinship and friendship ties. Networks based on trust have been described as a glue that holds networks together (Davidsson and Honig, 2003). Welter and Smallbone (2006) found that successful entrepreneurs are more likely to be those who can build networks of trust, which assist them in creating legitimacy within the market. Likewise, Lyon (2000) found that trust is a necessary condition for the expansion of private microenterprises in conditions where actors cannot rely on formal

and legal institutions. A major factor enhancing the strength of SC, thus, consists of trust, which is often a result of obligations, threat of critics, and exchange (Urban, 2011).

In this study, to examine the level of trust that respondents have to their contacts, respondents were given a five scale level of trust ranging from strongly never trust (1) to strongly trust (5). Accordingly, on average, 59 percent and 26 percent of the respondents' PN is composed of alters whom they strongly trust and trust respectively (see Appendix VI). The mean level of trust score is found to be 4.45. This implies that street vendors' network is made up of alters whom they trust strongly. This is the reflection of the fact that street vendors depend on strong ties for their business activities. Besides, the simple correlation analysis shows the presence of positive association ( $r=0.24$ ,  $p<0.01$ ) between trust and strong ties.

Another measure of network composition is frequency of contact with strong ties believed to be more frequent than distant ones. Frequency of contact is used to understand patterns of interaction among individuals (Marsden and Campbell, 2012). It measures the amount of time devoted in a relationship. The more frequent the interaction, the closer and more cohesive are members in a network (Kebede and Butterfield, 2009). Granovetter (1973, 1983) notes that compared to weak ties, strong ties involve frequent contact, occurring at least twice a week. In theory, individuals having frequent contacts to others may have access to and able to call on the resources of the contacts needed for instrumental actions (Kapucu, 2005). The 'closeness' of relationship is the most commonly used indicator of tie strength (see Marsden and Campbell, 1984; Jack, 2005; Marsden and Campbell, 2012).

The results of the study show that 54 percent of contacts made by respondents are on daily basis, 13 percent are on bi-weekly basis, and 12 percent on a weekly basis (see Appendix VI). This indicates that respondents exhibit frequent contact with their networks

members characterizing the strong bond that exists between actors in the network. The correlation between contact frequency and strength of ties is positive ( $r=0.19$ ,  $p<0.05$ ). In sum, the largest the proportion of the kinship ties, the high level of personal trust, and the more frequent interaction shows the strong bonds established by respondents. Duration of acquaintance is another measure of intimacy in a relationship. In this regard, the mean year of ego-alter acquaintance is found to be 15 years.

As argued by Granovetter (1983), the persistent use of strong ties by the poor and those vulnerable groups in a society is a response to economic stresses. This is because the poor are vulnerable to shocks and having no alternatives. Migrants upon their arrival to Addis Ababa rely on their strong ties for their adjustment to the city and for further business activities. They depend on their kin and friends as well as same ethnic and religion lines to get material, financial, and information support to start street businesses and sustain their urban livelihoods. Despite such advantages of strong bonds, Granovetter (1983) suggests that the heavy dependence on strong ties has the impact of fragmenting communities of the poor into circled networks that have little or no connections between units. Persons who are isolated may lose the advantages that they can obtain from weak ties. He further claims that strong ties hinder enterprise performance because strong ties bring redundant information and lack of knowledge of opportunities.

Contrasting the merits of weak ties, Aldrich and Jack (2005) underline the importance of strong ties as a support mechanism chosen by entrepreneurs to obtain help to solve business problems. In many ways, the results of network research shows strong evidence that strong ties are vital resources for entrepreneurs (Aldrich et al., 1987). Findings by Jack (2005) reveals that strong ties are crucial for business activity and used extensively not only to provide knowledge and information but also to preserve, enlarge, and, augment business and personal status.

### 5.2.5. Composition by Composite Diversity

To examine the overall nature of diversity in street vendor's network, an average index measure was computed from the six categorical socio-demographic characteristics including the mean heterogeneity index of sex, religion, education, ethnicity, marital status, and occupation. The mean diversity index for the six variables is found to be 0.20. This implies street vendors' networks are less diverse. This finding is against a study by Marques (2012). In his on social networks, segregation and poverty in Sao Paulo, Marques found that that networks of poor individuals tend to be highly heterogeneous and to vary substantially according to size, diversity and sphere concentration of sociability, and localism (Marques, 2012).

### 5.2.6. Graphical Presentation of Selected Street Vendors' Network Composition<sup>23</sup>

In addition of the index and proportion measures, SNA uses graphical presentation of network data. Figures 6 and 7 below illustrate an example of the composition of PNs established by *Murida* and *Tamirat* respectively. The rectangular boxes in the figures indicate various characteristics of alters in the network and the circles indicate nodes (alters). The unidirectional lines that connect alters indicate that alters do know each other.

*Murida* is a woman entrepreneur (see Figure 6). She is 38 years old and illiterate. *Murida* is married. She is Muslim and ethnically *Gurage*. She earns an average monthly income of ETB 300.00 from street business. As shown in the figure, *Murida* has five alters namely *Yasin*, *Zeinu*, *Tesfa*, *Sofia*, and *Bedru*. About 80 percent of *Murida's* network members are men implying that *Murida* depends much on men in her business activities. Coming to religion, all of *Murida's* alters are Muslims with a mean religion homophily index of -1. This confirms the preceding findings that street vendors are characterized by

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<sup>23</sup> In order to keep privacy, respondents were asked to give pseudo names of themselves and their contacts at the time of interview. Thus names mentioned in here are pseudo names.

high degree of religious homophily. The same is true of ethnic networking. All of *Murida's* network members are *Gurages* with ethnic homophily index of -1.

*Murida* has a daily contact with 80 percent of her associates. Likewise, 80 percent of *Murida's* ego centre networks are composed of families and friends. This shows that *Murida* has strong tie orientation in her business activities. However, *Murida's* contacts are diversified in terms of income, educational background, and occupation. *Murida* has associates from diverse income categories.

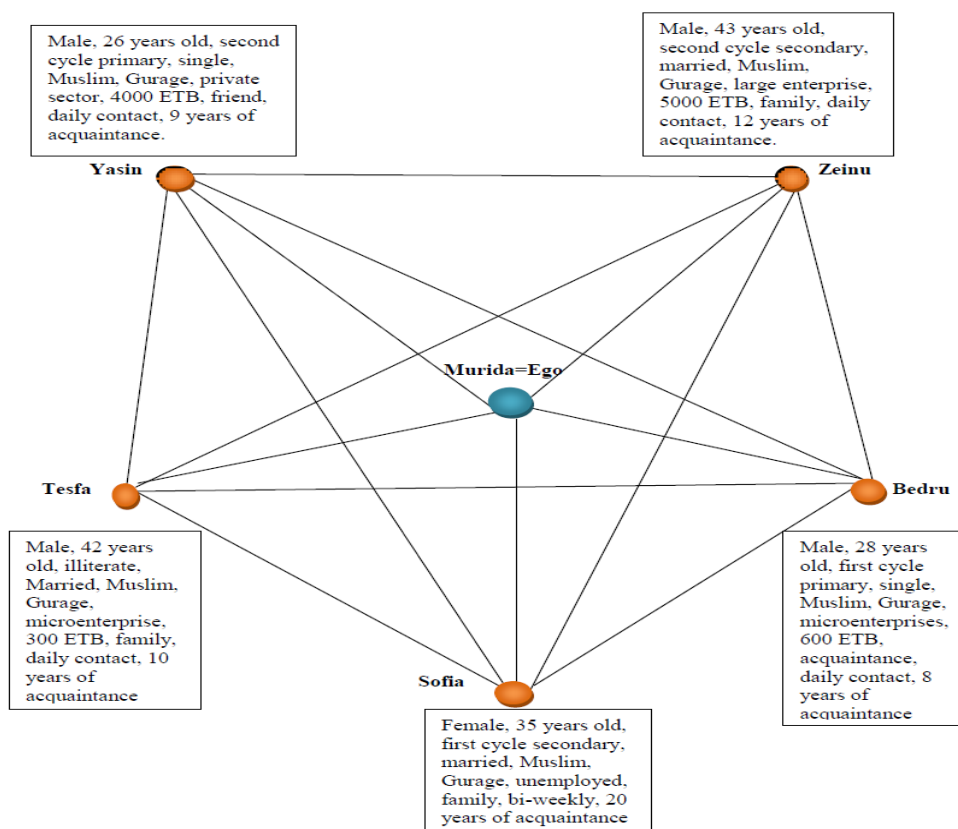


Figure 6: Personal networks of *Murida*

Source: Field survey, April-November 2013.

Figure 7 below shows the personal networks formed by *Tamirat*. *Tamirat* is a male street entrepreneur and he is 28 years old. He attended first cycle secondary school. He is married and is protestant in his religion. *Tamirat* is ethnically *Oromo* and he earns an average monthly income of ETB 800.00 from his street business. He is divorced and



engaged in lottery vending. *Tamirat* has five alters in his network. All of his alters are male implying *Tamirat* has high sex homogeneity with a homophily index of-1. About 80 percent of his alters are *Oromo*. Almost all of his alters are in the productive age group.

*Tamirat's* network composition concerning education shows that most of his contacts have either attended primary education or completed secondary school. Concerning income, his alters are of more or less in the same income group except *Gadisa* who earns ETB 2000.00 per month. About 80 percent of his ego network is made up of families and friends. Due to his strong bond nature of his network, *Tamirat* has daily contacts with 80 percent of his alters. In sum, the PNs of *Murida* and *Tamirat* show that street vendors greatly depend on strong ties for their microenterprise start up and growth.

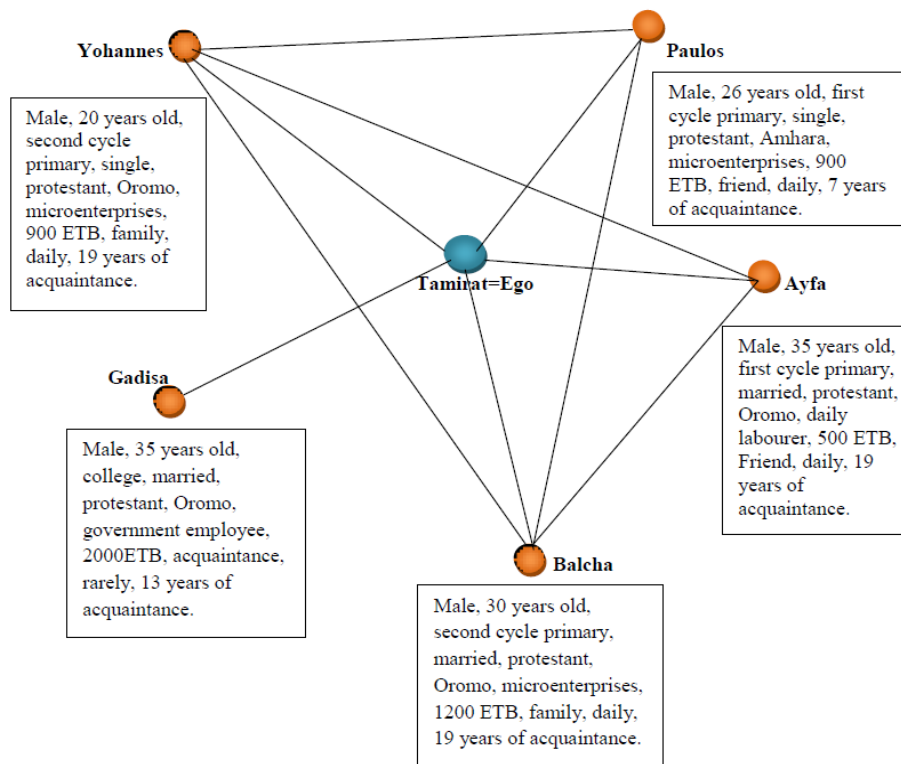


Figure 7: Personal networks of *Tamirat*

Source: Field survey, April-November 2013.

## 5.2. Street Vendors' Network Structure

In the previous section, the composition of respondents' PNs (types of people in the network) is discussed. The relationships between the actors in the PN, i.e., the pattern or structure of those relationships are not discussed. Indeed, two networks with the same PN composition in terms of the attributes of alters can have different network structures. Network structure matters more than the quality of individual attributes (Burt, 1992). As to Burt (1992), instead of the strength and content of ties, structure of a network impacts the creation of SC.

Burt (1992; 2000) argued that while the closed network structure is characterized by a network of strongly interconnected actors, the non-closed exists in a situation where people broker connections between disconnected networks. Burt (2000) claims that mediation of network brokerage is the source of new ideas and information, but closure can be critical to realizing the value hidden in bridging structural holes. As to Burt's argument, more constrained networks can have fewer brokerage opportunities and hence less SC. But for the closure argument, more constraint means more dense networks and more SC.

In this study, network structure data were collected through NG items. But it is not possible to retrieve network structure directly from NG questions. It, therefore, requires extra questions. In the survey questionnaire, items dealing with the relationships between alter mentioned were included. Respondents were requested to indicate whether the pairs of alters (1) are strangers, (2) know each other (3) are friends (4) are confidant and got along very well or (5) are family members. To enable the calculation of network structure measures, however, these values were dichotomized into (0) strangers and (1) know each other. The density and constraint measure then varies from 0 in networks in which alters

are unaware of one another to 1 when all pairs do know each other. The network structure indicators calculated are crude density, effective size, efficiency, and network constraint.

Table 18: Measures of network structure

S.No	Measure	Obs.	Mean Index	SD
1	Degree	154	3.09	1.15
2	Density	142	0.40	0.16
3	Effective size	142	1.48	0.71
4	Efficiency	142	0.48	0.22
5	Structural constraint	142	0.81	0.22

Source: Field Survey, April-November 2013.

### 5.2.1. Network Size and Density

The structural dimension of network size has been an important criterion of network structure and the entrepreneurship literature has shown that network size is positively related to enterprise performance (Burt, 1992). Many entrepreneurship studies have considered network size as an important structural element in PNs (Birley, 1985; Aldrich and Zimmer, 1986; Burt, 1992; Kristiansen, 2004). Increasing the number of contacts is helpful in the entrepreneurial process because it raises the probability that a specific resource can be reached (Kristiansen, 2004).

As shown in Table 18 above, from a maximum of five alters that respondents were allowed to mention, on average, they mentioned 3 alters with a standard deviation of 1.15. However, Burt (1992) claims that it is not simply the size of the network which leads to business success but the ability to broker connections. Burt (1992: 64) argued that “size is a mixed blessing” as bigger networks might not necessarily lead an entrepreneur to receive no-redundant information and thus he recommends using other measures such as density, effective size, efficiency, and network constraint.

Density is the ratio of the actual number of connections between alters mentioned in a network and the total number of connections that are possible within the network.

Network density represents group-level cohesion (Burt, 2000; 2005). When members of a group are connected by strong bonds, the group's overall network will be generally dense (Oh et al., 2006). As shown in Table 18, alters tend to be densely connected to each other with a mean density index of 0.40 and a standard deviation of 0.16. Since there are no similar studies in Ethiopia, it is difficult to evaluate if this figure is high or low. However, it is possible to compare this result with other studies in developed countries. For example, Marsden (1987), in his study of core discussion networks of Americans, found a network density of 0.61 and Fisher (1982) found a density score of 0.44.

Compared to the findings by Marsden (1987) and Fisher (1982), the result of this study shows that street vendors exhibit less dense network structure. Considering the indigenous ethnic groups of Ethiopia and the small size of networks mentioned (a maximum of five), however, the researcher believes that the density index of 0.40 shows a very dense network structure. In other words, from a maximum of density score of 0.50, in cases where all the five alters are interconnected, a density index of 0.40 characterizes a dense network structure. Such dense network structure of street vendors is partly attributed to the fact that the greater proportion of street vendors' network is composed of strong of kinship and friendship ties who know each other. The correlation between network density and proportion of family ties in PNs is positive and significant ( $r= 0.29$ ,  $p<0.01$ ). The stronger the ties in PNs is, the denser the network structure.

Scholars, e.g., Coleman, 1988, argue that dense networks enhance conformity and solidarity within a group. Group-level of closure increases the degree of trust, cooperation, and commitment thereby leading to greater knowledge sharing. An entrepreneur is more likely to obtain much social support if the network is dense (Marsden, 1987; 1988). Janssen and Koenig (2002) also found that high density networks result in faster acquisition of resources when compared to less dense networks. If the network is dense,

the contacts are able to know each other, they are likely to trust each other, able to share norms, and form a coalition that will enhance their capability for collective action (Aldrich and Zimmer, 1986). In contrast, excessive group cohesion may hinder knowledge accessibility. This is because the group's closure may reduce the opportunities to find new and diverse information outside a given group. A dense network structure shows that there are no possibilities that street vendors can get new information from unconnected parts of their networks (Burt, 1992).

### **5.2.2. Effective Size and Efficiency of Networks**

Other measures of network structure include the effective size and efficiency of the network. Effective size refers to the number of alters that ego has minus the average number of ties that each alter has to other alters (Burt, 1992). As shown in Table 18 above, the average network size of all the street vendors is 3 persons. But the average effective size is 1.48 with a standard deviation of 0.71. Here we can learn that from the average of 3 alters per street vendor, 1.52 of them bring redundant information to an ego. In other words, about 51 percent of street vendors' network is redundant. The low average effective size of street vendors is partly attributed to the fact that most of ego's contacts do know each other. In addition, street vendors are characterized by dense network of family and friendship ties. The dense network structure implies that alters bring redundant or similar information to an ego. This minimizes the effectiveness of the network size and hence small number of effective network size.

As to the claim of Burt (1992, 2000), the fourth measure of network structure is network efficiency. Efficiency is a function of effective size of ego's network and its actual size. It indicates what proportions of ego's ties to his/her alters are non-redundant. The efficiency of ego's network shows ego's total impact. It shows how much impact ego is obtaining for each unit of investment in time and energy in using his/her ties (Burt 1992,

2000). Indeed, an actor can be effective without being efficient and can be efficient without being effective (Burt, 2005). In this regard, the average efficiency index of street vendors is found to be 0.48. This means that about 48 percent of the network of the street vendors is efficient and the rest 52 percent is not efficient or is redundant indicating high degree of overlap between entrepreneurs' contacts.

People who are connected to each other tend to exhibit the same information and are, therefore, redundant (Jenssen and Greve, 2002). Entrepreneurs with low redundancy networks are more successful than entrepreneurs with high redundant networks (Burt, 1992). But a study by Jenssen and Greve (2002) shows that redundancy is beneficial in that entrepreneurs get information and support more easily if they have lots of ties with redundant relations. Despite such debates, street vendors are characterized by less effective and less efficient network structure.

### **5.2.3. Network Constraint**

Network constraint is the fifth measure of network structure. It measures the extent to which a network is directly or indirectly concentrated in a single alter. If all contacts of an ego are connected to each other, then the ego is highly constrained (Burt, 2004). Constraint varies with the three measures of network structure namely size, density, and hierarchy. For instance, constraint is low in large networks having disconnected contacts but high in a small numbers of contacts that are close to one another (dense networks), or strongly tied to one core contact (see Burt, 1992; 2000; 2004). The analysis of network data shows that structural constraint is very high among street vendors. The mean structural constraint is found to be 0.81(81 percent) with a standard deviation of 0.22 (22 percent). This means that 81 percent of street vendors' network is constrained by redundant information. The non-redundant part of street vendors network account for only

19 percent of the total network. This is a disadvantage for street vendors as they cannot get new information from new contacts (Burt, 1992; 2000; 2004).

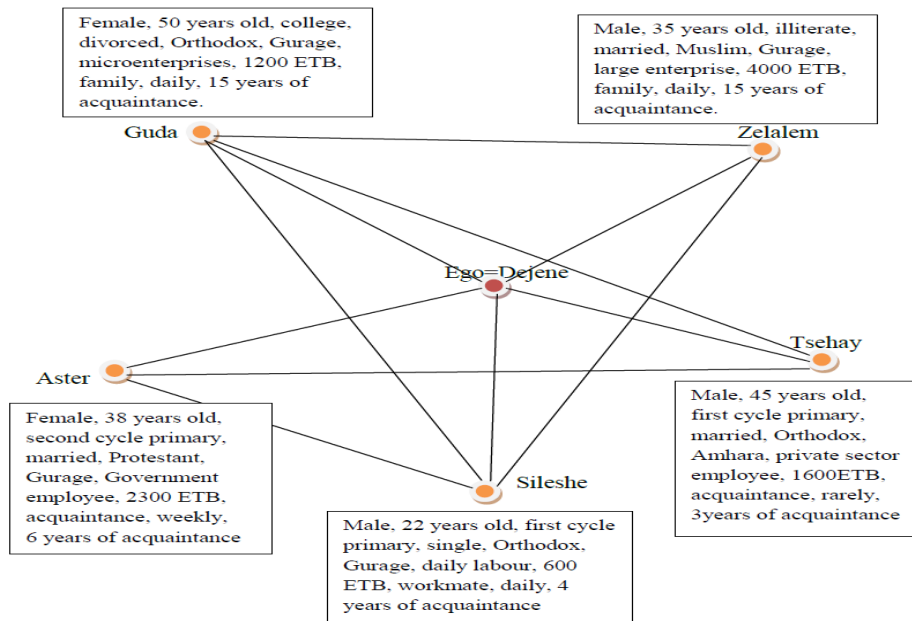
Generally, street vendors are characterized by densely interconnected and highly constrained network structure. This is a typical feature of strong ties. If network closure is the source of SC, street vendors do possess large volumes of SC and then enterprise performance will have direct association with constraint. But if network brokerage is the source of SC, street entrepreneurs exhibit less SC.

#### **5.2.4. Graphical Presentation of Selected Street Vendors' Network Structure**

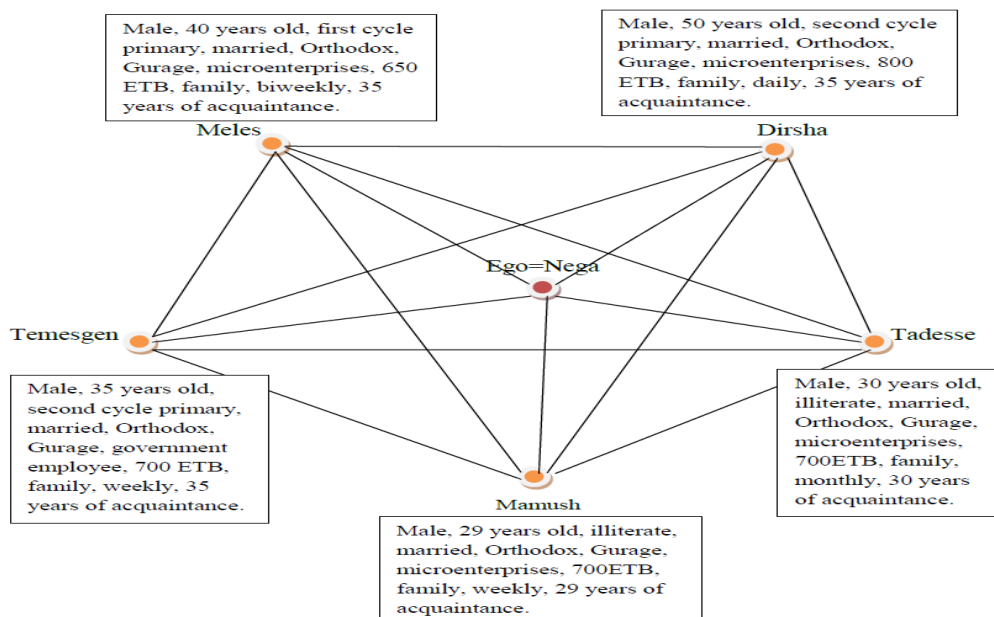
To clearly demonstrate measures of network structure and their linkage, this section shows the graphical presentation of selected street vendors' network structure. Figure 8 a, b, c, and d show the structure of networks created by four street vendors namely *Dejene*, *Nega*, *Alemayehu*, and *Worknesh*. The first three respondents exhibit equal network size of five but different levels of density, effective size, efficiency, and constraint. This is attributed to the level of connections that varies among alters of each respondent. The fourth street vendor does have three alters but all alters are connected and it does have similar characteristics with the second street vendor (see figure 8 b).

If we look the network structure of Figures 8 (a, b, c, d), as all the five alters are connected to each other, *Nega* has a very dense network with a density index of 0.50 followed by *Dejene* (0.30) and *Alemayehu* (0.05). Although the network size of *Worknesh* is three, the density of network is equal to *Nega*, i.e., 0.50. When we a look at *Alemayehu's* network, it is only two of his alters who know each other. Accordingly, *Aemayehu* has less dense networks than *Nega* and *Dejene*. When we observe effective size, *Nega* has ties to five alters and that all of these alters have connections to each other. Hence the effective size of *Nega's* network is 1. *Nega* can reach all five alters by reaching any one of them. The rest four are redundant ties. In addition, *Worknesh* has three contacts and all of her

contacts do know each other and thus the effective size is 1. In contrast, a look at the networks of *Alemayehu* in Figure 8(c) shows that *Alemayehu* has ties to 5 alters but only two of his contacts know each other. Accordingly, the effective network size of *Alemayehu* is 4.6. This indicates that *Alemayehu*'s network structure is more effective than the one possessed by *Nega* and *Worknesh*.

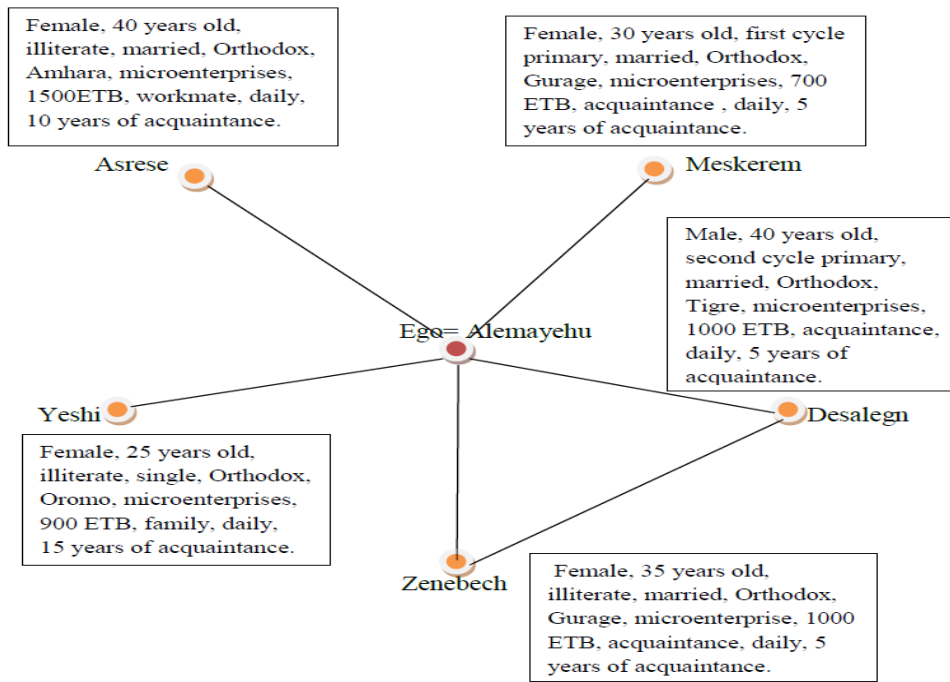


(a)

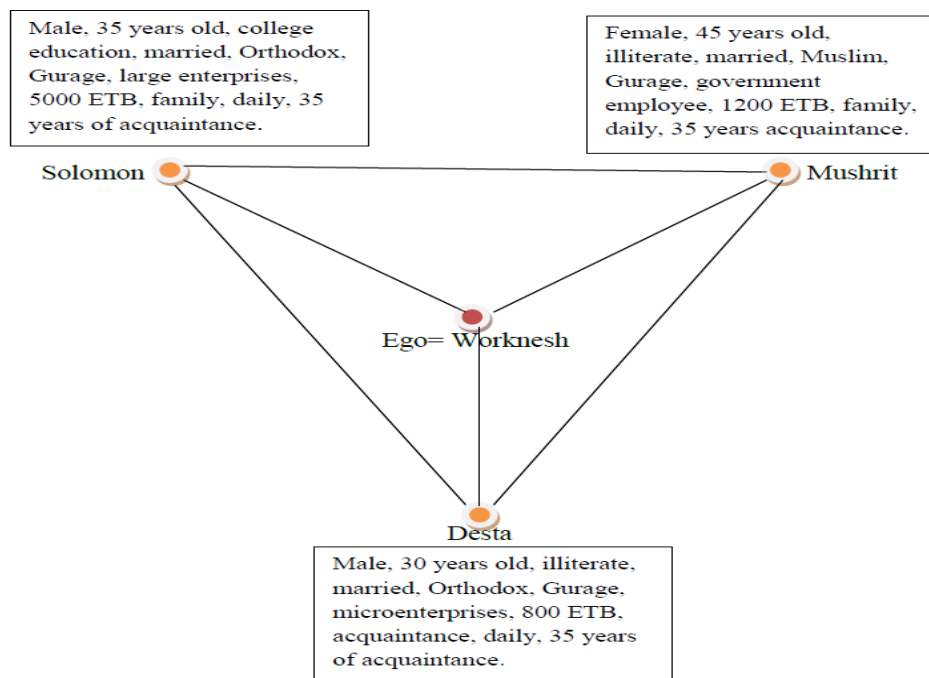


(b)





(c)



(d)

Figure 8: Personal network structures of selected street vendors

Source: Field Survey, April-November 2013.

When we come to the discussion of network efficiency, a look at the PNs of *Alemayehu*, *Dejene*, *Nega* and *Worknesh* shows that *Alemayehu* has more efficient

networks than *Dejene*, *Worknesh*, and *Nega*. While the mean network efficiency index of *Alemayehu* is 0.92, it is 0.52, 0.33, and 0.20 for *Dejene*, *Worknesh*, and *Nega* respectively. In other words, the PN of *Alemayehu* is efficient by 92 percent than *Dejene* (52 percent), *Worknesh* (33 percent) and *Nega* (20 percent). *Nega* and *Worknesh* have the same density and effective size but different efficiency. *Worknesh's* network is relatively efficient than the network of *Nega*. This is because as *Worknesh* exhibit small network size, she can efficiently mobilize resources from her alters than *Nega* does.

An examination of *Alemayehu's*, *Dejene's*, *Worknesh's*, and *Nega's* network configuration shows different levels of constraint. Except *Worknesh*, the three respondents possess equal network size. But they display different levels of network density and different levels of constraint. The denser the network is, the more the constraint and vice versa. For instance, *Nega* has a dense network structure of (0.50) compared to *Dejene* (0.30) and *Alemayehu* (0.05). As a result, while the network constraint of *Nega* is 0.65 (65 percent), it is 0.59 (59 percent) for *Dejene* and 0.30 (30 percent) for *Alemayehu*. *Nega* is more constrained than *Dejene* and *Alemayehu*. *Nega* and *Worknesh* do have the same level of density (0.50) and the same effective size (1.00). But when it comes to constraint, *Worknesh*, who exhibit a constraint index of 0.93, is more constrained than *Nega* (0.65). This is because since *Nega* has five alters, network density is distributed across the five alters but *Worknesh* has three alters and density is distributed to only three contacts. Here we can understand that egos having the same network density but with different network size can display different level of constraint. In sum, owing to variations in connections between actors different network structures have been established by street vendors. This might have its own repercussions of enterprise outcomes. The following section gives the overall shapes of network structures observed in street vendors PNs.

### 5.2.5. Shapes of Street Vendors' Personal Networks

After closely checking the network structure of the 154 respondents, the researcher has identified eight types of network structures which represents for about 95 percent of the samples. The majority of street vendors, i.e., 64 percent display a closed network structures. This gives a general picture of the dense ad closed network structure of street vendors as discussed in the previous section. About 26 percent of the street vendors exhibit semi-closed network structure. The rest 10 percent of the respondents demonstrate open network structure. Table 19 below shows the percentage distribution of network structures for the whole sample.

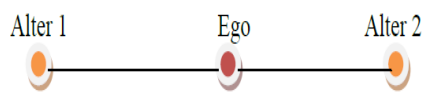
Table 19: Percentage distribution of types of network structure, N=142

Network Size	Closed	Semi-Closed	Open	Total
2	31(21.83)	-	7(4.92)	38(26.76)
3	26(18.30)	20(14.08)	2(1.41)	48(33.80)
4	19(13.38)	12(8.45)	4(2.82)	35(26.65)
5	15(10.56)	5(3.52)	1(0.70)	21(14.79)
Total	91(64.00)	37(26.05)	14(9.86)	142(100.00)

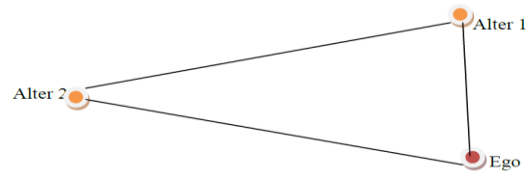
NB: Figures in parentheses are percentages

Source: Field Survey, April-November 2013.

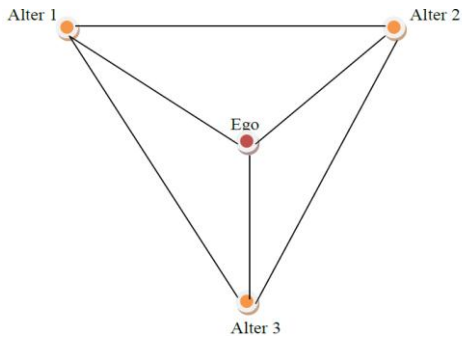
The eight network graphs presented in Figure 9 below show the types of network structures that characterize the nature of street vendors' networks. About 95 percent of the street vendors network configuration lies in these eight types of network structures. Middle sized networks, i.e., those with network sizes of three and four are equally distributed between closed and semi-closed network structure. But the two extremes, i.e., those having the larger network size of five and the smaller network size of two are highly concentrated on the closed type network structure. It is also possible to observe that the smaller the network size, the more closed the network structure is.



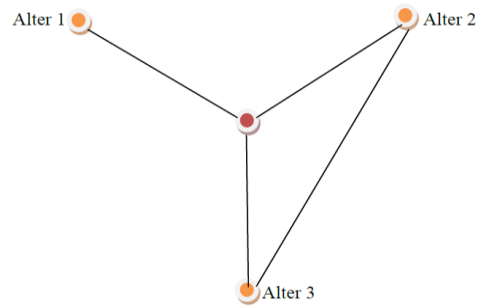
a) Linear structure (5 %)



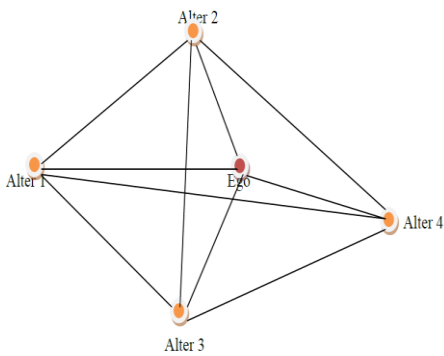
b) Triangular structure (22%)



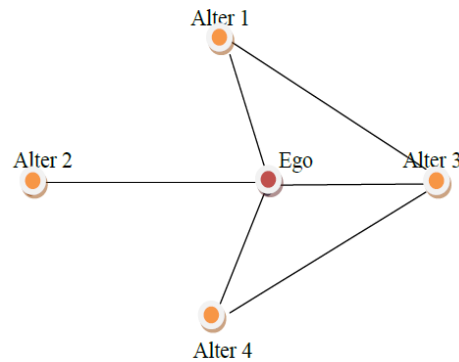
(c) Funnel shaped structure (18%)



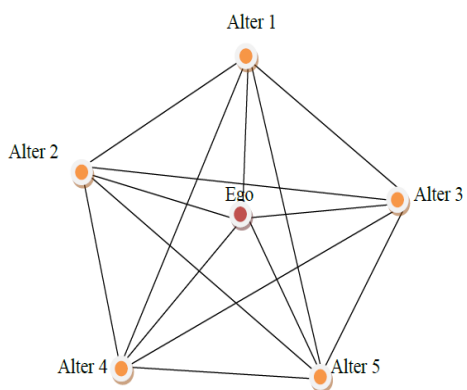
(d) Semi-funnel shaped structure (14% )



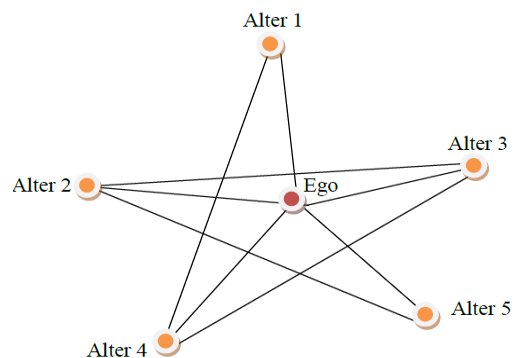
e) Closed rectangular structure (13%)



f) Semi-closed rectangular structure (8%)



g) Closed star network (11%)



h) Semi-closed star network (4%)

Figure 9: The eight identified shapes of respondents' personal networks

Source: Field Survey, April-November 2013.

### **5.3. Access to Network Resources**

Lin (1999a) has made a distinction between contact and network resources. While contact resources refer to contacts used as assistants in instrumental actions, network resources represent accessible resources that can be mobilized for some actions. In the above two sections, the composition and structure of street vendors network configuration is presented using the data collected through NG items concerning street vendors' contact resources. This section presents the results of data collected through PG survey. The distribution of PG responses is shown in Table 20 below. The shaded occupations in the table are those which have got the highest response rate by the respondents.

As shown in Table 20 below, given the 40 occupations, to the average 33 percent of the respondents stated they know at least one alter in any of the three types of relationships. The occupations which get greater than 50 percent responses in descending order are petty traders, farmers, business persons, drivers, teachers, daily labourers, police, waiters, brokers, security, and cleaners. These are low prestige occupations compared to others. In contrast, occupations of high prestige scale have got low responses. These occupations include engineers, accountants, bank managers, university professors, information technologist, artists, company director, policy advisors, and higher level civil servants. All these occupations have got responses of less than 10 percent.

Table 20: Position generator items, occupational prestige, and item responses

S.No.	<i>Do you know anyone who is a/an</i>	ISEI <sup>24</sup>	% yes	Relationship if “yes” (%) <sup>25</sup>		
				Family	Friend	Acq.
1.	Medical Doctor	88	26	29	17	63
2.	Lawyer	85	18	32	18	50
3.	University Professor	77	7	27	36	73
4.	Engineer	73	8	69	15	15
5.	Information Technologist	70	6	0	20	80
6.	Policy Maker/Advisor	70	3	20	0	80
7.	Accountant	69	8	8	50	42
8.	Bank Manager	69	8	33	17	50
9.	Company Director	69	4	33	17	33
10.	Teacher (Primary and Secondary)	66	71	31	25	54
11.	Artist/Musician/Writer/Choreographer	64	4	0	50	67
12.	Higher Civil Servant	61	2	33	33	33
13.	Mechanic	59	20	42	19	39
14.	Broker, Business and Employment Agent	55	58	8	14	80
15.	Sport Person (Athlete and Footballer)	54	15	26	52	30
16.	Secretary	53	18	21	21	61
17.	Bankers(Casher, Teller)	53	18	29	29	61
18.	Business Person/wholesalers	51	81	31	51	66
19.	Police	50	62	15	16	70
20.	Technician	49	23	9	31	60
21.	Sales Person	43	32	10	52	46
22.	Security Guard	40	55	19	24	58
23.	Soldier	40	30	35	26	46
24.	Nurse and Midwifery	38	27	24	33	52
25.	Electrician	38	21	22	28	50
26.	Waiters and Bartender	34	60	16	29	58
27.	Metal/Wood Worker	34	20	26	6	68
28.	Tourist Guide/Tour Operator	34	6	20	40	30
29.	Plumber, Pipe Fitter, and Painter	33	22	9	32	62
30.	Driver(Bus, Taxi, Heavy Truck)	30	74	25	20	51
31.	Cleaner/ House Keeping	30	53	23	20	60
32.	Cook	30	35	24	28	50
33.	Petty Traders <sup>26</sup>	29	86	29	53	54
34.	Hairdresser, Barber, and Beautician	29	44	10	18	74
35.	Messenger	25	31	30	30	40
36.	Foreman	25	7	27	27	45
37.	Farmer	23	82	87	16	15
38.	Unskilled Daily Laborers	23	63	35	29	47
39.	Construction Worker	23	40	21	21	60
40.	Housemaid	16	58	46	24	86
	Average	<b>48</b>	<b>33</b>	<b>26</b>	<b>27</b>	<b>54</b>

Source: Field Survey, April-November 2013.

<sup>24</sup> International socioeconomic index measures

<sup>25</sup> The sum of responses for the three relationships might be > 100% due to the presence of double responses.

<sup>26</sup> Includes the street vendors, hawker, lottery and news vendor, and shoe shiners, etc

As shown in Table 20 above, access to petty trade takes the lead in respondents' network composition. About 86 percent of respondents reported that they know a petty trader. This is perhaps because street vendors are engaged in petty activities and it is easy for them to know people who are engaged in the petty trade. This shows the tendency of forming occupational homophilous networks. Next to petty trade, the occupation which has got largest response is farming. About 82 percent of the respondents know a farmer. This is so because most of the street vendors are migrants from rural areas and they do have parents and relatives who are farmers. Large business owners and wholesalers are rated in the third place and this is attributed to the fact that street vendors obtain their products from the wholesalers.

Drivers and teachers respectively have got the fourth and fifth position in the rating of street vendors'. In their day-to-day activities, street vendors travel from place to place to purchase and also sell their commodities as a result they can easily access drivers. Likewise, teachers do have contacts with students and students' parents. This makes teachers to be easily accessed by street vendors. Though the socioeconomic index of teachers is high, in the Ethiopian context, they form the poorest segment of the society and they can easily integrate themselves into the fabric of the Ethiopian society.

On average 26 percent of the occupations are accessed through family members, 27 percent through friends, and 54 percent through acquaintances. Acquaintances are the source of access to almost all occupations. In other words, on average acquaintances gave access to more varied occupations than family and friendship relationships. This means that the weaker the tie, i.e., acquaintance, the lesser the probability that alters can give access to resources to an ego. As discussed in the above sections, street vendors highly depend on their strong ties. Kinship and family bonds have been used as contact resources

for the various activities of enterprises. But as to accessible resources, they greatly depend on more on acquaintances than kinship and friendship ties.

Researchers have used various indicators to measure network resources accessed by individuals. These measures are derived from position generator data (Van der Gaag, 2005). Highest accessed prestige, extensity of network positions, SC volume, and average accessed prestige are among the indicators commonly used by scholars in the field to measure network resources accessed by individuals. These indicators measure the amount of accessible resources that can be utilized by an ego in the future but not the resources that are actually mobilized. Table 21 below shows the distribution of position generator measures.

Table 21: Means and standard deviations of position generator measures

S.No	Measures	Mean	SD
1	Highest accessed prestige (upper reachability)	70.19	14.80
2	Resource heterogeneity(range in accessed prestige)	50.78	16.00
3	Number of accessed occupations(extensity of network positions)	13.10	5.42
4	SC volume (total accessed prestige)	527.07	250.68
5	Average accessed prestige	39.38	4.76

Source: Field Survey, April-November 2013.

As shown in Table 21, street entrepreneurs do have an average highest accessed prestige index of 70 out of the highest prestige index of 88 in the list of occupations. In a list of 40 occupations, the average range in occupational prestige is 72. But the average range in accessed prestige for street vendors is 51. This shows that street vendors are characterized by more or less low level of resource heterogeneity (range in accessed prestige) access compared to what is expected. Similarly, out of a list of 40 occupations, on average, street vendors were able to access only 13 occupations. This in turn means that they were able to access only 33 percent of the occupations listed.



As street vendors are poor, their accessible network resources are also characterized by low socioeconomic positions. Regarding occupational status, interviewee P4, female, 42 years old, *Oromo*, and engaged in selling coffee, tea, and fast foods says:

I sell tea, coffee, and fast foods on the streets. My customers are taxi drivers and their assistants, daily laborers. Also, lower status government and private sector employees such as guards, office boys, and construction workers are among my customers. My day-to-day contact is limited to house wives, home maids, and other minimum wage workers. I do not have any contact with people of higher occupational status. Just because I provide services on the streets, people of the higher social status do not consider my services as of good quality and thus they do not come to where I work. They prefer to go to hotels and restaurants. Even outside the business environment, people of higher socioeconomic positions prefer to associate themselves with people of the same socioeconomic profile. Due to this affiliation, I do not feel comfortable to associate myself with them too.

But interviewee P7, male, 30 years old, *Gurage*, and vends newspaper and books said:

I am a person who relies on vending newsletters and books. Using the income from my street business, I attended tertiary education in the evening program and obtained diploma in teaching from Kotebe College of Teacher Education. I circulate news papers and books in different corners of the city. I am working around the universities and cafeterias. In these places I get people of diverse occupational groups particularly university professors and students. My contact with these people helped me to pursue my education. I am happy with this business as it is good for me make money and get an exposure to people of diversified knowledge, fields of study, and socioeconomic status.

From the above interviews we can learn that though most street vendors associate with people of low socioeconomic positions, this situation depends on the type of activities that street vendors are engaged in and their place of operation.

Coming to the SC volume, out of the total 1902 prestige scores for the 40 occupations, on average, street vendors were able to secure only 527 scores accounting for only 28 percent of what is expected. Here we can understand that street vendors are able to access low amount of SC volume. Moreover, from the average accessed prestige of 48 for 40 occupations, on average, street vendors were able to access an average accessed prestige of 39. From the results of PG measures, we can learn that street vendors are characterized by limited access to high prestige positions, low resource heterogeneity, and low SC volume.

#### **5.4. Summary of Findings**

This chapter presents results on the composition and structure of street vendors' PNs. The data analysis addresses the structural component, the resource component, and the normative or relational component of PNs. The results demonstrate that homophily in religion and ethnicity forms the strongest divide in street vendors' network composition with sex and marital status following in roughly that order. But street vendors' networks are heterophilous regarding income, age, and occupation. Respondents also display strong kinship and friendship ties in their networks. This strong ties relationship of street vendors' PN is a reflection of the emotional and material support they obtained from their kin and friendship ties. In the words of Granovetter, street vendors' PNs are characterized by strong bonds.

There is a debate on the role of SC in urban areas. Some scholars, for example, (Schutte, 2004), claim that cities are culturally diverse and more socially fragmented than rural areas. As a result, community and kinship ties are weak. Moser (1998) also argues that social disintegration and community breakdown in urban areas could exacerbate the condition of the urban poor and increase their vulnerability. In contrast, others for example, Tacoli (1999) argue that SC in general and strong family bonds in particular are considered as vital resources for the urban poor. Despite such controversies, the findings of this study reveal that street vendors greatly depend on their strong ties for their day-to-day business activities. Strong and dense network structures help street vendors to withstand the ills of poverty by helping them establish street businesses. As such, the findings of this study refute the commonly held proposition that community and intra-household mechanisms of trust and cooperation are weakened by social and economic heterogeneity of urban areas.

Yet there is paradox as regards the essence of dense and strong ties. In terms of poverty alleviation, it is known that the poor call on close relations with family and friends as a form of social security (Woolcock, 1999). As stated by Woolcock (1999) the poor people typically have greater proportion of bonding SC and that SC obtained from families is used to ensure the poor against shocks and to pool resources for different activities. Strong bonds enable the poor to start-up microenterprises and earn income for livelihoods. However, many studies argue on the normative view of 'the social family' and display the constraining nature of strong and close social relationships (Clever, 2005). For instance, Beall (2001), reviewing the urban case studies from Africa and Latin America, not only explains the crucial role of kinship ties in livelihood strategies but also emphasizes the disadvantage that reliance on close family ties can produce.

Beall (2001) states that reliance on close family ties prevents people from networks outside of family that are important sources of information about jobs and services. It is argued that strong ties tend to produce small groups based on religion, ethnicity, sex, etc. that are tightly knit but isolated from each other. Cleaver (2005) also asserts that closed and strong ties are not utterly 'taken for granted' but constantly negotiated. They are rather formed and eroded over time by circumstances. The exchanges within the closed network strengthens group solidarity and enhance access to social and emotional support but not beneficial to enhanced business and social integration (Clever, 2005). In this case, unless street vendors attempt to integrate weak ties in their networks, they tend to simply continue the condition that makes them remain poor.

Coming to the structural component, street vendors are characterized by dense, less effective, and less efficient networks but they exhibit highly structural constrained network structures. More constrained network means that street vendors are unable to obtain non-redundant information from their contacts. But according to the closure argument dense

networks and high network constraint are sources of large volume of SC. As regards the position generator measures, street vendors do have high degree of association with people having lower occupational prestige. They do have easy access to petty traders, farmers, business persons, drivers, teachers, daily laborers, polices, waiters, brokers, security, and cleaners. But they demonstrate less access to occupations of higher prestige including engineers, accountants, bank mangers, university professors, information technologist, company director, policy advisors and higher level civil servants. This scenario is also testified by low access to high prestige positions, low resource heterogeneity, and low SC volume possessed by street vendors.

## Chapter 6

### Gender, Ethnicity, and Street Vendors' Personal Networks

#### 6.1. Introduction

Recently, a growing body of research have begun to study socioeconomic inequalities as a function of differential accumulation of SC (Smith, 2000). In fact, the formulation and conceptualization of SC has been dictated by reproduction of inequality (Pichler and Wallace, 2009). For instance, Bourdieu (1986) argued that SC exists in networks as a resource, build up over time, and transmitted to the next generation. Bourdieu (1986) boldly describes the association between SC and social class. His analysis was about the ways as to how the privileged classes retain and reproduce their social positions. Bourdieu claims that people from the upper classes in France use their economic, cultural, and social capital to maintain their positions and exclude those in the lower classes. Bourdieu's analysis of SC has given explanations as to how social inequality perpetuates owing to differential SC accumulation (Pichler and Wallace, 2009).

Following Bourdieu, Lin has extended the discussion on SC and social class (Pichler and Wallace, 2009). Lin (1999a) argues that SC is embedded in social structures which determine the resources available to a network. Networks embedded in the social structure control resources and this is especially the case of people who occupy higher positions. Lin argues that in the lower layers of the social hierarchy networks will be smaller, more dense, and more closed in character than the higher levels. In the traditional LDCs context, societies are not that much classified in terms class structure. Rather, they are divided into societies categorized by different ethnic and cultural settings and these differences are revealed in the nature of personal relationships (Bastani, 2007). Hence, in an attempt to deal with inequality in SC, this chapter reflects on variations between social groups categorized by gender and ethnic identity but not class structure in a real sense like the developed countries.

Like other forms of capital such as physical, financial, natural, and human, all social groups in a given community do not equally possess SC assets (Lin, 2000). The question to be raised here is why do social groups enjoy differential social capital? Lin (2000) provides two explanations for such differences. The first explanation is related to the situation that some groups stand at a disadvantaged position that makes them poor in SC accumulation. Owing to variations in the processes of institutional structure, each society provides asymmetrical opportunities to members of social groups defined over ethnicity, gender, religion, or other ascribed characteristics such as education, income, and occupation. The second explanation is related to the propensity of individuals to interact and share feelings with others having similar characteristics, i.e., homophily (Lin, 2000).

The two practices operating in combination produce differential access and use of SC across social groups (Lin, 2000). While some groups are prosperous in resources, some others remain poor. Those networks which are rich in resources are identified by richness in quantity and quality of resource heterogeneity (Lin, 1981; Lin and Dumin, 1986; Campbell et al., 1986; Lin, 2000). Persons who are members of resource-rich networks benefit from access to a wide range of information. In contrast, people who are affiliates of resource-poor networks obtain and share less diverse information and do have less influence on others. Consequently, a given social group reflects differences in network resources among members (Lin, 1981). Evidently, intergroup relations facilitate access to better resources and better outcomes for members of the less privileged ones. However, network homophily and structural constraint reduce the probability of establishing such ties for most of the disadvantaged groups (Lin, 2000).

Ethnicity, socio-cultural influences, and gender roles are some of the factors that influence the PN of entrepreneurs (Salaff et al., 2003). Indeed, it is useful to consider differences in network composition and structure among men and women and across

ethnic groups because these differences may relate to the material success of individuals (Lin, 2000). For instance, strong homophily and less diversity may weaken social mobility by preventing an individual from forming ties with those who have new information and resources (Lin, 1981). Those who exhibit network diversity may be able to connect structural holes (Burt, 1992) or make use of weak ties (Granovetter, 1973).

Previous studies have demonstrated variations in network composition and structure among various social groups. For example, Moore (1990) found that women's networks contain a higher proportion of kin than men's networks. Women's networks consist of people who know each other compared with men's networks. Accordingly, contacts in women's networks are more likely to provide redundant information than those in men's networks (Burt, 2004). Women are less able than men to benefit from weak ties which have the advantage of channeling diverse information to entrepreneurs than do strong ties (Burt, 1998). Men tend to have more sex homophilous networks than do women (Ibarra, 1992; McPherson et al., 2001). McPherson and Smith-Lovin (1982), in their study on sex differences in the size of voluntary organizations, discover differences between men and women in the size of the organizations they belong to. On the contrary, in their comparative analysis of PNs of small entrepreneurs in Malaysia, Surin et al. (2015) confirm that there is no significant difference in terms of network size, network activity, and network density between men and women.

Variation in SC is also apparent across different ethnic groups. For instance, Marsden (1988), using the 1985 general social survey data in the US, found that network diversity and size varies among ethnic groups. The findings reveal that diversity and size varies between Whites, Hispanics, and Blacks in that size and diversity declines from Whites to Hispanics and Blacks. He also found that while Whites had the largest networks of 3.1, the Blacks display the smallest mean size of 2.3 contacts. Kao and Joyner (2004), in

their study of interracial and interethnic friendship activities, also found that best friends are more likely to be from the same ethnic group. Valle et al., (2004) examine ethnic differences between Euro-American and Latinos in the use of PN for help with care giving tasks. The results reveal that Latino care givers reported less help-seeking than the Euro-American care givers did.

The literature supports the understanding that SC is differentially constructed across different social groups. But as contexts vary from place to place, this understanding should be examined in an Ethiopian informal economy context where SC plays a leading role in the day-to-day life of the poor street vendors. To develop a better understanding of whether PNs vary among street vendors, differences between men and women and among indigenous ethnic groups are examined considering network composition, network structure, and access to resources. This section, therefore, shows the results of gender and ethnic differences in street vendors' network configuration.

Recognising the significances of PNs to small entrepreneurs, it is hypothesized that entrepreneurial networking practices differ between gender and ethnic groups. Since gender and ethnicity reinforce some personal characteristics and penalizes others, one could expect some social groups to practice PNs differently than others(Urban, 2011). Considering the context in which Ethiopian street vendors operate under the stream of gender and ethnicity, it is likely to expect that the nature of network composition and structure to differ between gender and among ethnic groups. Knowing such differences will help to explain how street vendors react differently or similarly to networking phenomena (Urban, 2011).

The proposition is that there are differences in street vendors' network composition, network structure, and access to network resources across gender and among indigenous ethnic groups of Ethiopia. It is also hypothesized that women possess small



network size with more dense and constrained networks than men. Ethnically, the *Gurages* have large network size with more dense and constrained networks than the *Amharas* and the *Oromos*. Moreover, women and the *Gurages* are composed of high proportion of strong ties compared to men and the *Amharas* and the *Oromos* respectively. To test the hypotheses, parametric tests of ANOVA and Two-Sample T-test are used. While ANOVA is used to test the presence of PN variations among the three ethnic groups, Two Sample T-test is applied to examine the presence of differences in PNs between men and women. For such analysis, the core network data is used. Simple correlation analysis is also used to analyze relationships between variables.

This chapter is structured in such a way that following the introduction, section two deals with network composition by gender and ethnicity. Section three presents gender and ethnic group variations on network structure. Section four shows access to resources by gender and ethnic groups. Lastly, section five presents summary of the findings.

## **6.2. Gender, Ethnicity, and Network Composition**

### **6.2.1. Differences in Gender Composition**

Gender is an organizing factor in social life. Gender is the byproduct of social interaction and it also shapes the patterns of social relationships, i.e., with whom one interacts and the situations and processes of interaction (Hanson and Blake, 2009). Thus, examining street vendors' gender composition is of a paramount importance in SN studies. Table 22 and Table 23 below indicate gender and ethnic group differences in the homophily and heterogeneity of PNs. As shown in Table 22, both men and women frequently mention men network members in their core PNs. While the same-gender proportion of women is 0.36, men exhibit same-gender proportion of 0.58. Same-gender proportion shows significant variation between men and women ( $t=4.89$ ,  $p<0.01$ ). This shows that the largest share (64 percent) of women's network is composed of men.

Women display greater proportion of cross-gender ties than men. While women frequently mention men as their contacts, men rarely cite women in their networks. Similarly, the mean gender homophily index shows that men (-0.52) display more gender homophilous networks than women (0.26). Though men are gender homophilous than women, the two sexes display equal mean gender diversity index of 0.24 (see Table 23). This study is consistent with other similar studies. For instance, Bastani (2007), in his study of the SNs of Tehran society, found that men and women differ significantly with respect to gender composition. He reveals that men's networks contain higher percentage of male (64 percent) than women alters. In contrast, women comprise only 62 percent of women's PNs.

The results of the study show the presence of gender differences in gender homophily in that women prefer men than women contacts. As claimed by researchers, (e.g., Fiske et al., 2007), the tendency that women frequently name men than women is attributed to the social status difference between the two sexes. Men have enjoyed numerous advantages over women in their life chances. For example, men have higher occupational status, a higher rate of self-employment, and higher incomes whereas women are less privileged, less powerful, and are positioned in the low status cluster (Reskin, 1993). Even when women appear to be in higher positions, people yet recognize men as more resourceful because men are supposed to be more powerful than women (Fiske et al., 2007). Lin and Dumin (1986) also found that women can establish more contacts through men than women. For women, it is often crucial to form cross-gender networks to access job and to obtain other necessary supports for their day-to-day activities (Lin and Dumin, 1986).

Table 22: ANOVA and T-test results for same-proportion and homophily indices

No	Attribute	Mean scores of same proportion and homophily indices <sup>27</sup>						
		Gender		T	Ethnic Group			F
		Men	Women		Amhara	Gurage	Oromo	
1	Gender	0.58 (-0.52)	0.36 (0.26)	4.88***	0.55 (-0.28)	0.45 (-0.17)	0.41 (-0.05)	2.98*
2	Age	3.59 (0.89)	5.60 (0.81)	1.06	4.47 (0.85)	6.19 (0.83)	2.72 (0.91)	1.07
3	Education	0.14 (0.48)	0.19 (0.61)	1.33	0.17 (0.59)	0.17 (0.57)	0.16 (0.48)	0.04
4	Marital Status	0.29 (0.01)	0.27 (0.27)	0.47	0.31 (-0.03)	0.28 (0.20)	0.26 (0.19)	0.43
5	Religion	0.26 (-0.70)	0.40 (-0.74)	4.07***	0.33 (-0.74)	0.35 (-0.79)	0.30 (-0.64)	0.71
6	Ethnicity	0.44 (-0.31)	0.54 (-0.51)	2.14**	0.37 (0.01)	0.65 (-0.76)	0.44 (-0.28)	17.71** *
7	Income	3.39 (0.92)	5.60 (0.86)	1.06	1.76 (0.95)	7.56 (0.86)	3.97 (0.89)	3.17**

Note: \*\*\* P<0.01, \*\* P<0.05, \* P<0.10

Source: Field Survey, April-November 2013.

In the Ethiopian context, the tendency that women frequently mention men in their networks is a consequence of many probable reasons. First, women in Ethiopia hold the role of food processing, home-making, and taking care of children. Each of these roles imposes different demands and expectations on them. Women work all hours of a day and they lack appropriate infrastructures that help them to ease their household chores. Combined with lack of basic infrastructure and access to basic resources, these household duties and responsibilities leave women to be poor. Second, within household women in Ethiopia do not control the income they generate through their labor. Women work more hours a day than men but earn less. As such, women are more likely resource constrained or income poor than men. Third, though changes are being observed through time, women in Ethiopia do not have the freedom to spend their own income on their will because of the

<sup>27</sup> Figures in the parentheses are homophily indices. T –test results are for sameness proportion indices.

culture and patriarchal society that existed in Ethiopia. All these factors oblige women to be socially and economically dependent on men as their contacts.

Interviewee P2, who was asked to explain about the sex composition of street vendors, has the following to say:

My observation of street vendors' networking shows that while mostly women establish personal contacts with men, men prefer men as their contacts in their businesses. This is due to several reasons. It is known that street vending as an activity has many challenges. Being informal, street vendors are always under the threat of government security forces. The activity requires running fast from place to place escaping from police harassment and confiscation of their properties. When street vendors see the police are after them, they have to run away not to be caught. Under such circumstances, men assist women to run by helping them carrying their stuff. In addition, when women face problems in their business, they often share and discuss their troubles to men because men do have relatively better business skills and are socially and economically powerful than women. Even, naturally women need security in every sphere of their life and they attach themselves with men and consider men as their guards. In addition, the natural process of opposite sex preference makes women to connect themselves to men in their business activities.

Also, interviewee P3, asked about the sex composition of street vendors, has said:

There is high tendency of men-to-men networking among street vendors in particular and the Ethiopian community in general. In the household, women do have double responsibilities of earning income and taking care of household duties. They do not have enough time to go out for recreation and establish more contacts like men do. In addition, the culture in Ethiopia does not favor women to go out alone to cafeterias and restaurants. When a woman wants to go out for recreation, she has to be accompanied by man: husband or any male family member. On the other hand, men are free to go wherever they like. As a result, men go to hotels, restaurants, and cafeterias alone. Always, men get together with men, drink together, and chew *chat*<sup>28</sup> in groups. While drinking and chewing *chat*, they discuss business matters and other social issues. Thus, the greater majority of men's network is composed of men.

Analysis of gender homophily also shows variations among ethnic groups. The gender homophily index of respondents declines from -0.28 for the *Amharas* to -0.17 for

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<sup>28</sup> *Chat* is a mildly narcotic and a stimulant plant that has been chewed and enjoyed socially in Ethiopia in and in the Horn of African countries. Muslims in Ethiopia, in particular, hew chat to pray together.

the *Gurages* and -0.05 for the *Oromos*. The *Amharas* are more gender homophilous than the *Gurages* and the *Oromos*. Like gender homophily index, the same-gender proportion shows the same pattern. While the same-gender proportion of the *Amharas* is 0.55, it is 0.45 for the *Gurages* and 0.41 for the *Oromos*. The difference is statistically significant at  $F=2.98$ ,  $p<0.10$ . In contrast, as shown in Table 23, the mean gender diversity index shows opposite results. The *Gurages* display diverse gender networks (0.32) than the *Amharas* and the *Oromos* with diversity index of 0.19 each. This difference is found to be statistically significant ( $F=5.14$ ,  $p<0.05$ ).

The study reveals positive relationship ( $r=0.24$ ,  $p<0.01$ ) between education and same-gender composition. The more educated street vendors are, the more likely they display same-gender contacts and vice versa. As indicated in Table 22, men who are more educated than men exhibit more same-gender proportion (58 percent) than women who display same-gender proportion of 36 percent. In other words, as women are less educated, they tend to have less same-gender proportion than men who are more educated and characterized by high proportion of same-gender proportion. Being less educated, therefore, women usually traverse gender boundaries and establishes contacts with men to obtain the necessary social support. In fact, the cross-gender network tendency of women is attributed to the fact that in the Ethiopian society men are economically strong than women. Likewise, the correlation analysis between age and same-gender proportion indicates the presence of an inverse relationship ( $r=-0.27$ ,  $p<0.01$ ). The older the street vendors are, the less the same-gender proportion. This is perhaps because, as indicated in chapter four, women are older than men and at the same time women display low same-gender proportion than men.

Table 23: ANOVA and T-test results of heterogeneity indices

No	Attribute	Mean heterogeneity index						
		Gender			Ethnic Group			
		Men	Wome	T	Amhara	Gurage	Oromo	F
		n						
1	Sex	0.24	0.24	0.07	0.19	0.32	0.19	5.14***
2	Age	4.88	3.37	1.89*	3.50	4.74	4.10	0.85
3	Education	0.40	0.17	5.54***	0.21	0.39	0.24	6.78***
4	Marital Status	0.20	0.10	2.71***	0.12	0.21	0.12	2.72*
5	Religion	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Ethnicity	0.24	0.13	2.88***	0.29	0.11	0.13	10.01***
7	Income	927	576	2.11**	626	1106	455	5.74***
8	Occupation	0.38	0.34	1.01	0.30	0.41	0.37	2.22
9	Social Role	0.46	0.32	3.51***	0.49	0.29	0.39	7.93***
10	Composite diversity	0.24	0.15	4.59***	0.19	0.24	0.17	3.94**

Note: \*\*\* P<0.01, \*\* P<0.05, \* P<0.10

Source: Field Survey, April-November 2013.

### 6.2.2. Differences in Religion and Ethnic Composition

Religious affiliation is among the factors that influence the PNs of street vendors. As shown in chapter five, religious homophily is one of the highest in street vendors' networks configuration. An examination of same religious proportion by gender shows that women do have more same-religion alters than men and the difference between the two sexes is significant at  $t=4.07$ ,  $p < 0.01$ . While the same religion proportion of women is 40 percent, it is 26 percent for men. From these results we can infer that women are more religious homogenous than men. This result is consistent with other similar studies in other counties. For instance, Brashears (2008), in his study of the Iranian society, found that religion homophily is higher for women than men.

Like religious homophily, ethnic homophily varies between men and women. The comparison of same-ethnic proportion by gender shows that women demonstrate greater same-ethnic networks than men. On average, about 54 percent of women's and 44 percent

of men's network is composed of individuals of same ethnic group. The variation is significant at  $t=2.14$ ,  $p<0.05$ . Similarly, the mean ethnic homophily index is -0.51 for women and -0.31 for men. From these results we can understand that women are more ethnic homophilous than men. Similarly, men exhibit a relatively high ethnic diversity of 0.24. Women's ethnic diversity is lower than men and it is found to be 0.13. The difference is statistically significant at  $t=2.88$ ,  $p<0.01$ (see Table 23).

In here we can learn that women are more homophilous regarding ethnic and religious composition than men. This might be a consequence of variations in neighborhood ties established between men and women. As discussed in chapter five, there are urban enclaves in Addis Ababa. These enclaves and neighborhoods are in most cases segregated by ethnic and religion homogeneity. Accordingly, women who relatively exhibit more proportion of neighborhood ties than men can interact with people of the same religion and ethnic group. In addition, mostly women are involved in ethnic and religious based activities and festivals than men. These religion and ethnic based activities provide women an opportunity to interact with people of same religion and same ethnic group and hence greater ethnic and religion homophily than men. Asked about membership in local based institutions, interviewee P16 said:

In Ethiopia, both men and women participate in religious and ethnic based activities. But women are more involved in these activities than men. When you go to churches and mosques, you can get more women than men. Women are more involved in religious based institutions like *Mahiber* than men, which by nature women are more inclined to religion than men. One can also get women involved in arranging and coordinating in neighborhood based and ethnic festivities compared to men. The involvement of women in such activities gives them a chance to know and connected among themselves. This also provides them a platform to share their joys and sorrows.

Comparison of religious homophily among ethnic groups shows that the *Gurages* display homophilous religion networks with a score of -0.79 followed by the *Amharas* (-0.74) and the *Oromos* (-0.64). Likewise, the same religion proportion of the *Gurages*, the

*Amharas*, and the *Oromos* is found to be 0.35, 0.33 and 0.30 respectively. But the ANOVA results show no statistically significant variation (see Table 22). As shown in Table 23, religious diversity index is found to be zero for all ethnic groups. This shows that the contacts in respondents' network are of the same religion. Coming to ethnic composition, same-ethnic networking is one of the highest for the *Gurages* (65 percent) followed by the *Oromos* (44 percent) and the *Amharas* (37percent). The ANOVA result shows the presence of statistically significant variation between the three ethnic groups ( $F=17.71$ ,  $P<0.01$ ). The same holds true as regards ethnic homophily. The mean ethnic homophily is found to be -0.76, -0.28, and 0.01 for the *Gurages*, the *Oromos*, and the *Amharas* respectively. This shows that the *Gurages* are exceptionally ethnic homophilous compared to the *Amharas* and the *Oromos*. The *Amharas*, on the other hand, demonstrate ethnic heterophilic networks. The *Oromos* are in the intermediate position.

The study also reveals significant differences ( $F=10.01$ ,  $p<0.01$ ) in ethnic diversity among ethnic groups. The *Amharas* exhibit contacts with diverse ethnic groups with ethnic diversity index of 0.30 followed by the *Oromos* (0.14) and the *Gurages* (0.11). Out of their ethnic line, the *Gurages* mostly mention the *Amharas* and the *Amharas* in turn mention the *Gurages*. The *Oromos* mention the *Amharas* out of their ethnic circles. For the *Gurages* and the *Oromos*, therefore, the *Amharas* are the next choice out of their ethnic line.

The high ethnic homophilous character of the *Gurages* is a consequence of many reasons. In his study of *Gurages*' rural urban interaction and entrepreneurship in Ethiopia, Baker (1992) notes that the *Gurages* maintain successful urban life style by exhibiting 'ethnic exclusivity'. This ethnic exclusivity is indeed the result of ethnic homogeneity. Baker claims that *Gurages* ethnic homogeneity is maintained through different means including the limited use of the *Guragigna* language by other ethnic groups (except *Amharic*), the *Gurages* limited knowledge of other languages, lack of visible political



involvement by the *Gurages*, little involvement in the public sector, and their greater involvement in ethnic-based associations (Baker, 1992). Baker (1992) further states that the *Gurages* are conservative of their language. The *Gurage* language has not received much importance by the *Amharas* and the *Oromos*. Consequently, the *Gurage* language provides a good medium for exercising urban exclusivity. The *Gurages*, for example, exchange business secrets through their language. In addition, the *Gurages* exhibit high sense of kin and ethnic solidarity and cooperation than other ethnic groups. All these are among the factors in explaining the high level of ethnic homogeneity of the *Gurages* as compared to other ethnic groups. Concerning the ethnic exclusiveness nature of the *Gurages* in street business, interviewee P6 states:

*Gurages* are hard workers and business minded. I realized this for I was working with them on the streets. While doing so, I used to approach them to learn business skills. However, they were always suspicious of me because ethnically I am *Oromo*. They do not need to share their business ideas and other business related matters such as exchanging of money and giving working spots on streets with members of other ethnic groups. When they want to talk about business secrets, they discuss in their own language because street vendors of other ethnic groups could not get the information. But, generally, in other social matters, they are sociable and can get along with people of any ethnic groups.

Another way in which the *Gurages* ethnic homophily is maintained has been through the development of self-help associations. The *Gurage* have a long tradition of self-help associations. There are several associations in Ethiopia which meet the needs of the community including labor-exchange societies and religious societies (Baker, 1992). In fact these traditional associations are these days widely practiced by different ethnic groups in Ethiopia. But they are not as strong as the ones practiced by the *Gurage* people.

In sum, while the *Gurages* are ethnically homogenous, the *Amharas* are ethnically heterogeneous. The ethnically diverse network of the *Amharas* is probably a consequence of many circumstances. In terms of population size, the *Amharas* are the first largest ethnic groups accounting for about 48 percent of the population of Addis Ababa (CSA, 2010).

The *Amharas* also live in large cities and larger settlements throughout the country. Their substantial number and their settlement pattern might help the *Amharas* to integrate with people of other ethnic groups. On top of these, *Amharic*, the language of the *Amharas*, is the official language of the country. The majority of the *Oromos* and the *Gurages* also used Amharic as their second language. This might help the *Amharas* get integrated into the diverse ethnic community of Addis Ababa compared to the *Gurages* and the *Oromos*. Moreover, the *Amharas* exhibit an Ethiopianism attitude and do not usually favor ethnic lines as priority in their social relationships. In this regard, Takkele (1994) described the *Amhara* as ethnically conscious Ethiopians serving as the pot in which all the other ethnic groups are supposed to melt. He claims that the *Amharas* believe and feel as Ethiopians and they do not distinguish between peoples of different ethnicities.

As the correlation between respondents' level of education and ethnic heterogeneity is concerned, the study reveals the presence of positive relationship between the two variables ( $r=0.27$ ,  $p<0.01$ ). The more educated the respondents are, the more ethnically diverse are the contacts and vice versa.

### **6.2.3. Differences in Education Composition**

Education is one of the characteristics wherein network composition of respondents might differ among social groups. The same-education proportion of the respondents is 0.14 and 0.19 for men and women respectively. Analysis of same-education proportion composition by gender shows no statistically significant variation ( $t=1.33$ ,  $p=0.18$ ) between men and women. The education homophily index reveals that both men and women comprise heterophilous networks with a homophily index of 0.61 and 0.48 for men and women respectively. Men are educationally more heterophilous than women. Likewise, while the education heterogeneity index of men is 0.40, women display a heterogeneity index of 0.17. The results show a statistically significant variation between the two sexes ( $t=5.54$ ,  $p<0.01$ ). Here we can learn that women find themselves in less

educationally diverse environments and thus are subject to weaker connections to people of diverse educational level than men. Women are more likely to confide in others who share same-education level. But, men who are more educated than women, exhibit networks with people of diverse education levels.

Women exhibit many illiterate alters in their networks compared to their men counterparts. Illiterate alters in women's network double those illiterate members in men's network. About 38 percent of alters in women's network are illiterate. In men's network, illiterate alters account for about 19 percent. T-test results show a significant ( $t=3.23$ ,  $p<0.01$ ) variation between the two sexes. Compared to women, men display many alters who have attended college/university education. While alters with college/university education account for 15 percent of men's network, they account for only 6 percent of women's network. The t- test results show significant variation among the two sexes ( $t=2.08$ ,  $p<0.05$ ). In the case of primary and secondary education attainment, men and women possess more or less equal proportion of alters in their networks. The correlation between respondents' level of education and same-education level of contacts shows an inverse relationship ( $r=-0.16$ ,  $p<0.05$ ). The higher the level of education, the lower the probability of establishing contacts of same-education level and vice versa.

Testing of variations on same-education proportion by ethnic group shows no significant differences ( $F=0.04$ ,  $p=0.96$ ). The mean same-education proportion is 0.17 for the *Gurages*, 0.17 for the *Amharas*, and 0.16 for the *Oromos*. In addition, the mean education homophily is 0.59 for the *Amharas*, 0.57 for the *Gurages*, and 0.48 for the *Oromos*. However, the *Gurages*, with a mean educational diversity index of 0.39, exhibit more educationally diverse contacts than the *Oromos* (0.24), and the *Amharas* (0.21). The difference is significant at  $F=6.78$ ,  $p<0.01$ . Compared to other attributes, however, respondents of all ethnic groups demonstrate educationally heterophilous networks.

#### **6.2.4. Differences in Age and Marital Status Composition**

Age and marital status are the two closely related characteristics in individuals' life. Like other personal characteristics, men and women differ in the network configuration of these attributes. Regarding marital status, women reported that most of their network members are married. While the majority of women's PN is composed of married alters, the greater part of men's network is composed of unmarried contacts. On average, about 65 percent of women's network is composed of married alters. This figure is 50 percent for men. The difference is significant ( $t=2.14$ ,  $p<0.05$ ). In contrast, on average, 48 percent of men's network and 34 percent of women's network is composed of unmarried alters. The difference is significant at  $t=2.10$ ,  $p<0.05$ .

The difference in marital status network configuration between men and women is perhaps attributed to variations in age and associated marital status among respondents. As discussed in chapter four, women are older than men. The majority of women street vendors are also married compared to men. As a result, owing to the tendency for network homophily, women are more likely to associate with married alters than unmarried ones. In contrast, men respondents are younger than women. In addition, the majority of men respondents are unmarried. As such, men frequently reported unmarried alters in their networks. This state of affairs indicates the tendency that street vendors prefer to associate with alters of the same-marital status. As Table 22 shows, men are more marital status homophilous than women with a homophily index of 0.01 and 0.27 respectively. While the marital status diversity for women is 0.10, men have an index of 0.20. This variation is significant ( $t=2.71$ ,  $p<0.01$ ) (see Table 23).

The study reveals no statically significant difference between the ethnic groups as marital status composition is concerned. On average, married alters comprise 58 percent, 57 percent, and 56 percent of the networks of the *Oromos*, the *Gurages*, and the *Amharas*

respectively. Unmarried alters account for about 42 percent of the networks of the *Amharas* and the *Oromos* and 40 percent of the *Gurages* with no significant variation. However, there appears to be a significant difference among ethnic groups regarding marital status diversity. Relatively, the *Gurages* exhibit higher marital status diversity of 0.21 than the *Amharas* (0.12) and the *Oromos* (0.12). The difference is statistically significant at  $F=2.72$ ,  $p<0.10$ .

Coming to age composition, the age homophily index for men and women is 0.89 and 0.81 respectively. The result shows that both men and women are heterophilous in age composition of their PNs. But men are more heterophilous than women. Likewise, men do have contacts with diverse age groups compared to women. Whereas the age diversity for men is 4.87, women exhibit age diversity index of 3.37. The difference is significant at  $t=1.89$ ,  $p<0.10$ . This finding is against the finding by Moore (1990) who found that women exhibit contacts of diverse ages than men and that women have less age homophily.

Similarly, the study reveals variation between men and women on the age of alters. The mean age of alters in women's and men's network is 36 and 32 years respectively. The difference is significant at  $t=2.10$ ,  $p<0.05$ . Women's alters are older than alters in men's network. Such variation is probably attributed to differences in age between men and women respondents. As women respondents are relatively older than men respondents (see chapter 4), alters in women's network are older than alters in men's network. The old street vendors go with the old and the young dwell with the young ones. Regarding the old age network configuration of women, interviewee P4 has said:

We women always are responsive to many issues in life. As such, we often seek advice and protection from older people because they have more life experiences than the young ones. Also, older people are sympathetic to help those who seek their support. Even when we see marriage arrangements, women prefer matured and older men. In most cases, women prefer to get married to men who are at least 7-10 years older than them. The assumption is that if the husband is older, he is matured, make and save more money and above all be responsible to support a family. In the contrary, most men are interested in marrying young women.

An assessment of age heterogeneity among ethnic group shows that the *Gurages* do have a relatively heterogeneous networks of 4.74 compared to the *Oromos* (4.00) and the *Amharas* (3.50). But the variation in age heterogeneity is not significant ( $F=0.85$ ,  $p=0.43$ ). The study also reveals no significant variation among ethnic groups on the average age of alters in their networks ( $F=1.39$ ,  $P=0.25$ ). The mean age of alters in the *Oromos*, the *Gurages*, and the *Amharas* network is 36, 35, and 33 years respectively. The absence of variation in age of alters between ethnic groups is probably a consequence of the fact that there are no variations among respondents of the three ethnic groups.

#### **6.2.5. Differences in Social Relations and Time Spent in a Relation**

As to the social relations connecting egos and alters, on average, about 53 percent of women's and 47 percent of men's network is made up of kinship ties. Though women tend to form more networks with kinship ties, compared to men, the difference between the two sexes is not significant ( $t=1.12$ ,  $p=0.27$ ). Likewise, 23 percent of women's and 19 percent of men's network is made up of friends with a t-test results of  $t=0.86$ ,  $p=0.39$ . There are, however, significant variations between men and women as acquaintances, workmates, and neighborhood relations. About 22 percent of men's and 14 percent of women's network is made up of acquaintances with a t-test result of  $t=2.02$ ,  $p<0.05$ . Similarly, men display more workmate ties (11 percent) than women do (5 percent). The variation is significant at ( $t=2.27$ ,  $p<0.05$ ). With a significant variation ( $t=2.17$ ,  $p<0.05$ ), women exhibit more neighborhood relations (5 percent) than their men counterparts (0.32 percent). This means that women exhibit more local relations than men. This finding is similar with results of other studies. For example, in their US based study, Campbell and Lee (1992) found that women have larger networks within their neighborhoods than men.

The reason for the involvement of women more on neighborhood relations may be a consequence of the greater involvement of women in community and religious activities

than men. In this regard, Duck (1990) states that labor force participation is a major factor that provides social integration outside the home and the neighborhood. The PNs of women are defined by their domestic roles and access to the labor market. Like other LDCs, women in Ethiopia spend most of their time doing household chores. These domestic roles give them an opportunity to meet with people around their immediate neighborhood. Women are also more responsible to attend village level meetings, religious activities, and attending weeding and funeral ceremonies than men.

Previous studies in developed countries corroborate this finding. For example, Moore (1990) found that men's and women's PNs often differ in composition with men's network focused on non-kin ties especially co-workers. Brashears (2008) also confirmed that while men tend to be more integrated into networks that connect them to a wider society, women do have limited exposure and hence obtain fewer network benefits than men because of their limited social relations outside home and outside the neighborhood.

Regarding PN composition and women's preference to neighborhood relations, a woman interviewee P4, has to say the following:

Instead of discussing issues with workmates and acquaintances, I feel comfortable to discuss with people who live around my neighborhood. This is because by being in the neighborhood, we share many similar socio economic characteristics. We attend neighborhood associations like *Iddir*, *Equb*, *Mahber*, and coffee ceremony on daily, weekly] or monthly basis as per the nature of the association. These neighborhood based associations help us to discuss about private issues and business related matters. While the main objectives of these associations and gatherings are meant for acquiring needed resources and services, we also make new friends, share information, learn new things, and gain self esteem. Sometimes, we get together to discuss issues including love affairs, sexuality, birth control, and other women matters.

If we condense ego-alter relationship as strong and weak ties, about 76 percent of women's and 66 percent of men's network is composed of strong ties. Significant variation is observed between the two sexes concerning strong ties ( $t=2.10$ ,  $p<0.05$ ). Women exhibit more strong ties in their networks than men. The finding suggests that women

entrepreneurs' networks include alters who provide emotional social support (such as kin and friends) and less likely to include contacts that provide instrumental social support (such as workmates and acquaintances). In this regard, Bastani (2007) states that relations with kin and neighbors are more important for women than men. For women, kinship ties have priority on their time and energy investment and are of much practical and psychological importance in their day- to- day activities. However, Staber (1993), in a his study on small business owners, found that women's networks are wider and have a higher proportion of strangers in them.

An examination of weak ties configuration shows that about 33 percent of men's and 22 percent of women's network is composed of weak ties. T-test results show that there is a significant variation between the two sexes ( $t=2.19$ ,  $p<0.05$ ). This indicates that relatively men exhibit a potential to obtain non-redundant information from weak ties than women. Women are less likely to benefit from weak ties (Granovetter,1973;1983). Likewise, the mean social role diversity index shows significant variation between the two sexes ( $t=3.51$ ,  $p<0.01$ ) with the mean social role heterogeneity index of 0.46 for men and 0.32 for women. While men interact with people who are relatives, friends, workmates, and acquaintances, women's contact is mostly related to kinship and neighborhood ties.

Comparison of network composition by ethnic group shows that kinship ties took the largest share in the PNs of all the ethnic groups under study. But there appears a remarkable difference between the three ethnic groups ( $F=18.37$ ,  $p<0.01$ ). The *Gurages* do have more kinship ties than the *Oromos* and the *Amharas*. For *Gurages*, kinship ties account for about 69 percent of their networks followed by the *Oromos* (44 percent) and the *Amharas* (36 percent). For the *Amharas*, next to kinship ties, contacts to acquaintances (25 percent) and workmates (16 percent) are more frequent compared to the *Gurages* and the *Oromos*. For the *Gurages*, acquaintances (11 percent) and workmates (2 percent) are



less important when compared to the *Amharas* and the *Oromos*. By and large, on average, 84 percent of the *Gurages* PNs are composed of strong ties. For the *Oromos* and the *Amharas* strong ties account for about 70 percent and 58 percent of their contacts respectively. The difference is statistically significant at  $F=14.28$ ,  $p<0.01$ .

Assessment of street vendors' weak ties composition demonstrates the presence of statistically significant variation among the ethnic groups ( $F=10.10$ ,  $p<0.01$ ). On average, the proportion of weak ties declines from 0.40 for the *Amharas* to 0.28 for the *Oromos* and the 0.16 for the *Gurages*. The result show that compared to the *Gurages* and the *Oromos*, the *Amharas* can relatively obtain more advantages from weak connections. On the other hand, the *Gurages*, who include greater proportions of strong ties in their networks, could secure greater social support than other ethnic groups but at the cost of sacrificing the non-redundant information required for enterprise performance (Burt, 1992). As the *Gurages* greatly rely on their kinship ties, they demonstrate high level of trust to their contacts with an average score of 4.74. The average level of trust on alters for the *Amharas* and the *Oromos* is 4.41 and 4.21 respectively. The variation is significant at  $F=11.84$ ,  $p<0.01$ .

In addition to variations in gender and ethnic identity, the association between age, education, and role relation was examined. The results of the correlation analysis show no significant association between the age of respondents and the role relation of contacts (family, friends, workmates/co-workers, and acquaintances). However, significant relationship ( $r=0.22$ ,  $p<0.01$ ) is observed between the age of respondents and the proportion of contacts who are in the neighborhood. This is perhaps because the older the age of the respondents, the longer the length of residence in the neighborhood and the higher the opportunity for neighborhood contact. Analysis of the relationship between respondents' level of education and role relation of contacts shows mixed results. Education has an inverse relation with contacts who are kin members ( $r=-0.23$ ,  $p<0.01$ ).

But there is a significant and positive relationship between respondents level of education and the proportion of contacts who are acquaintances ( $r=0.16$ ,  $p<0.05$ ) and workmate ( $r=0.20$ ,  $p<0.01$ ). The more educated an individual is, the more the contact with weak ties (acquaintances and workmates) than strong ties (friendship and kinship ties).

The correlation between respondents level of education and proportion of weak ties was found to be positive and significant, i.e.,  $r=0.19$ ,  $p<0.01$ . Likewise, the correlation between respondents' level of education and level of trust to contacts is found to be negative and statically significant ( $r=-0.16$ ,  $p<0.05$ ). The more educated the respondents are, the lesser the level of trust to their contacts. This is because there is an inverse relation between educational level of respondents and the proportion of kinship ties, which in turn minimizes the level of trust to contacts.

The nature of ego-alter relationship influences the frequency of contact between actors in a network. The more frequent the contact between an ego and his/her alter, the closer are members of a network. On average, daily contact to alters accounts 62 percent of women's and 45 men's network. This means that women do have more daily contact with their network members than men. The difference is significant ( $t=2.12$ ,  $p<0.05$ ). The frequent interaction of women to their contacts is probably attributed to the fact that women exhibit close connections with their kinship and friendship ties as well as neighbors compared to men who demonstrate contacts with acquaintances and workmates. Regarding duration of acquaintances, since women display more strong ties and do have contacts of old age, they exhibit longer period of relationship of their contacts (on average 17 years) than men with mean acquaintance period of 12 years. The difference is statistically significant at  $t=3.21$ ,  $p<0.01$ .

Regarding ethnic groups, the *Gurages* are characterized by more frequent interaction with their network members than the *Amharas* and the *Oromos*. On average, 64

percent of the contacts that the *Gurages* did with their alters are on daily basis followed by the *Oromos* (59 percent) and the *Amharas* (39 percent). The difference is statistically significant at  $F=4.03$ ,  $p<0.01$ . In terms of the duration of ego-alter acquaintances, the study found no significant difference among ethnic groups. This might be due to the fact that no significant age variation is observed among respondents of the three ethnic groups.

#### **6.2.6. Differences in Occupation Composition and Income**

Occupational composition is another attribute of alters that might be differently displayed by social groups. Regarding alters' occupation, about 57 percent of men's and 55 percent of women's network is composed contacts who are involved in microenterprises. No significant difference is observed between the two sexes regarding micro-entrepreneurs in their networks. But when we look at the composition of alters who are owners of large enterprises, there is a statistically significant ( $t=3.01$ ,  $p<0.01$ ) variation between men and women. About 14 percent of men's and 5 percent of women's network is composed of alters who own large enterprises. The study reveals no significant difference between the two sexes regarding alters occupation in private and government employment, NGO work, daily labor, and pension. Correspondingly, no significant difference is observed between the two sexes on occupational diversity ( $t=1.01$  and  $p=0.31$ ) with men and women exhibiting occupational diversity index of 0.38 and 0.34 respectively.

Regarding ethnicity and occupational composition, about 64 percent of the *Amharas*', 54 percent of the *Oromos*', and 50 percent of the *Gurages*' network is composed of individuals who own microenterprises. The network of the *Amharas* involves more people from the microenterprise sector compared to the other two ethnic groups. The difference is significant at  $F=2.36$ ,  $P<0.10$ . In contrast, compared to the *Amharas* and the *Oromos*, the *Gurages* display the presence of large-enterprise owners in their networks. While large enterprise owners account for 17 percent of the *Gurages*' network, they

account only 6 percent of the *Amharas*' and 4 percent of the *Oromos*' network. The difference is significant at  $F=7.08$ ,  $p<0.01$ . No significant variation is found in occupational diversity between ethnic groups ( $F=2.22$ ,  $P=0.11$ ). The occupational diversity index declines from the *Gurages* (0.40) to the *Oromos* (0.37) and the *Amharas* (0.30).

The nature of alters' occupation either directly or indirectly influences the income diversity of contacts in street vendors network. Examining the income composition of alters is vital because alters' income influences the amount of financial and material resources mobilized by respondents. In this regard, the average monthly income of alters in women's network is ETB 1388.00 whereas men do have contacts with a mean monthly income of ETB 1955.00. The t-test result shows a significant variation between men and women ( $t=2.75$ ,  $p<0.01$ ). Men exhibit networks with alters of better economic position than alters in women's network. This implies that men can obtain better material and financial social support from their contacts than women do. This is perhaps attributed to the fact that women's network is composed of small proportion of large enterprise owners who can earn more income. The study also reveals that there is a significant variation between men and women ( $t=2.11$ ,  $p<0.05$ ) concerning income diversity. Men exhibit more income diversity of ETB 927.00 than women who show income diversity of ETB 576.00.

Pertaining to income diversity by ethnic groups, there is a significant variation. While the *Gurages* show income diversity of ETB 1106.00, the *Amharas* and the *Oromos* exhibit the income diversity of ETB 625.00 and ETB 455.00 respectively. The difference is significant at  $F=5.74$ ,  $p<0.01$ . Likewise, the *Gurages* establish networks who relatively earn high income (with a mean monthly income of ETB 1947.00) followed by the *Amharas* (ETB 1697.00) and the *Oromos* (ETB 1290.00). The difference is significant at  $F=3.24$ ,  $p<0.05$ . The *Gurages* are generally embedded in diverse occupational and income networks compared to the *Amharas* and the *Oromos*. Here we can deduce that since the

mean income of contacts in the *Gurages* network is greater than that of the income of contacts in the *Amharas* and the *Oromos* network, the *Gurages* can better mobilize financial and material resources than the *Amharas* and the *Oromos*.

### **6.2.7. Differences in Composite Diversity Index**

Coming to the composite diversity index (see Table 23), men display more diversified networks with a mean diversity index of 0.24 than women who do have a mean diversity index of 0.15. The difference is significant at  $t=4.59$ ,  $p<0.01$ . Ethnically, there is also variation ( $F=3.94$ ,  $P<0.05$ ) between ethnic groups. The overall heterogeneity of the *Gurages* (0.24) is greater than the *Amharas* (0.19) and the *Oromos* (0.17). Generally, the *Gurages* and men are, thus, in a better position to increase their networks by enlarging their knowledge and experiences through indirect ties to others beyond their immediate circles. The heterogeneous networks help the *Gurages* and men to compensate for their incomplete perceptions and increase expectations for business start-up and performance (Renzulli et al., 2000).

## **6.3. Gender, Ethnicity, and Network Structure**

### **6.3.1. Differences in Size and Density of Networks**

As discussed in chapter five, network structure is measured by different indicators suggested by Burt (1992). A basic indicator in dealing with network structure is network size. Network size is used to measure integration, popularity, or range in a network (Marsden, 1990). Likewise, network range measures the extent to which an individual's network links him/her to diverse other persons (Burt, 1992). The larger the network size, the larger the range and the more integration of an individual in to a given community and the greater the social support he/she obtains from his/her networks. Range can be measured by size or by network density in that dense networks have lower range (Granovetter, 1973; Burt 1992; 2005).

Network size influences the development of enterprises through resource acquisition. For instance, individuals with large networks do have better access to information and resources than individuals with small networks. They are, therefore, more likely to recognize business opportunities (Aldrich and Zimmer, 1986). Access to information and resources may also positively influence self-efficacy and perceived feasibility pertaining to business start-up and entrepreneurial success (Klyver and Terjesen, 2007). In terms of network size, the study reveals that men display larger network size than women. While the mean network size of men is 3.58, women exhibit a mean network size of 2.61. The difference is statically significant (see Table 24 below). Women are characterized by small network size than men. This means that women might obtain less resource, less information, and might be less integrated in a community than men. The small network size of women is perhaps attributed to different causes. To mention some, forming network needs investment in time and resources. Women in Ethiopia do have a double responsibility of earning income and taking household chores. As a result women do have less time to invest in establishing networks. Women are also poor and they do not have adequate resources that can be invested in establishing PNs.

Another probable case for the small network size of women is discussed by Campbell and Lee (1992) with respect to communication and transport costs that are necessary to establish and maintain ties. Maintaining strong relationships involves communication and transport costs as well as other related expenses. However, these costs tend to be relatively higher for poor street vendors in general and women in particular. Women street entrepreneurs earn less income from their businesses. They are not in a position to cover all the necessary costs for establishing and maintaining networks. As a result, women's potential to socialize and interact is limited to few people and even these interactions are limited to their kin and neighborhood ties.

Among ethnic groups, the *Gurages* display the largest mean network size of 3.44 followed by the *Amharas* (2.90) and the *Oromos* (2.88). The difference is significant at  $F=4.20$ ,  $p < 0.05$  (see Table 24). The larger network size of the *Gurages* is attributed to a variety of reasons. An important attribute of the *Gurage* culture is that there is no central authority and a kind of boss-subordinate relationship but the principle of ‘collective consciousness’ (Baker, 1992). This feeling of collectiveness links all the *Gurages* whether they live in towns or in the countryside. In addition, there is a strong sense of responsibility and obligation towards other *Gurages* inducing those in need. These circumstances in combination make the *Gurages* to have larger networks than the *Amharas* and the *Oromos*. Though, similar studies are absent in the Ethiopian indigenous ethnicity context, a South African study on ethnic entrepreneurship by Mitchell (2003) shows that the Indian and European entrepreneurs tended to have a wider range of networks than the African entrepreneurs.

Table 24: ANOVA and T-test results for network structural measures

S. No	Measure	Means of network structure measures						
		Gender			Ethnic Group			
		Men	Women	T	Amhara	Gurage	Oromo	F
1	Network size	3.58	2.61	5.76***	2.90	3.44	2.88	4.20**
2	Density	0.39	0.39	0.03	0.32	0.47	0.38	12.17***
3	Effective size	1.55	1.41	1.21	1.78	1.19	1.49	9.51***
4	Efficiency	0.45	0.52	1.86*	0.59	0.35	0.51	19.13***
5	Constraint	0.76	0.87	2.96***	0.77	0.83	0.83	1.53

Note: \*\*\*  $P < 0.01$ , \*\*  $P < 0.05$ , \*  $P < 0.10$

Source: Field Survey, April-November 2013.

Network density is the most widely measure of network structure. It measures the mean strength of connections among members in a net-work. It refers to the proportion of links present relative to those possible. Dense and closed connections typically contain less diverse contacts (Granovetter 1973; Campbell et al., 1986; Burt, 2005). Density measures the availability of social support and the potential strength of normative pressures towards

compliance by indicating the capacity of alters to collectively influence an ego (Granovetter, 1973). The denser the network is, the larger the emotional and social support among actors in a network and vice versa. Examination of network density by gender shows no difference between the two sexes. As shown in Table 24, men and women demonstrate a mean density index of 0.39 each. Though men exhibit larger networks than women, the strength of connection is the same for both men and women vendors.

Network density shows variation between ethnic groups ( $F=12.17$ ,  $p<0.01$ ). The network density of the *Gurages*, the *Oromos*, and the *Amharas* is found to be 0.47, 0.38, and 0.32 respectively. The *Gurages* display more dense networks than the *Amharas* and the *Oromos*. In contrast, the *Amharas* are characterized by less dense networks. The *Oromos* are found in the intermediate position. Such difference in network density is perhaps attributed to the nature of network composition. The *Gurages* display high degree of ethnic homophily. The greater proportion of their network is also composed of kinship ties. This means that there is high level of interconnectedness between alters of same kinship and same ethnic identity. In contrast, the *Amharas* relatively exhibit weaker tie configuration. The *Amharas* do have more diverse ethnic composition than the *Gurages* and the *Oromos*. This diversity in the *Amharas* network is one probable cause for their low density network structure compared to the *Gurages* and the *Oromos*.

Assessment of the relationship between the educational level of respondents and network density shows an inverse relation,  $r=-0.21$ ,  $p<0.05$ . This result is consistent with the previous finding of this study that educational level and proportion of kinship ties are inversely related. These findings tell us that the more educated the respondents are, the less the proportion of kinship ties in their networks and the less dense the network structure is. For this reason, the *Amharas* who are relatively more educated than the *Oromos* and the *Gurages* are characterized by less dense networks (see Table 24).



### 6.3.2. Differences in Effective Size and Efficiency of Networks

An examination of the effective size of network shows no significant difference between men and women (see Table 24). This is because both sexes demonstrate similar pattern of network density. While the effective size of men is 1.55, women exhibit an effective size of 1.41. In other words, 2.03 of men's alters and 1.20 of women's alters are redundant or they bring similar information to an ego. When effective size is divided by average network size, it provides network efficiency. Regarding network efficiency, there is a statistically significant difference between the two sexes ( $t=1.86$ ,  $p<0.10$ ). Women exhibit more efficient networks (0.52) than men (0.45). From this result we can learn that though women do have smaller network size than men, the networks of women are more efficient than men. In other words, women can efficiently mobilize their network resources as compared to men.

The study also reveals significant variation ( $F=9.51$ ,  $p<0.01$ ) among ethnic groups concerning effective size and efficiency. The *Amharas* display large effective size (1.78) followed by the *Oromos* (1.49), and the *Gurages* (1.19). Though the *Gurages* exhibit large network size, the majority of their contacts are redundant. Saying differently, while the redundant network size of the *Gurages* is 2.25, the *Oromos* and the *Amharas* demonstrate redundant network size of 1.39 and 1.12 respectively. Likewise, the *Amharas* exhibit more efficient networks with a mean efficiency index of 0.59 than the *Oromos* and the *Gurages* who exhibit a mean efficiency index of 0.51 and 0.35 respectively. The difference is statistically significant at  $F=19.13$ ,  $p<0.01$  (see Table 24 above).

### 6.3.3. Differences in Structural Constraint

Structural constraint is a measure of network structure and is a function of network size and density. There is a statistically significant inverse relationship ( $r=-0.64$ ,  $p<0.01$ ) between network size and constraint. The larger the network size, the lower the structural

constraint. However, there is a direct relationship between network density and network constraint ( $r=0.75$ ,  $p<0.01$ ). Those street vendors who exhibit dense networks are characterized by high constraint.

When we examine the distribution of constraint across gender, women display more constrained networks than men. Women's constraint index is 0.87 whereas men do have a constraint index of 0.76. The difference is significant at  $t=2.96$ ,  $p<0.01$ . About 87 percent of women's and 76 percent of men's network is concentrated on a single actor. The result reveals that women are less able to obtain new information than men and hence women are less exposed to varied information. In fact, the high constraint index of women is partly attributed to their smaller network size than men. Ethnically, the *Amharas* exhibit less constrained networks, i.e., 0.77 (77 percent) than the *Gurages* and the *Oromos* who display a constraint index of 0.83(83 percent) each. But the difference is not statistically significant (see Table 24).

#### **6.4. Gender, Ethnicity, and Access to Social Resources**

The discussions in the above sections show variations in contacts resources between the two sexes and among the three ethnic groups. In addition to the inequality in the structure and composition of contact resources, street vendors may exhibit differential access to network resources (potentially accessible resources). The results in the above sections show that there are variations between gender and among ethnic groups as contact resources are concerned. In this section of the thesis, in equality in accessible resources is examined between gender and among ethnic groups. Table 25 below shows the ANOVA and t-test results for position generator measures.

Table 25: ANOVA and T-test results for position generator measures

No	Measure	Position generator measures						
		Gender			Ethnic Group			
		Men	Women	T	Amhara	Gurage	Oromo	F
1	Upper reachability	71.70	68.68	1.27	68.27	73.03	68.93	1.66
2	Resource heterogeneity	52.02	49.54	0.96	49.07	53.67	49.20	1.44
3	Extensivity of network positions	13.38	12.81	0.65	13.05	13.80	12.27	0.98
4	Social capital volume	546.92	507.23	0.98	520.38	565.23	486.72	1.24
5	Average accessed prestige	40.08	38.68	1.83*	39.03	40.49	38.40	2.67*

Note: \*P<0.10,

Source: Field Survey, April -November 2013

As shown in Table 25, the ANOVA and t-test results show no significant variation between men and women and among the three ethnic groups on all the position generator measures except the average accessed prestige. As regards average accessed prestige, both the ANOVA and the t-test results show the presence of significant variation between men and women ( $t=1.83$ ,  $p<0.10$ ) and among ethnic groups ( $F=2.67$ ,  $p<0.10$ ). Average accessed prestige is the function of SC volume divided by the number of accessed positions. Thus, although no significant variation is observed in SC volume among social groups, there are differences by gender and ethnic group. When such variations in SC volume are divided by more or less equal number of accessed positions, the difference in average accessed prestige became significant.

In the previous sections we have seen that there are variations in the composition and structure of contact resources, i.e. resources actually mobilized by street vendors for their businesses. However, a comparison of potentially accessible resources between gender and among ethnic groups shows no significant variation. Here we can understand that social resources inequality exists on actually mobilized resources and not on accessible resources. Accessible resources are more or less equal as they are not actually mobilized and do not need and power dominance among the different social groups.

## 6.5. Summary of Findings

In this chapter, network characteristics across ethnic groups and gender were examined. To do so, parametric tests of ANOVA and T-test were used to test if there are variations among social groups on the composition and structure of networks. Accordingly, significant variations were observed in the configuration of PNs between the two sexes and among ethnic groups. The results of the study revealed that men and women exhibit differences in network composition and structure. There are also variations in the composition and structure of PNs among respondents who are *Amharas*, *Gurages*, and *Oromos*.

Regarding gender and PN composition, women's network exhibits larger proportion of strong and smaller proportion of weak ties than men do. For the reason that women greatly depend on strong ties, they display frequent contacts with their network members than men. Women's network is identified by more ethnic and religion, homogeneity than men. In the contrary, men are more gender and marital status homophilous than women. Men exhibit more contacts with individuals having diverse educational levels than women. Men's alters are also younger than alters in women's network.

In terms of occupation, men's network relatively comprises of large proportion of owners of large-enterprises than women's network. This might be one probable cause for the differences in alters' income between men's and women's network. The income of women's contacts is lower than those in men's network. This might lead to differential resource access between the two sexes i.e., men might obtain better financial and material support than women. As regards the overall diversity, men display more diverse networks than women. Analysis of network structure between the two sexes shows that women

show small network size, high constrained, and less effective networks. In contrast, men exhibit larger network size, less constrained, less redundant network structure than women.

Pertaining to gender differences in PN characteristics, Fischer and Oliker (1983) argued that structural constraints in a society are a primary cause for the differences in PN characteristics of men and women. They point out that “the differing positions of women and men in the work force, in marital roles, and in parenthood create different sets of opportunities for and constraints on friendship building” (1983: 30). The home-based role of women, i.e., their principal role as home-keepers and baby sitters, and the differences in sexual activity play a role in PN differences between women and men (Fischer, 1982; Moore, 1990).

A discussion on PN characteristics and ethnic identity shows that the *Gurages* show high proportion of kin and friendship ties and more frequent contacts with alters. As the *Gurages* greatly rely on their kinship bonds, they demonstrate higher level of trust to their contacts compared to the *Amharas* and the *Oromos*. The *Gurages* are distinguished by high level of ethnic homophily compared to the *Amharas* and the *Oromos*. But the *Gurages* are embedded in diverse education, marital status, occupation, and income networks compared to the *Amharas* and the *Oromos*. The income of alters in the *Gurages* network is greater than those possessed by the *Amharas* and *Oromos*.

The *Amharas* are characterized by ethnic and religious heterogeneity. The *Amharas* are more sex homophilous compared to the *Gurages* and the *Oromos*. The *Amharas* demonstrate relatively high proportion of weak ties than the *Gurages* and the *Oromos*. As regards the overall diversity, the *Gurages* exhibit more heterogeneous networks than the *Amharas* and the *Gurages*. Analysis of network structure by ethnic group shows that the *Gurages* exhibit large network size but dense, less effective, and less efficient network structure. In contrast, the *Amharas* do have small network size and less dense networks.

The *Amharas* also exhibit relatively more efficient and effective network structure than the *Gurages* and the *Oromos*. The *Oromos* are in most cases in the intermediate position.

Generally speaking, given that individual's network may be highly heterogeneous in some respects yet homogeneous in others, it is difficult to say that one social group is homogenous or heterogeneous in PN characteristics. But from the findings of the study it is clear that men occupy higher positions in a hierarchically structured society of Ethiopia and hence men are affiliated with diverse PNs. In contrast, women are affiliated with disadvantaged networks having smaller, highly constrained, and less diverse networks, and primarily to ties lower in hierarchical positions. Since women's networks tend to be homogeneous, there is likelihood that they exhibit network closure and reproduction of resource disadvantages (Lin, 2000) than their men counterparts.

Ethnically, the *Gurages* display ethnic and religious homogeneity and depend more on strong ties for their business pursuits. However, they exhibit large network size and heterogeneous networks especially in ascribed characteristics. They exhibit both homogeneity and heterogeneity in their network configurations. This might give them an opportunity to compromise the closure and the structural holes limitations and benefits that may provide them the resource advantages for their business performance compared to the *Amharas* and the *Oromos*.

## **Chapter 7**

### **Changes in Personal Networks over the Phases of Enterprise Development**

#### **7.1. Introduction**

Establishing an enterprise needs entrepreneurs to mobilize resources to accomplish the establishment process and successfully manage their enterprises (Greve, 1995; Greve and Salaff, 2003). To start a business, an entrepreneur needs capital (financial, material, and human), information, advice, and other related business resources. To obtain these resources, contacts with other persons who could provide business information as well as financial and material support are important (Aldrich and Zimmer, 1986). In fact, the resources needed by an entrepreneur might vary depending on the stages of the entrepreneurial process. Review of the available literature has shown that there are three phases in enterprise development. These are the phase of discovery of opportunities, the phase of securing resources, and the phase of obtaining legitimacy (Greve, 1995; Elfring and Hulsink, 2003).

The first phase in enterprise development is a time when an entrepreneur is motivated to start a business. This is called the phase of *identifying opportunities* (Elfring and Hulsink, 2003). In this phase, an entrepreneur might start collecting business ideas or might have business ideas but he/she has not yet started to take any practical steps to start a business. During this period, social support from other persons is needed (Greve, 1995). An important source of business ideas and plans is, thus, the networks of an entrepreneur. In this regard, Birley (1985) notes that an entrepreneur often requires advices and feedback on business plans from his/her personal contacts. The network of an entrepreneur is, therefore, a source of information and advice that helps him/her to identify and locate business opportunities. As stated by Granovetter (1973, 1983, 1985), in this phase weak ties are important as they provide diverse business information for an entrepreneur.

The second phase is the *resources phase*. It is a period when an entrepreneur starts looking for financial and material resources needed for business venturing (Greve, 1995). Entrepreneurs rarely possess all the resources required to materialize business opportunities. One of the crucial tasks in business start-up is to access and mobilize resources (Greve and Salaff, 2003). This is a hard task for the poor entrepreneurs in the informal sector with no or having limited financial and material resources (Elfring and Hulsink, 2003). In such cases, strong ties (e.g. family and friends) provide an entrepreneur with resources (e.g. financial, material, and human) that he/she needs (Brüderl and Preisendörfer, 1998). Strong ties are more accessible and more motivated to help entrepreneurs than weak ties do. Entrepreneurs can also obtain the necessary resources at low transaction cost from their strong ties (Elfring and Hulsink, 2003).

The third phase in enterprise development is the *phase of legitimacy*. This is a time when an entrepreneur starts the full fledged operation of the business and start to build legitimacy (Greve, 1995; Elfring and Hulsink, 2003). Establishing an enterprise by itself does not guarantee success and sustainability in business. New enterprises are more likely to fail as they still have to develop and acquire many resources that help them survive the stiff market competition (Baum et al., 2000). Faced with the ‘liability of newness’, a new enterprise has to mobilize the required support to establish legitimacy (Elfring and Hulsink, 2003). To strengthen the likelihood of new business survival, entrepreneurs still seek assistance and cooperation from others. In this case, they use their PNs as a source of support for coping with market condition by either establishing contact with acquaintances or expanding the existing ties for obtaining products and services for their businesses (Elfring and Hulsink, 2003).

In all of the three phases of the entrepreneurial process, the PNs of an entrepreneur play a crucial role (Greve, 1995; Elfring and Hulsink, 2003; Greve and Salaff, 2003).



During these three phases of entrepreneurship, PNs are used for different purposes and the different phases need different resources (Greve, 1995). The aim of this chapter is, therefore, to analyze how the PNs of small entrepreneurs change over the three phases of enterprise development. Following the work of Feld et al. (2007), analysis of changes in PNs focuses on which ties exist and which ties lost, the rise and the decline of ties, and the overall changes in the composition and structure of PNs.

The remainder of the chapter is organized as follows. Section two presents the nature of data collected for network dynamics. Section three presents the '*tie churn*' in PNs. While section four presents the expansion and contraction of networks, section five deals with changes in the overall composition of PNs. Section six depicts changes in the overall structure of PNs. In the last section, findings of the study are summarized.

## **7.2. The Nature of Data**

Analysis of changes in PNs needs panel data wherein respondents are interviewed at least in two periods. This is the gold standard in analyzing network dynamics (Lubbers et al., 2010). The data in this study is, however, cross sectional and the panels are not observations of respondents' PNs in different years. Rather, the panels are the phases of entrepreneurship which indeed indicate the different periods in the entrepreneurial process. To collect the network data, three NG/I questions focusing on resources required in the three phases of enterprise development were developed. Respondents were then asked retrospectively to elicit members of their PNs whom they obtained support in each of the entrepreneurship phases. After listing the names of alters, respondents were asked to give information about the attributes of their contacts and the nature of relation they had/ have with them. They were also asked to mention if pairs of alters named do know each other. This information enables the researcher to evaluate how the composition and structure of PNs changes over the three phases.

Like other recall-based NG techniques, forgetting alters in respondents' network might be a problem. In fact, this is a persistent and an avoidable phenomenon in the recall-based elicitation of PNs (Brewer, 2000). As such, one has to consider that alters mentioned in each phase are samples of all possible alters that respondents have recalled (Brewer, 2000). Yet, forgotten alters may yield biased results if the objective of recalling is to spot and perhaps to contact all of those alters whom an individual has a particular link as is the case of tracing contacts for controlling the spread of infectious diseases (Brewer, 2000). As the objective of this paper is not to have a complete list of street vendors' PNs, the names mentioned in each phase are believed to be representatives of persons that street vendors contacted to obtain social support for enterprise development. As the definition of recall phases and associated resources are clearly demarcated, respondents can also properly recall their PNs in each phase. On top of this, re-interviewing of respondents has been exercised to increase the recalling ability of respondents. The listed alters in each phase can, therefore, be representatives of the situation under study.

In this study, respondents were asked to list their network members in each phases of entrepreneurship and to give information about the attributes of these network members and of the ties they have with them. In addition, data were collected about the ties that network members have among themselves in each phase. This enabled the researcher to study how the composition and structure of PNs change across the phases of enterprise development. Thus, changes in street vendor PNs reflect the conditions whether at the three stages different networks were detected or not. In other words, the network dynamics analysis does not necessarily indicate real life network changes of street vendors that can be observed through collecting panel data.

### 7.3. Tie Churn in Street Vendors' Personal Networks

Examining change in the PNs is not an easy task for researchers. A simple analysis of change in the size of networks cannot provide a clear picture of network dynamics (Feld et al., 2007). Suppose that a given respondent lists five alters in the opportunities phase and five alters in the resources phase. By simply observing the size of ties, one can infer that there is no change in network size. However, such kind of analysis does not show whether the ties are maintained or lost as activities shift from one phase to another. As argued by Borgatti and Halgin (2012), the problem in such analysis is that one cannot prove if the five alters mentioned in the opportunities phase are named at the resources phase or a respondent has totally changed his/her alters by dropping all the initial five alters and replacing them with five new contacts. Thus, to better understand changes in PNs, Feld et al. (2007) and later on Borgatti and Halgin (2012), recommend measures that describe the creation of new ties, the maintenance of existing ties, and the loss of old ones. This is termed as '*tie churn*' (Karnstedt et al., 2010; Sasovova et al., 2010).

For the sake of analyzing changes in PNs, in this section and also the sections that follow, changes in networks are divided into three categories: (1) changes from opportunities phase to resources phase, (2) changes from the resources phase to legitimacy phase, and (3) changes from opportunities phase to the phase of legitimacy. Figure 10 below shows summary of the tie churn statistics of these three categories of changes. As shown in the Figure, there are changes in the number of new ties created, ties kept, and ties lost in the PNs of respondents as they shift from one enterprise phase to another.

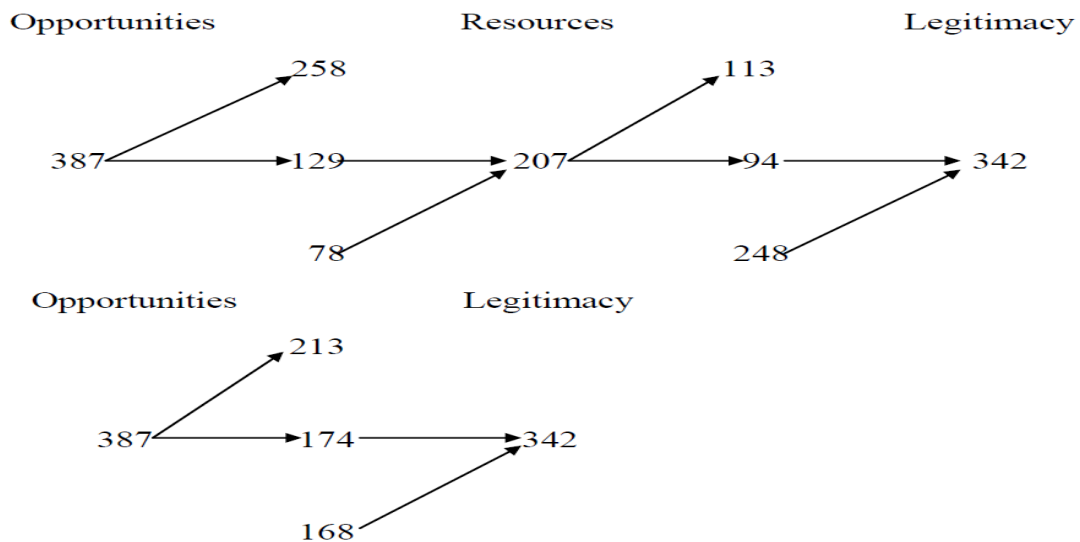


Figure 10: Changes in personal networks over the phases of enterprise development  
Source: Field Survey, April-November 2013.

The first analysis involves examining the change of ties from the opportunities phase to resources phase. In this phase, there are changes in the total number of ties. The total number of ties has declined by 47 percent from 387 to 207. There are also changes in ties lost, ties kept, and new ties created. While respondents lost two-third of their original ties, they were able to keep only one-third of the ties. In other words, 33 percent of alters who provided support in the opportunities phase were named as a source of financial and material support in the resources phase. The stability of PNs is, therefore, 33 percent.

In a shift from the opportunities phase to the resources phase, the number of lost ties exceeds the number of kept ties. This is probably because the opportunities phase is a time of gathering business ideas and information, hence, vendors can contact as many alters as possible to look for business opportunities (Elfring and Hulsink, 2003). But when it comes to obtaining critical enterprise resources (resources phase), only strong ties persisted and are able to provide financial and material resources. One-third of the contacts who were mentioned in both the opportunities and resources phase were family members and close friends. This result is consistent with Granovetter (1973; 1983; 1985) argument

that strong ties are the ones that are willing to provide critical enterprise resources for business start-up than weak ties do.

Evaluation of changes in PNs by gender and ethnic groups shows differences. In a shift from the opportunities to resources phase, women exhibited more stable networks than men. While the mean network stability of women is 0.96, it is 0.71 for men. The result is significant at  $t=2.13$ ,  $p<0.05$ . Ethnically, the *Gurages* have more stable networks than the *Amharas* and the *Oromos*. On average, the network stability of the *Gurages* is 1.04 followed by the *Oromos* 0.77 and the *Amharas* 0.68. The difference is significant at  $F=3.55$ ,  $p<0.05$ . Concerning new ties, men had more new ties (0.56) than women (0.45). Similarly, the *Amharas* with mean ties of 0.61 have more new ties than the *Oromos* (0.55), and the *Gurages* (0.35). However, the test statistics is not significant in both cases.

The second analysis of network dynamics involves the change of ties in a shift from the resources phase to the legitimacy phase. The legitimacy stage is a time of business start-up and obtaining legitimacy, hence, street vendors have to strive to establish as many contacts as possible to make their businesses endure market competition and make profit (Elfring and Hulsink, 2003). Thus, in this phase the number of ties has increased by 65 percent from 207 to 342. During this period, the proportion of new ties exceeds the proportion of old ties. While new ties account for about 73 percent of the ties, old ties account only 27 percent of the ties in the legitimacy phase. Of the 207 ties whom respondents obtained financial and material support, 113 (55 percent) are lost in the legitimacy phase. Comparison of network dynamics by gender shows that, on average, men displayed more new ties (1.74) than women (1.48). Among the ethnic groups, the *Gurages* (1.66) have got more new ties than the *Amharas* (1.59) and the *Oromos* (1.56). Likewise, on average, the *Gurages* have lost few ties (1.30) than the *Amharas* (1.80) and the *Oromos* (1.93). The difference is statistically significant ( $F=4.09$ ,  $p<0.05$ ).

The third case is analysis of changes in PNs is a shift from the opportunity phase to legitimacy phase. In a shift from the opportunity phase to the legitimacy phase, the number of ties has declined by 12 percent from 387 to 342. In the legitimacy phase, the numbers of new ties created and old ties kept are almost equal. While kept ties account for about 51 percent of the ties, new ties account for about 49 percent. Over all the pattern of change in the number of ties shows that respondents have increased the numbers of ties in the opportunities phase and decline in the resources phase. After the resource phase, there is an increase in the legitimacy phase. Figure 11 below depicts comparison of the number new ties, kept ties, and lost ties over the three shifts in the phases of entrepreneurship.

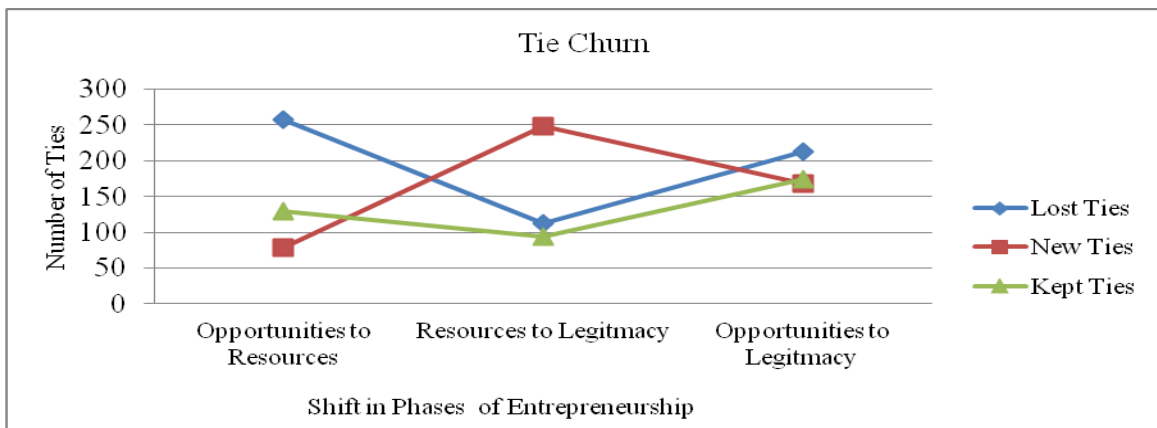


Figure 11: The number of new ties, kept ties, and lost ties over enterprise phases  
 Source: Field Survey, April-November 2013.

The other issue worthwhile in the study of change in networks is which ties persist in all the three phase? In this regard, researchers, (e.g., Lubbers et al., 2010), have shown that the persistence of ties is explained by tie strength, network density, and alters' residence. Of the total 387 ties mentioned at the opportunities phase, it is only 82 (21 percent) who were able to support respondents in all the three phases of enterprise development. A follow up of the social role of these persistent ties has shown that about 58 (71 percent) of the persisted ties are family ties and 17 (21 percent) of them are friendship ties. This implies that the strong family and friendship ties are the ties that provide persistent support in all the three phases of enterprise development.

#### **7.4. Change in the Expansion and Contraction of Ties**

Apart from the outcome of particular ties, the swap between ties gained and lost can determine the overall changes in the sizes of PNs, which can have repercussions for individual outcomes (Feld et al., 2007). As argued by Feld et al. (2007), the other question to be raised in the study of change in the PNs is the extent to which network size expand or contract following the entrepreneurial process. To address this issue, the level of analysis has to be changed from the individual tie to the network as a whole and the concern is the overall change in network size but not the persistence of particular ties (Feld et al., 2007).

The mean number of alters who were named as sources of support at the opportunities, resources, and legitimacy phases are calculated. This is important to know the phases that the street vendors obtained more support than the other phases. Comparisons by mean size of ties indicated that, the size of the street vendors support network has declined in the shift from opportunities phase to the resource phase. But, it has increased in the legitimacy phase. Across the three phases, the average number of alters has declined from 2.37 (opportunities phase) to 2.05 (resources phase). In the legitimacy phase, the average number of alters has risen to 2.50. The change in the mean number of ties mentioned is significant at  $F=5.28$ ,  $p<0.01$ . The low number of ties in the resources phase is perhaps because this is a stage that respondents require critical resources and hence the number of ties has narrowed down to close family and friendship ties. The Figure below gives almost the V shaped pattern of change in the mean number of ties over the three phases.

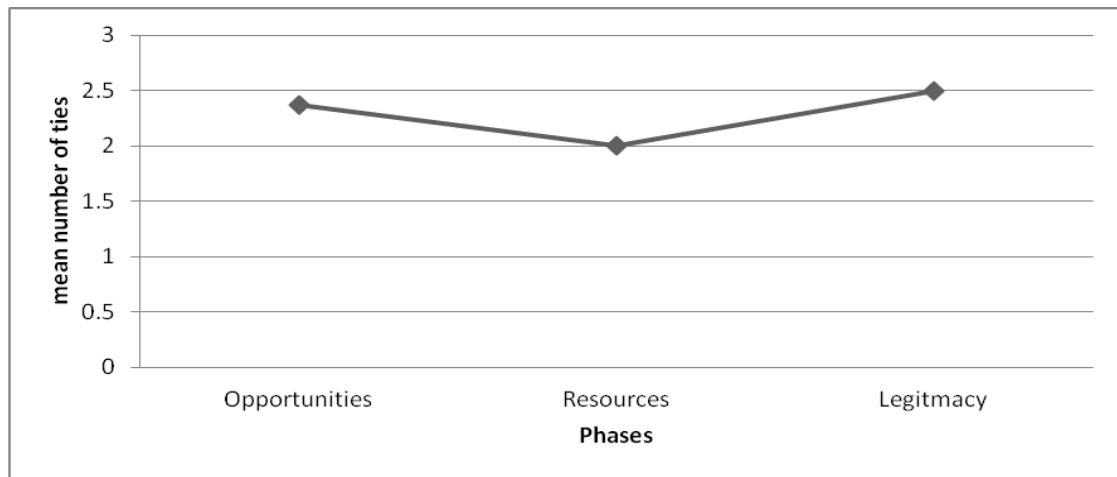


Figure 12: Changes in the mean number of ties over the phases of enterprise development  
 Source: Field Survey, April-November 2013.

### 7.5. Changes in the Overall Composition of Personal Networks

Considering the fact that resources needed by entrepreneurs differ across phases of entrepreneurship, there are several network characteristics that would be expected to have changed over the three phases. For example, one would expect that the proportion of men would have increased and the proportion of women would have declined. Thus, the third aspect in the change of PNs involves analysis of changes in the distribution of network characteristics as a whole (Feld et al., 2007). The question to be raised here is, do PNs change in terms of the proportion of alters who have particular characteristics, such as gender, ethnic group, marital status, education, occupation or in the proportion of network members that are family and non-family members? Does PN heterogeneity and homophily change over the entrepreneurial process? Do the structure of PNs change over the phases of enterprise development? The focus here is, thus, on changes in the overall PNs of respondents but not on particular ties.

To investigate changes in the overall composition of PNs, proportion of alter attributes and relational characteristics and homophily and heterogeneity indices were estimated for each phase. To examine the presence of significant changes in the overall



composition of PNs, one-way ANOVA is used. This section is divided into three sub-sections: changes in the proportion of alter attributes and relational variables, changes in network homophily, and changes in network heterogeneity.

### 7.5.1. Change in the Proportion of Alter Attributes and Relational Variables

#### 7.5.1.1. Change in Gender, Marital Status, and Age Composition

One of the techniques of analyzing changes in the composition of PNs is examining the proportion of alter attributes and relational variables in each phases of enterprise development. To start with gender characteristics, the proportion of men took the largest share of respondents’ networks in all the three phases of enterprise development. On average, while men account for about 62 percent of the PNs of street vendors across the three phases, woman account only 38 percent. The proportion of men and women alters, however, remains more or less same over the three phases of entrepreneurship. The ANOVA test result shows no significant difference in the proportion of men and women over entrepreneurial processes (see Appendix VII). Figure 13 below shows the proportion of men and woman over the phases of enterprise development.

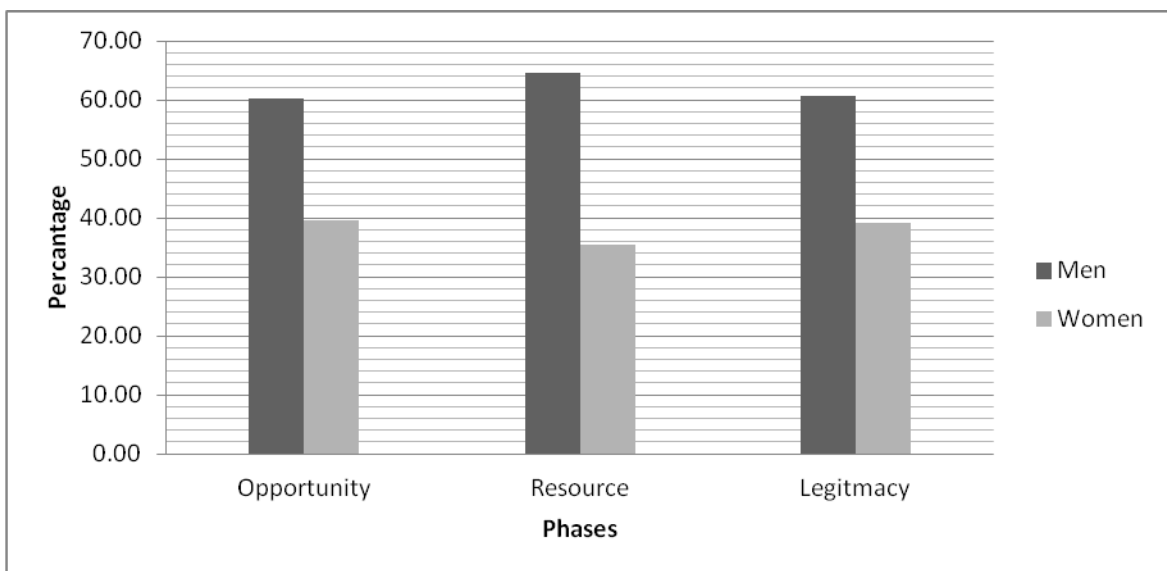


Figure 13: Proportion of men and women alters over the phases of enterprise development

Source: Field Survey, April-November 2013.

An examination of network composition by marital status shows that, on average, 64 percent of respondents' network is composed of married ties. This is perhaps due to the fact that married couples are matured and are socially and economically strong and able to provide social support to street vendors. The support of married alters is, however, higher during the resource phase (71 percent) than the opportunity phase (62 percent) and the legitimacy phase (58 percent). The change is significant at  $F=3.26$ ,  $p<0.05$  (see Appendix VII). On average, unmarried alters account for about 31 percent of the PNs of street vendors. The proportion of unmarried alters is high in the opportunities phase and the legitimacy phase accounting for about 35 percent of the PNs of street vendors in each phase. But it has declined to 23 percent during the resources phase possibly because unmarried persons are youngsters and are economically less strong to provide financial and material resources than married alters.

While discussing the marital status of alters, it is important to examine if there are changes in the age of contacts in the networks of respondents. There is a significant change in the age of alters over the phases of enterprise development. The mean age of alters in the resources phase is 37 years followed by the opportunity phase 34 years and the legitimacy phase 33 years. In here we can earn that there is relationship between marital status and average age of alters in the PNs of street vendors. For instance, the resource phase is characterized by the predominance of ties who are married and who are older in age than the ties in the other two phases (see Appendix VII).

#### **7.5.1.2. Changes in the Composition of Social Relations and Frequency of Contact**

As to the composition of PNs by social role, family ties took the largest share of respondents' PNs in all the three phases. On average, family ties account for about 50 percent of the PNs of the respondents across the three entrepreneurial phases. The social support of family ties is high in the resources phase accounting for about 67 percent of

respondents' PNs. This implies that small entrepreneurs significantly depend on family ties for financial and material resources. Next to the family, friendship ties provide the necessary business support. The social support of friends is high during the opportunity and legitimacy phases accounting for 31 percent and 30 percent respectively. During the resources phase, the contribution of friendship ties has declined to 17 percent. The change in the proportion of friendship ties is significant ( $F=6.57, p<0.01$ ).

The support of family ties has declined from the resources phase to the legitimacy phase by 97. This is perhaps because during the legitimacy phase entrepreneurs have to establish contacts with people in the work place in order to make their businesses profitable and to remain competitive in the market. As a result, during the legitimacy phase while the proportion of kinship ties has declined, the proportion of workmates and acquaintances has increased. The share of acquaintances accounts for about 14 percent in the opportunities phase but has declined to 7 percent in the resources phase. In the legitimacy phase it has increased to 15 percent (see Appendix VII). This result is consistent with the findings of Greve (1995) who found that persons who are in the later phases of the enterprise development have a larger proportion of work related contacts than people in the earlier phases of entrepreneurship. Figure 14 below shows the proportion of family and non-family ties over the phases of enterprise development.

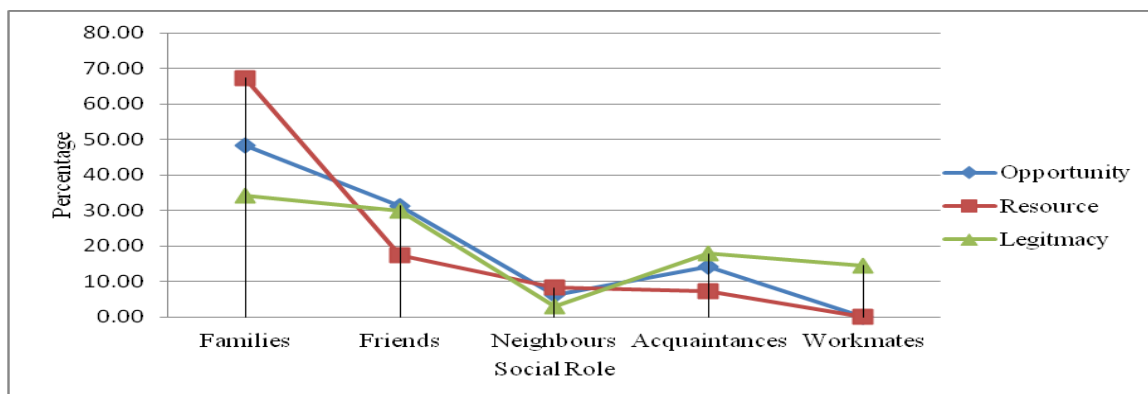


Figure 14: The proportion of family and non-family ties over enterprise phases

Source: Field Survey, April-November 2013.

In relation to social relations, SN study has frequently addressed the question of the frequency of contact between an ego and his/her alters. Such analysis can show the level of change in social interaction between actors in the network and the level of support that entrepreneurs can obtain from their ties (Granovetter, 1997). On average, 50 percent of respondents get in touch with their network members on a daily basis. This indicates the high degree of intimacy and closeness between respondents their contacts that are mostly of family and friendship ties.

The respondents' daily contact with their ties is high during the legitimacy phase accounting for about 62 percent followed by the opportunities phase (48 percent) and the resources phase (40 percent). The more frequent interaction during the legitimacy phase is for the reason that respondents have contacts on a daily basis with their workmates and acquaintances (mostly of suppliers and customers). Due to this, the daily contact of respondents with their ties has increased during the legitimacy phase. The changes on daily contact over the phases of enterprise development is significant at  $F=6.90$ ,  $p<0.01$  (see Appendix VII). There are no significant changes as contact frequencies of bi-weekly, weekly, monthly, and rarely are concerned.

Frequency of contact is a function of social and spatial closeness between an ego and his/her alters (Wellman, 1992). As discussed above, most of the family and friendship ties have/had frequent contact with family and friendship ties. Coming to spatial proximity, the majority of alters are found in Addis Ababa within few kilometers from respondents. On average, alters who live in Addis Ababa few kilometers far from respondents account for about 61 percent. The proportion of alters who live in Addis Ababa within few kilometers from the respondents residence account 58 percent of the ties in the opportunities phase, 57 percent in the resources phase, and 67 percent in the legitimacy phase. On average, alters in the neighborhood account for about 14 percent of

respondents PNs. The supports obtained from neighborhood ties do not, however, change significantly over the phases of enterprise development (see Appendix VII).

Family ties are especially able to endure over long distances because dense network structure and normative obligations promote contact (Wellman, 1992). Family and friendship ties are less likely than distant ties such as acquaintances and workmates to be local. On average, 10 percent of respondents' networks live rural areas. Ties from rural areas account for about 11 percent, 14 percent, and 5 percent of the PNs of respondents in the opportunities, resources, and legitimacy phases respectively. The change is statistically significant at  $F=3.39$ ,  $p<0.05$  (see Appendix VII). The contribution of distant family ties is high during the resources phase. These distant strong ties serve as source of social support for migrants to the city to start-enterprises. Also, this rural-urban network later on attracts further migration to city. In addition, distant ties living outside Addis Ababa but in other urban areas account for about 7 percent, 6 percent, and 5 percent of the PNs of respondents in the opportunities, resources, and legitimacy phases respectively. The Figure below shows the spatial proximity of alters over the three phases.

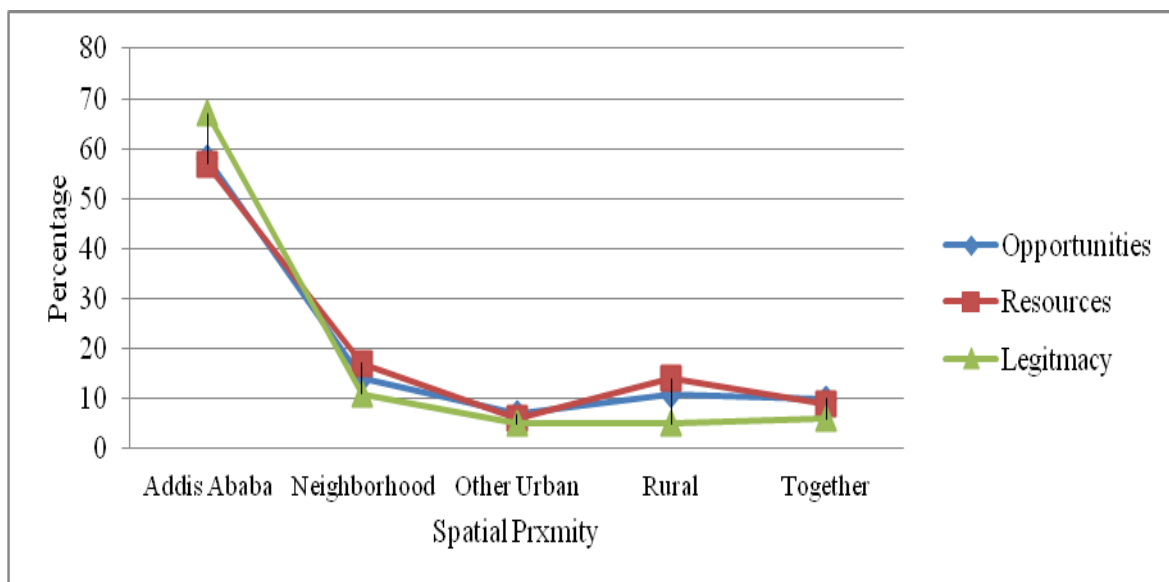


Figure 15: The spatial proximity of ties over the phases of enterprise development

Source: Field Survey, April-November 2013.

The length of acquaintance between respondents and their contacts has changed over the phases of enterprise development. While the average length of acquaintance at the resources phase is 15 years, it is 13 years and 10 years in opportunity and the legitimacy phases respectively. The longer period of acquaintance in the resource phase is probably due to the fact that family ties took the lion's share in providing financial and material support for enterprise start-up. Accordingly, the more intimate the relationship, the longer the duration of acquaintance. The short period of acquaintance in the legitimacy phase is because there are new ties created after the establishment of enterprises. The more new members introduced into PNs, the more the average length of acquaintance declines.

#### **7.5.1.3. Changes in Occupation and Income Composition**

An examination of respondents' PN composition by occupation shows that, on average, alters engaged in microenterprises account for about 54 percent of the networks in the opportunities phase followed by 48 percent in the legitimacy phase and 41 percent in the resources phase. But no significant changes are observed over the phases of enterprise development. Unlike microenterprises, there are changes in the composition of ties that are owners of medium and large-scale enterprises. On average, owners of medium and large-scale enterprises, account for about 3 percent of the PNs of respondents in the opportunities phase. In the resources and legitimacy phases, however, their proportion has increased to 13 percent and 16 percent respectively. This is because these people are economically better-off and able to provide financial and material support for business start-up in the resources phase. In the legitimacy phase too, respondents look for people who can supply them goods and services for their businesses. In most cases, these are wholesalers that are owners of large enterprises. The change in the proportion of these alters is significant at  $F=10.29$ ,  $P<0.01$ .

Like other alter attributes, there is a change in the average monthly income of alters over the three phases of enterprise development. The income of alters is low at the opportunities stage, i.e., ETB 1259.00. This is because the opportunities phase is a time of identifying opportunities and, hence, respondents are not in a position to seek financial and material resources for enterprise start-up. In the resources phase, however, the monthly income of alters has increased to ETB 2074.00 as it is a time when entrepreneurs look for financial and material support to realize the businesses identified during the opportunities phase. Respondents, thus, resort their attention and look for support from economically better off contacts. The average monthly income of alters in the legitimacy phase, i.e., ETB 2153.00 is higher than the resources and opportunities phases (see Appendix VII).

#### **7.5.2. Change in Network Homophily**

In a review of SN studies, McPherson et al. (2001) found that people exhibit a strong tendency toward homophily. Similarities in ego-alter attributes such as age, gender, marital status, religion, ethnicity, income, and education characterizes the formation and dissolution of PNs over time. Homophily strongly affects affection because people expect in advance that self-similar alters are more likely to accept them and become dependable (Rivera et al., 2010). As a result, the social support obtained may increase with the strength of the relationship.

Network homophily, as a measure of individuals PNs, changes over time depending on changes in circumstances that make people to get together (Greve, 1995; Rivera et al., 2010). The hypothesis in here is that, as entrepreneurs need different resources in each phase of the entrepreneurial process, network homophily could have changed over the phases of enterprise development. Table 26 below shows the comparison of sameness proportion and homophily indices of respondents over the entrepreneurial phases.

Table 26: ANOVA test results for same-proportion and homophily indices over phases of enterprise development<sup>29</sup>

S. No	Attribute	Phases			F
		Opportunity	Resources	Legitimacy	
1	Gender	0.56 (-0.27)	0.50 (-0.06)	0.56 (-0.28)	1.12
2	Marital status	0.30 (0.05)	0.31 (0.17)	0.30 (0.05)	0.03
3	Religion	0.41 (-0.57)	0.59 (-0.68)	0.39 (-0.55)	16.20***
4	Ethnicity	0.53 (-0.58)	0.67 (-0.75)	0.42 (-0.28)	22.50***
5	Education	0.11 (0.62)	0.15 (0.57)	0.15 (0.57)	0.90
6	Age	0.02 (0.92)	0.04 (0.91)	0.04 (0.89)	0.49
7	Income	0.05 (0.88)	0.04 (0.90)	0.04 (0.87)	0.07

Source: Field Survey, April-November 2013.

As shown in Table 26, respondents are homophilous in terms of gender, religion, and ethnic characteristics. Gender homophily index is relatively higher in the opportunity phase with a homophily index of -0.27 and legitimacy phase with a homophily index of -0.28. In the resources phase, gender homophily has declined to -0.06. During the resources phase, gender homophily is low because during this stage women entrepreneurs obtained financial and material supports from men as men are socially and economically stronger than women. This makes gender homophily lower than the opportunities and legitimacy phases. The change in gender homophily is not, however, statically significant.

As indicated in Table 26 above, respondents are more religious homophilous during the resources phase (-0.68) than the opportunity phase (-0.57) and the legitimacy phase (-0.55). During the resources phase, respondents have established more networks with people of the same religion than the other phases. This is attributed to the fact that family ties are sources of financial and material support in the resources phase and these family ties are of same religion to an ego. During the legitimacy phase, religion homophily

<sup>29</sup> Figures in the parentheses are homophily indices-test results are for sameness-proportion scores.



is relatively low because at this stage the role of the family has declined and respondents have created contacts with workmates and acquaintances from other religious groups.

Next to religion, street vendors are ethnically homogenous in all the three phases. Respondents are more ethnically homophilous during the resources phase (-0.75) than the opportunity phase (-0.58) and the legitimacy phase (-0.28). The change in mean homophily index is significant at  $F=22.5$ ,  $p<0.01$ . Unlike religious and ethnic characteristics, street vendors are somewhat less homogenous as regards marital status, education, income, and age. But no significant change is observed in the homophily index of these attributes over the three phases (see Table 26).

### 7.5.3. Change in Network Diversity

As discussed in chapter 5, street vendor are generally characterized by low network diversity. In fact, the PNs of street vendors are relatively diverse in attributes such as education, occupation, social role, income, and age compared to marital status, religion, and ethnicity. The discussion in this sub-section is to examine if the network diversity of street vendors' change following the phases of the entrepreneurial process or not. Table 27 below shows changes in network diversity across the phases of enterprise development.

Table 27: ANOVA test results for network diversity indices over the enterprise phases

S. No	Attribute	Phases			F
		Opportunity	Resources	Legitimacy	
1	Gender	0.19	0.12	0.21	6.71 <sup>***</sup>
2	Marital status	0.10	0.01	0.11	14.12 <sup>***</sup>
3	Religion	0.00	0.00	0.00	0.00
4	Ethnicity	0.08	0.00	0.12	18.69 <sup>***</sup>
5	Education	0.15	0.02	0.15	21.23 <sup>***</sup>
6	Occupation	0.30	0.12	0.28	21.57 <sup>***</sup>
7	Social role	0.20	0.07	0.25	24.51 <sup>***</sup>
8	Age	2.36	0.39	2.69	16.19 <sup>***</sup>
9	Income	291.73	195.24	681.14	13.86 <sup>***</sup>

Note <sup>\*\*\*</sup>  $P < 0.01$ , <sup>\*\*</sup>  $P < 0.05$

Source: Field Survey, April-November 2013.

As shown in Table 27, street vendors are characterized by low network diversity. The diversity indices of all attributes are below the average of 0.5. Though network diversity is low, there are changes in network heterogeneity over the phases of enterprise development. As indicated in the Table, the resources phase is characterized by low diversity in all attributes. In contrast, in the opportunity and legitimacy phases, respondents exhibit diverse networks. For instance, respondents are gender diverse by 12 percent in the resources phase. Gender diversity is relatively high during the opportunity and legitimacy phases with a mean diversity index of 0.19 and 0.21 respectively. The change in gender diversity is statically significant ( $F=6.71$ ,  $p<0.01$ ). Marital status is another attribute that serves as a factor in selecting PN and getting social support out of it. The resource phase is characterized by zero diversity. But the opportunity and the legitimacy phases are characterized by heterogeneity index of 0.10 and 0.11 respectively.

The condition of religion and ethnic diversity is an extreme case. Respondents' networks are less diverse as religion and ethnicity are concerned. Across the three phases, religious diversity is zero. This shows that religion is a very decisive attribute for street vendors to obtain the necessary social support in the various stages of enterprise development. Ethnically, respondents' PNs are diverse, on average, by 8 percent during the phase of identifying opportunities. In the resource phase, ethnic diversity is zero. Ethnic diversity has increased to 12 percent during the legitimacy phase. This is a period when entrepreneurs start a fully fledged operation of their enterprises and able to contact with acquaintances and workmates outside to their ethnic circles. The change in ethnic diversity is significant ( $F=18.96$ ,  $p<0.01$ ).

Respondents are educationally diverse, on average, by 2 percent in the resources phase. In the opportunity and legitimacy phases, however, the mean diversity index is 15 percent. The change in educational diversity is significant ( $F=21.23$ ,  $p<0.01$ ). As to

occupational diversity, respondents exhibit low diversity index during the resources phase. This is probably because of their strong tendency to family and friendship ties which are engaged in similar occupations mostly of microenterprises. The opportunity and legitimacy phases exhibit a diversity index of 0.30 and 0.28 respectively. The change in occupational diversity is significant (see Table 27).

Age and income are also relatively diverse. There are significant changes in the age and income diversity of alters. Street vendors display contacts of diverse ages during the opportunity and legitimacy phases with a diversity index of 2.36 and 2.69 respectively. In the resource phase, respondents display a relatively low age diversity index of 0.39. This is perhaps because street vendors have obtained support from same old age groups. The change in age diversity is significant at  $F=16.19$ ,  $p<0.01$ . Coming to income, the diversity is found to be ETB 292.00, ETB 195.00, and ETB 681.00 during the opportunity, resource, and legitimacy phases respectively. The high income diversity during the legitimacy phase is probably due to the fact that during this phase street vendors establish contacts with owners of large-scale enterprises who are economically strong, on one hand, and workmates who are economically less strong on the other.

#### **7.6. Change in the Structure of Personal Networks**

Besides the change in the composition of street vendors' PNs, there could have been changes in network structure. The changes in network size, composition, and the changes in the ties maintained, ties created, and ties lost might affect the overall changes in the structure of street vendors' PNs. To evaluate changes in the structure of street vendors' PNs, structural holes measures were calculated for each phase of enterprise development. Table 28 below shows the ANOVA test results for structural holes measures estimated for the three phases of enterprise development.

Table 28: ANOVA test results of network structure measures over the phases of enterprise development

S. No	Measure	Phases			F statistics
		Opportunity	Resources	Legitimacy	
1	Density	0.26	0.28	0.20	4.63**
2	Effective Size	1.82	1.65	1.99	6.13***
3	Efficiency	0.70	0.65	0.75	6.15***
4	Constraint	0.73	0.78	0.68	4.21**

Note \*\*\* P< 0.01, \*\* P<0.05

Source: Field Survey, April-November 2013.

As shown in Table 28, the resources phase is characterized by relatively more dense networks (0.28) than the opportunity (0.26) and legitimacy(0.20) phases. The change in the network density over enterprise phases is significant. The relatively high network density of networks in the opportunity and resource phases is the reflection of the presence high proportion of family and friendship ties who do know each other. In the legitimacy phases, the proportion of strong ties is relatively low as street vendors have created contacts with acquaintances and workmates who may not know each other. As a result, network density in the legitimacy phase has declined. The change in network density is significant (F=4.63, p<0.05).

A change in network structure is also observed concerning effective size and efficiency. As shown in Table 28, the resource stage is characterized by low effective size. This is perhaps attributed to the fact that the majority of ties are family members and friends who, in most cases, do now each other. The information acquired from strong ties is, thus, more redundant than the information obtained during the opportunities and the legitimacy phases. But efficiency is low at the resources phase implying that respondents' network is less efficient or more redundant than the network efficiency in the opportunity and legitimacy phases. While the efficiency index of the resource stage is 0.65, it is 0.70 and 0.75 in the opportunity and legitimacy phases respectively. The change in efficiency over the phases of enterprise development is significant (F=6.15, p<0.01).

Evaluation of respondents' network constraint shows significant changes over the phases of enterprise development. As indicated in Table 28, network constraint is high in the resources phase 0.78 followed by the opportunities phase 0.70 and the legitimacy stage 0.68. The high constraint index of respondents in the resources stage is the reflection of street vendors' overreliance on strong family and friendship ties that do know each other and who bring redundant information to the respondents.

### **7.7. Summary of Findings**

Enterprise development is not a revolutionary activity rather it is evolutionary and passes through different stages. The argument is that as entrepreneurs shift their activities from one phase to another, the configuration of networks might change. This chapter of the dissertation has presented results of the study on changes in PNs of street vendors over the phases of enterprise development. Accordingly, the study has revealed significant changes in the total number of ties over the phases of enterprise development. There are also changes in the number of new ties created, ties kept, and ties lost as respondents shift their actions from one phase to another. The study also found differences in the ties created, ties kept, and ties that are lost between gender and among ethnic groups.

Examination of the proportion of alters attributes and relational variables shows that men took the largest share of respondents' networks in all the phases of enterprise development. The contribution of men contacts is high during the resources phase compared to the other phases. Network composition by marital status shows that the majority of alters are married. The support obtained from married ties is higher during the resource phase than the opportunity and the legitimacy phases. Alters in the resources phase are older than alters in the opportunities and legitimacy phases.

As to social relations, family ties took the largest share in all the three phases of enterprise development. The support of family ties is, however, high in the resources phase

and declined in the legitimacy phase. Next to family, friendship ties provide support for entrepreneurs in the process of enterprise development. The support of friends is higher during the opportunity and legitimacy phases than the resources phase. The role played by acquaintances and workmates is, however, more remarkable in the legitimacy phase. The role of family is dominant in the resources phase and this is in line with the Granovetter's (1973) theory that close networks provide entrepreneurs with the critical resources as well as emotional support needed for business development. The support obtained from distant strong ties is high during the resources phase.

It is argued that both strong and weak ties are important and contribute to the emergence and growth of enterprises. The benefit obtained from weak and strong ties varies over different stages of enterprise development (Elfring and Hulsink, 2003). For example, weak ties provide access to diverse set of topics including identification of profitable businesses, potential markets for goods, and information on merits and demerits of engaged in a certain business type. Weak ties are also proposed to lead to more varied set of information and resources than strong ties can and consequently weak ties enhance the ability of entrepreneurs to spot opportunities (Elfring and Hulsink, 2003). Though there are changes in the proportion of weak and strong ties over the phases of enterprise development, strong ties are dominant in all of the three phases. As a result, the benefit obtained from weak ties is minimal.

Respondents are found homophilous in terms of gender, religion, and ethnic characteristics. Religion and ethnic homogeneity are higher during the resources phase than the opportunity and the legitimacy phases. Respondents also exhibit low network diversity. However, there are changes in diversity over the three phases. The resources phase displays less diverse networks in all attributes. In contrast, the opportunity and legitimacy phases display diverse networks. Moreover, the changes in the network size,

composition, and changes in the ties kept, ties created, and ties lost have changed the structure of street vendors' PNs. Analysis of change in PNs of respondents also shows the presence of changes in network structure. In sum, from the analysis we can infer that respondents PNs have shown significant changes on tie churn, network size, network composition, and network structure over the three phases of enterprise development.

## Chapter 8

### Street Vendors' Personal Networks and Enterprise Performance

#### 8.1. Introduction

There is a growing literature that shows the significance of PNs to entrepreneurs economic outcomes (Aldrich and Zimmer, 1986; Davidsson and Honig, 2003; Semrau and Werner, 2009). The available literature indicates that PNs allow entrepreneurs to identify opportunities and mobilize resources for instrumental actions (Batjargal, 2003; Elfring and Hulsink, 2007; Bhagavatula et al., 2010). Despite immense interest in the field, there is lack of consensus about the role of networks in the performance of enterprises (Stuart and Sorenson, 2007). This is mainly because researchers have used different definitions of the concept, different levels of analysis, and different research approaches (O'Donnell et al., 2001). Indeed, there are differing stances about network properties that constitute the measurement of SNs (Hoang and Antoncic, 2003; Jack, 2010; Stam et al., 2014).

While some studies (e.g., Singh, 2001; Klyver and Terjesen, 2007; Xiao and Tsui, 2007; Stam, 2010) have focused on network structure following Burt's structural holes argument, others (e.g., Aldrich et al., 1987; Jack et al., 2004; Jack, 2005; Berrou and Combarous, 2012) have considered the strength of network relationships following Granovetter's strength of weak ties theory. Yet, others gave attention to the embedded resources held by alters following Lin's social resources theory. Among the empirical studies on network resources include Lin et al. (1981), Lin and Dumin (1986), De Graaf and Flap (1988), Marsden and Hurlbert (1988), Berrou and Combarous (2011), Martinez and Aldrich (2011), and Son and Lin (2012). Some scholars, e.g. Chiesi (2007), combined the relational, structural, and resources perspectives in their SC studies. Debates are still prevalent concerning the importance of sparse Vs dense network structures, weak Vs strong ties, and heterogeneous Vs homogeneous networks. As a result, the dimensions of



entrepreneurs' PNs that supplement enterprise performance remain inconclusive and subject to research (Hoang and Antoncic, 2003; Stam et al., 2014).

The question to be raised here is that which perspective properly addresses the benefits of PNs and helps street vendors enhance their enterprise performance? This study attempts to answer this question and empirically contributes to the dispute on the dimensions of PNs that augment enterprise outcomes. In so doing, the causal effect of the relational, structural, and embedded resources dimensions of PNs on enterprise income is examined. The effect of network properties is estimated using the OLS regression. Instrumental variable estimators are employed to control for the possible endogeneity effects of network measures on enterprise income. By doing so, it is possible to evaluate the network dimension that contributes to enterprise performance.

The chapter is subdivided in to six sections. Following the introduction in section one, section two presents the three dominant network perspectives and hypotheses of the study. Section three shows the variables and their measurements. Section four deals with the regression model used for the study. While section five presents the discussions of the results, the last section provides summary of the findings.

## **8.2. Theory and Hypotheses**

Given the importance SC in economic outcomes, it is familiar to see that researchers in the field have shown differential focus on one of the three dimensions of SC: relational, structural, and embedded resource perspectives. As argued by Lin (1999a), these perspectives are classified into two categories as embedded resources and network locations. While the relational and structural dimensions measures individual's position in a network, the resource dimension demonstrates the resources embedded in a network of relations (Lin, 1999a).

The relational perspective is in line with Granovetter's (1973) 'strength of weak ties' argument. Granovetter (1973) distinguishes between weak and strong ties and he claims that weak ties are crucial for business performance. The importance of weak ties comes from their bridging function. The central hypothesis is that strong ties create closed networks whereas weak ties enable access to new social circles beyond individuals' immediate network. Weak ties then play a vital role in the circulation of non-redundant information (Granovetter, 1995; Granovetter, 2000). Empirical studies, however, show contradictory results on the effect of strength of ties on economic outcomes.

For instance, in a study of the Ghanaian manufacturing sector, Barr (2002) found that solidarity networks have little impact on economic performance. Singh et al. (1999) found that entrepreneurs in the information technology industry with more weak ties have higher number of opportunities than those having fewer weak ties. In contrast, Bruderl and Preisendorfer (1998) reveal that strong ties were more critical than weak ties in explaining firm success as measured by firm survival. In their study of PNs and entrepreneurial outcomes, Berrou and Combarous (2012) found that strong ties have a significant positive impact on economic outcomes of entrepreneurs. Likewise, Bian and Ang (1997) reveal that *guanxi*<sup>30</sup> networks in China and Singapore help workers to get and to change jobs. They realize that unlike the findings from the West, which demonstrate the importance of weak ties, strong ties were found to be significant in the context of China and Singapore.

Other studies show the importance of both strong and weak ties depending on circumstances studied. For example, in a study of agricultural traders in Madagascar, Fafchamps and Minten (2001; 1999) reveal that weak ties are critical for accessing and sharing market information. They also emphasize the significance of strong ties for risk

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<sup>30</sup> *Guanxi* means relationship or relation but is extended to mean the connections that allow for reciprocity (Bian and Ang 1997).

sharing and also for market relations with suppliers and customers. Uzzi (1996) studied the networks of manufacturing firms and found a curvilinear association between the extent of embedded ties and firm survival. He founds that very weak or very strong extended networks had a negative effect on firm survival because too weak and too strong ties limit the benefits obtained in either of the two ties.

The empirical literature indicates that there is no consensus on the effect of strength of ties on economic outcomes. As argued by Granovetter (1973, 1983), lack of agreement on the effect of the strength of ties is contingent upon the social context of the countries studied. Street vendors in the informal economy of Addis Ababa to a great extent depend on strong ties for their day-to-day business activities. Thus, in view of the context of the Ethiopian informal economy where strong ties play a significant role, the researcher proposes that:

H0: Strong ties do not have a significant positive effect on enterprise profit

H1: Strong ties have a significant positive effect on enterprise profit

The second important network perspective in entrepreneurship research is emphasis on the network structures and their impact on entrepreneurial outcomes (Xiao and Tsui, 2007). Burt 's (1992, 1997; 2000) network structural argument claims that the position of actors in a network has an impact on resource flows and on enterprise outcomes. The actions and outcomes of an entrepreneur can be predicted by the position he/she occupies in a network (Xiao and Tsui, 2007). Burt (1992) argues that an individual who 'broker' different connections has more SC than an individual who does not hold brokering positions. Brokers have more access to non-redundant information and hence more prospects(Hoang and Antoncic, 2003). This bridging position helps actors to obtain new ideas and new capabilities that will enhance enterprise performance ( Zaheer and McEvily, 1999; Baum et al., 2000; Xiao and Tsui, 2007).

There are conflicting results on the effect of network brokerage on economic outcomes. While some confirm the importance of the brokerage argument of SC, others challenge it. For instance, in a French chemical firm, salary increases were more likely for individuals who span structural holes (Burton et al., 2010). Mehra et al. (2001) found that supervisors in a small technology company who broker connections have got higher performance evaluations than employees whose networks bridged otherwise disconnected parts of their organizations. Klyver and Terjesen (2007) also found that an entrepreneur who holds a brokerage position obtains diverse information and hence better enterprise performance.

In contrast, in their study of four high-tech companies in China, Xiao and Tsui (2007) found that brokers do not work in the collectivistic values of China as the Western do. Their study reveals that the more an organization possesses a clan-like and high-commitment culture, the more the brokerage position becomes less important for employees' career achievements. Collecting data from 159 software entrepreneurs in Beijing and Moscow, Batjargal (2010) found that structural holes have a positive effect on product portfolio but a negative effect on profit growth in the early stage of enterprise development. The study shows that structural holes are more helpful in the Russian institutional context compared to the Chinese environment. The effect of brokerage is context specific and it varies depending on the context of countries under study. Owing to the dense network structure of street vendors in Ethiopia, the researcher proposes that:

H0: Network constraint does not have a positive effect on enterprise income.

H1: Network constraint has a positive effect on enterprise income.

The third network approach, which is a subject of network research, is the embedded resources perspective (Lin, 1981). The embedded resources perspective gives emphasis to the resources embedded in the networks rather than the strength of ties or

structure of networks. This perspective argues that it is not the weak ties or bridging function that gives benefit to individuals; rather, it is the resources embedded in the network that matters for enterprise success. “Not all bridges or weak ties lead to better information, influence, social credentials or reinforcement”(Lin, 1999a:36). As to Lin (1999a) social resources are classified as contact resources and network resources.

Most of the previous studies (e.g., Lin et al., 1981; Marsden and Hurlbert, 1988; De Graaf and Flap, 1988; Berrou and Combarous, 2012; Son and Lin, 2012) have focused on the contact resources perspective. The findings of these studies show that higher occupational position of alters is associated with better outcomes. Son and Lin (2012) found that the diversity of contact resources gives a relative advantage for instrumental actions. Kalmijn and Flap (2001) also discover that contact network diversity reduces the degree of in-group constraints on resources. Similarly, Uzzi (1996) found that entrepreneurs’ contact resources diversity positively influence enterprise performance. Thus, in this study, the hypothesis is that:

H0: Contact resources heterogeneity does not have a positive effect on enterprise income.

H1: Contact resources heterogeneity has a positive effect on enterprise income.

Some other studies (e.g., Lin and Dumin, 1986; Van der Gaag et al., 2004; Van der Gaag, 2005) focus on network resources measured by the range of occupational status, network range, and the highest occupational status reached. The findings of these studies show that access to contacts having higher socioeconomic status leads to better outcomes. In sum, studies of embedded resources have found that both the accessibility and the actual mobilization of resources play a crucial role in finding jobs (Lai et al., 1998; Van Der Gaag and Snijders, 2005). Accordingly, in this study it is hypothesized that:

H0: Network resources do not have a positive effect on enterprise income.

H1: Network resources have a positive effect on enterprise income

### **8.3. Variables and their Measurement**

#### **8.3.1. Outcome Variable: Enterprise Profit**

Enterprise performance is a dependent variable. In the literature there are various indicators of enterprise performance such as growth in sales, business turnover, profit, assets, enterprise survival, and employment growth (Garoma, 2012). Employment growth is one of the most frequently used measures (Bigsten and Mulu, 2007). An enterprise is successful if it increases the number of its employees. The assumption is that growth in employment size is related to enterprise profit (McPherson, 1996). Chiesi (2007) used employment growth as a measure of enterprise performance. In this study, the use of employment growth is not viable because street businesses are usually managed by a single person.

McPherson (1995) measures performance by enterprise age. The logic is that the longer the age in business, the more successful the business is. Business survival, however, requires panel data (Garoma, 2012) and hence not applicable in cross-sectional studies. Robb and Fairlie (2007) use profit as an indicator of enterprise success. Van Dijk (2005), however, argues that as business owners do not keep complete record of business transactions, they might not realize the true financial values. Estimating profit is also sensitive to regulation and taxation problems. Moreover, personal and business accounts are usually mingled within a single cash box (Honig, 1998). Despite such limitations, profit is the most widely used measure of enterprise performance (Garoma, 2012).

In this study, profit is used as an indicator of enterprise performance. This is because the ultimate objective of enterprise formation for poor street vendors is earning income to sustain their urban life (Kantor, 2005). To establish reliable profit, street vendors were asked a series of questions related to average monthly business expenses and

average monthly sales volume. Profit was, therefore, reduced by expenses including wages, rent, repairs, supplies, parts, and maintenance. Income derived from other sources was excluded from profit calculation. Profit is expressed in Ethiopian Birr and its logarithm is used to pull outliers from a skewed distribution closer to the bulk of data to be normally distributed.

### **8.3.2. Predictor Variables: Network Measures**

**Strength of Ties:** The strength of a tie is defined by Granovetter (1973: 1361) as “a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the ties”. The original definition of Granovetter was not to provide technical issues regarding empirical assessment (Marsden and Campbell, 1984). However, measures of tie strength were first identified by Marsden and Campbell (1984). Marsden and Campbell (1984) identify closeness (intensity of a relationship), duration and interaction frequency (amount of time), and the degree of mutual confiding (intimacy) as measures of ties strength. In their publication on “reflections on conceptualizing and measuring tie strength”, Marsden and Campbell (2012) also note that, nearly thirty years after completing the 1984 research, closeness and frequency of contact remain important measures of tie strength.

Marsden and Campbell (1984) claimed that indicators of tie strength are ‘somewhat independent though also ‘obviously highly correlated’. In order to evade the multicollinearity between the measures of tie strength, a quantitative measure based on three dimensions of tie strength (closeness, contact frequency, and trust closeness) was developed. Duration of acquaintance is excluded in the calculation of tie strength. This is because, as argued by Marsden and Campbell (1984) the benefit (in terms of tie strength) of increased duration of acquaintance declines with length of relationship. Besides, the length of relationship is contaminated by the age of respondents in that older respondents

may have longer period of relationships because of their age than the young ones. Using duration of acquaintance as a measure of ties strength will, thus, result in a biased figure of tie strength.

Data for calculating tie strength were derived from NI items of the core network data. Information on closeness is collected on five point category. Respondents were asked to indicate if each alter named is a kin (5), a friend (4), a neighbor (3), a workmate (2), and an acquaintance (1). Frequency of contact is also measured in five order categories with responses ranging from rarely (1), monthly or every two weeks (2), weekly (3), twice or three times a week (4), to daily (5). Similarly, mutual trust was measured on a five level Likert scale ranging from strongly trust (5) to strongly never trust (1). For the purposes of summarizing the values of the five scaled variables and calculating average tie strength, the values were transformed into a range from 0 to 1, from the weakest (0) to the strongest tie (1). This quantitative measure of ties strength then offers a more inclusive approach than the dichotomized measures of strong or weak ties (Berrou and Combarous, 2012).

**Network Constraint:** several measures have been employed to understand the structural positions of individuals in a network (Hoang and Antoncic, 2003). Network size, density, effective size, efficiency, and constraint are the measures of network structure (Burt, 1992). Due to the problem of multicollinearity, the researcher uses network constraint as a proxy measure to network structure. Constraint is used as a proxy of network structure because it is a function of other three structural holes measures including network size and density. Constraint measures the extent to which the focal actor's network lacks a brokerage role (Xiao and Tsui, 2007). To construct the constraint index, respondents were asked about the relationships that exist between egos alters. They were asked to indicate whether the pairs of alters are strangers or know each other.



**Embedded Resources:** to analyze the embedded resource approach of networks, data were collected through both NG and PG techniques. While contact resources heterogeneity is constructed from NG data, network (accessible) resource indicators are constructed from PG data. To measure the contact resources in networks, heterogeneity index was calculated. High heterogeneity implies integration into several spheres of society which is advantageous for instrumental action (Marsden, 1987). As networks are composed of people with many different attributes, a researcher should choose which dimension of heterogeneity is pertinent as a person's network can be heterogeneous in some respects and homogeneous in others (Marsden, 1987). To minimize such problem, instead of using the heterogeneity index of a single attribute, the researcher uses a composite measure as it gives a concise measure of network diversity. The composite heterogeneity index is calculated from alter attributes including gender, ethnicity, religion, marital status, education, and occupation. Consequently the composite diversity index gives a summary score of six socio-demographic characteristics pertaining to ego-alter relationships.

In order to measure access to network resources, researchers have used various proxies. These measures are derived from PG data (Van der Gaag, 2005). The measures include 'upper reachability', resource heterogeneity', 'extensity of network positions', 'SC volume', and 'average accessed position'<sup>31</sup> (Campbell et al., 1986; Lin, 1999b; Lin, 2002; Van der Gaag et al., 2004; Van der Gaag, 2005). Though there are diverse proxies of network resources, there are limitations in some of these measures in using them as measures of accessible resources. For example, the number of accessed positions and range in accessed prestige measure variations in SC accessed by respondents. However, the problem is that two individuals can access the same number of occupations or ranges in

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<sup>31</sup> These measures are discussed in detail in the research methods section.

prestige but while one person mostly accesses high prestige positions, the other might access low prestige occupations (Van der Gaag, 2005).

Yet, using average accessed prestige as a proxy of network resources has limitations in that one respondent having access to one position and another person with access to various positions may have the same average accessed prestige. Thus, using these three measures in our regression model may lead to a biased result. Also, the researcher did preliminary regression analysis involving the PG measures and the control variables. The results of preliminary regression analysis indicate the presence of multicollinearity problem between the five measures of accessible resources with an average variance inflation factor (VIF) of 39.25. Due to such limitations, in this study, SC volume is used as a proxy measure of accessible resources because it gives a valid estimate of total resources accessed by a respondent (Van der Gaag, 2005).

### **8.3.3. Control Variables: Entrepreneur and Enterprise Characteristics**

Many variables that have been shown to influence enterprise performance are controlled for. The researcher controlled for age of street vendors assuming that it does have inverse relation with profit. As individuals grow older, they are less likely to invest to expand their enterprise and hence less income achieved (Rooks et al., 2009). Gender is included in the model to control for various characteristics such as trouble to manage business, household duties, networks, restricted mobility, physical strength, nature of business, and discrimination. Gender is a dummy variable (women= 1). Human capital is positively related to profitability. Aspects of human capital that are pertinent to economic outcomes include vocational training, formal education, and previous business experience (Kantor, 2005).

The researcher included education by respondents' years of schooling. Vocational training is a dummy variable capturing if a respondent has training before or after starting

business. Previous business experience is also a dummy variable examining if a respondent had previous business experiences before joining street activities (1=yes). Age of an enterprise is another factor that is accounted for. The proposition is that with increased age in business profit increases. The presence of a spouse may positively influence profit. The researcher added a dummy variable marital status (married = 1).

Indigenous ethnicity is included into the analysis as different ethnic groups have different business behavior and different composition and structure of PNs (Mengstie, 2001). Ethnicity is a dummy variable equal to 1 if *Amhara* or 1 if *Gurage* in reference to *Oromo*. The researcher anticipated that factors of production such as working capital have a positive effect on profit. The researcher also proposes that working age family members will contribute labor for the enterprise and influence performance positively. Location dummies are added to control for differences in business environment across space. Furthermore, the researcher tested interaction terms by adding a term to the model in which two independent variables are multiplied.

#### 8.4. The Econometric Model

The study evaluates the causal effect of SC on enterprise profit. The dependent variable is profit. Profit is a continuous variable and OLS regression model is the best fit to determine the causal relationship between SC and profit. The equation used to measure the effect of SC on enterprise profit is written as:

$$\text{Log}(\text{Profit}_i) = \beta_0 + \beta_1 \text{SC}_i + \beta_2 \text{HC}_i + \beta_3 \text{IC}_i + \beta_4 \text{EC}_i + \mu_i$$

Where,

Log (Profit <sub>i</sub>) = the logarithm of profit for a street vendor *i*.

SC<sub>i</sub> = measure of individual *i*'s endowment of SC measured by average strength of ties, structural constraint, resource heterogeneity, and SC volume.

HC<sub>i</sub> = street vendor's endowment of human capital (education in years, previous business experience and vocational training).

$IC_i$ = a vector of individual characteristics (age in years, gender, working age family size, marital status, and ethnic background).

$EC_i$ = enterprise characteristics (working capital, age of enterprise, and location of enterprise).

$\mu_i$ = unobserved disturbances and potential measurement errors.

The key feature of the above OLS model is the assumption that SC has measured returns on street vendors' profit. The key assumption is that the networks built through social interactions have measurable effects to participating actors in a network and lead directly or indirectly to a higher enterprise profit (Grootaert et al., 2002). The model is based on the hypothesis that SC is part of the individuals' exogenous asset endowment. But in reality this claim usually does not hold true (Fafchamps and Minten, 2002).

To be able to talk about the causal effect of SC on enterprise profit, three conditions must be satisfied (Shadish et al., 2002): (i) SC must precede enterprise profit, (ii) SC should be related to enterprise profit, and (iii) there is no probable another explanation for enterprise profit other than SC. In case of the first assumption, it means that SC has to be a temporal predecessor of enterprise profit. However, this condition is ambiguous and is a multifaceted problem in economics and entrepreneurship research (Shadish et al., 2002; Wooldridge, 2010). The second clause presumes a significant relationship between SC and enterprise profit. As argued by scholars (e.g., Shadish et al., 2002; Wooldridge, 2010; Wooldridge, 2013), the third condition is one of the great challenge to reach at causal inference as it requires the presumed relationship between the two variables not to be explained by other variables. If these three conditions are satisfied, SC is said to be exogenous. But if either condition (i) or (iii) do not hold true, SC is said to be endogenous (Wooldridge, 2010; Caliendo, 2013; Wooldridge, 2013). Endogeneity

occurs when the error term in the model is related to one or more explanatory variables (Caliendo, 2013).

The available literature shows that there are three sources of endogeneity: omission of variables, measurement error, and simultaneity (Wooldridge, 2013). Omitting of the important independent variables in the estimation model is one of the problems that causes to endogeneity thereby biased and inconsistent OLS estimates (Wooldridge, 2010; 2013). In this study, for instance, endogeneity of the SC variable is suspected while estimating the determinants of profit. This might happen because individual street vendors might possess unobservable attributes that not only affect SC accumulation but also directly influence enterprise income. Apart from the unobservable attributes, other individual and institutional related variables might be omitted in the model.

The second source of endogeneity is measurement error. In this regard Caliendo (2013) argues measurement error is the most common problem in statistical inference. He notes that it is rare to obtain that measured variables are the true values of its theoretical counterpart. He further claims that even in carefully conducted surveys it is very likely that a variable is prone to measurement error. The third important source of endogeneity is reverse causality. Endogeneity “arises when one or more of the explanatory variables is jointly determined with the dependent variable” (Wooldridge, 2013:530). Reverse causality might be a problem in this study. For example, the formation of SC needs investment in time and other tangible and intangible resources. Individuals with higher profit can, therefore, invest more resources to network formation and accumulate more SC. In this case, reverse causality might occur from profit to SC formation. In statistical terms, SC becomes endogenous and its estimated coefficients will be upward biased if profit is estimated by OLS model.

If endogeneity is a problem, how does one know if there is a causal relationship between SC and enterprise profit or how does one know whether cause and effect are related to each other? To truly be able to make a causal claim of SC on enterprise income, SC should be exogenous (Caliendo, 2013). The solution is the use of instrumental variables (Baum, 2006; Wooldridge, 2010; Caliendo, 2013; Wooldridge, 2013).

### **8.5. Instrumental Variable Estimation**

Instrumental variable (IVs) provide an empirical test and adjustment of the degree of two way causality between the predictor and outcome variables (Baum, 2006; Wooldridge, 2010). In this study, IVs estimation uses the relationship between SC and the instrumental variable to assess the effect of exogenous shifts in SC on profit. This removes the problem created by the endogeneity influence of SC and enterprise profit (Durlauf, 2002). However, obtaining an appropriate set of instruments of SC is problematic and only few studies have had any measure of success with this approach (Durlauf, 2002; Durlauf and Fafchamps, 2004; Bascle, 2008; Adepoju and Oni, 2012). As argued by Durlauf and Fafchamps (2004), the choice of a valid instrument is a hard task and this is due to absence of precise modeling of the process of SC formation. As a result, researchers are forced to rely on perception and speculation (Durlauf, 2002).

In this type of study where primary data were collected by the researcher, the possible effect of selection and accuracy of the interview process can be controlled inserting interviewer as an instrumental variable in the regression analysis. For example, Chiesi (2014) controlled the interviewer effect by inserting ‘interviewer’ as an instrumental variable. In network studies, the most visible form of inaccuracy of interviewing is the case of eliciting the size of networks. The network size elicited by respondents might vary from interviewer to interviewer depending on the skill and technique of the interviewing. However, as can be seen in Appendix IX, in this study no

variation is observed between interviewers regarding network size elicited from respondents. The average network size per interviewer ranges between 3.04 and 3.18. In addition, no variation is observed between men and women interviewers with the average number of network size of 3.13 for women and 3.05 for men. In addition, inserting interviewer as an instrumental variable is impractical as there are many interviewers and hence many dummy variables to be inserted in the regression equation.

The selection of IVs has varied from study to study depending on the dimensions used to measure SC and the nature of the outcome variables. Previous studies (e.g. Narayan and Pritchett, 1999; Glaeser et al., 2002) have used trust as an IV of SC. Nevertheless, the use of trust as IV has been liable to criticism. For example, Putman (2000) argues that rich individuals may have higher tendency to trust and hence using trust as IV can be misleading. Others, for instance, Adepoju and Oni (2012), used length of residence in ones location as IV for SC. Berrou and Combarous (2011) used the number and proportion of ties created before business start-up as an IVs. Fafchamps and Minten (2002) employ individual's demographic characteristics and place of birth. In a study of kinship networks and economic behavior in rural Ethiopia, Werger (2009) instrumented network measures with religion and ethnicity dummies. He recommends that religion dummy instruments the network measures very well than ethnic dummies.

In this study, network measures were instrumented with religion dummies. Ethiopia has been recognized for the coexistence of various religious traditions. The majority of Ethiopians are followers of Orthodox Christianity followed by Muslims, Protestants, and Catholic (CSA, 2010). Most people in Ethiopia attend religious services either daily or weekly depending on the respective sect of each religion. Churches, mosques, and other houses of worship provide an institutional base for 'civic good works' and a learning opportunity for entrepreneurs (Hopkins, 2011). Religion offers personal networks and

support (Lim and Putnam, 2010). This proposition dates back to the work of classical sociologists such as Durkheim and Simmel, who wrote on the social dimension of religion (Durkheim, 1951; Simmel, 1997). According to their argument, religious involvement offers opportunities for social interaction between likeminded people, nurturing friendships, and fostering social ties. Regular religious service attendees meet many people daily or weekly making religious institutions as a prime forum for SC formation (Hopkins, 2011). Religion through worshiping places and membership in spiritual institutions, offers an opportunity to the poor to access resources (Miguel, 2004). The researcher also believes that street vendors' stock of SC formation in Ethiopia's is mostly religiously affiliated.

As presented in chapter 5, religion homophily index of the respondents is -0.73. This figure is the highest of all the socioeconomic and demographic characteristics of respondents. The calculated religion heterogeneity index is zero. This shows that religious bonds are the highest in the Ethiopian street vendors' context and, thus, religion is a good predictor of SC accumulation. The proposition is that religious affiliation is neither directly affected by enterprise profit nor does it affect profit directly, but that greater levels of religious participation can lead to higher levels of SC accumulation and vice versa. Religious affiliation affects the strength of relationships among actors in a network, the size and density of networks, and the social resource endowments of an individual. In fact, in his famous essay, *'The Protestant Sects and the Spirit of Capitalism'*, Weber maintained that the protestant sect was important in the American economic growth. This influence, has, however, developed through participation in voluntary religious associations leading to social capital formation and thereby economic growth (Trigilia, 2001). To circumvent the endogeneity effect of SC and to check the robustness of estimation results, three IV estimators namely: Two-Stage Least Squares (2SLS), Limited-Information Maximum



Likelihood (LIML), and the Generalized Method of Moments (GMM) were used using STATA. The model fit by instrumental variables regression is given by:

$$y_i = \mathbf{y}_i\beta_1 + \mathbf{x}_{1i}\beta_2 + u_i \quad (1)$$

$$\mathbf{y}_i = \mathbf{x}_{1i}\mathbf{\Pi}_1 + \mathbf{x}_{2i}\mathbf{\Pi}_2 + \mathbf{v}_i \quad (2)$$

Where  $y_i$  is the dependent variable for  $i^{\text{th}}$  observation,  $\mathbf{y}_i$  represents endogenous regressors (social capital measures including SC volume, contact resources diversity, average strength of ties and network constraint),  $\mathbf{x}_{1i}$  represents included exogenous regressors (street vendors endowment of human capital, a vector of individual characteristics, and enterprise characteristics ) and  $\mathbf{x}_{2i}$  represents the excluded exogenous regressors (religion dummy). Variables  $\mathbf{x}_{1i}$  and  $\mathbf{x}_{2i}$  are collectively called the instruments.  $u_i$  and  $\mathbf{v}_i$  are zero mean error terms, and the correlations between  $u_i$  and the elements of  $\mathbf{v}_i$  are apparently non-zero.

## 8.6. Estimation Results and Discussion

After fitting the instrumental variable estimators using STATA, tests of endogeneity were performed to check if network measures supposed to be endogenous in the first OLS model can be treated as exogenous or not. The results show that instrumental variables estimates of SC are higher than OLS estimates and that when SC and religion dummies are measured the instruments pass a standard exogeneity test. The Hausman test, Durbin-score and C-statics values show that SC measures exogenous (see the Tables 29-32). This has shown that network measures of SC are exogenous and causal inference can be made.

### 8.6.1. Network Resources and Enterprise Profit<sup>32</sup>

As discussed above, accessible social resources are measured by SC volume. The estimation results of SC volume on enterprise profit are presented in Table 29. The four models (OLS, 2SLS, LIML and GMM) significantly predict profit (see the F statics in the Table). In addition, the results of the IV estimation show a higher coefficient of SC volume than OLS estimates. All the estimation results are also consistent across the three IV estimators.

As shown in Table 29 below, some results match the expectations and some others failed to go with the expected sign and strength. Human capital is one of the inputs hypothesized to influence the success of enterprises. Uneducated people might struggle to be successful in business as it is extremely difficult for them to keep track of the flows of income in their enterprise. Even, they cannot have access to information from the print media. Therefore, human resource development should be considered as important factor to determine enterprise success (Ozturk, 2001). On the human capital side, contrary to what is expected, the estimation results show that education, vocational training, and previous business experience are not significant predictors of profit. This is probably because, those engaged in street vending are characterized by limited skills, low education levels, and low status. They are also engaged in micro businesses that does not need any training and further educational background. This situation might make human capital variables to be less significant in influencing enterprise performance.

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<sup>32</sup> *This section of the paper is published in the European Journal of Sustainable Development. I would like to thank the anonymous reviewers of the manuscript for their comments.*

Table 29: Regression estimation results of social capital volume predicting profit

<i>Variables</i>	<i>Instrumental Variables Estimation</i>			
	<i>OLS</i>	<i>2SLS</i>	<i>LIML</i>	<i>GMM</i>
SC volume	0.00070*** (4.48)	0.00128** (2.49)	0.00128** (2.49)	0.00128** (2.42)
Education	0.00231 (0.36)	0.00252 (0.33)	0.00252 (0.33)	0.00245 (0.32)
Vocational training(1=yes)	0.01625 (0.21)	0.02767 (0.36)	0.02767 (0.36)	0.02785 (0.37)
Business experience(1=yes)	0.04789 (0.00)	0.04859 (0.81)	0.04859 (0.81)	0.04889 (0.77)
Gender (women=1)	-0.30029*** (3.75)	-0.29096*** (3.65)	-0.29096*** (3.64)	-0.29076*** (3.51)
Marital status (married=1)	0.56662*** (3.13)	0.87813*** (2.75)	0.87816*** (2.75)	0.87694*** (2.81)
Age of respondents	0.00925* (1.68)	0.00980* (1.78)	0.00980* (1.78)	0.00980* (1.70)
Working age family members	0.01674 (0.86)	0.00090 (0.04)	0.00090 (0.04)	0.00087 (0.04)
Working capital	0.00006*** (2.95)	0.00006*** (2.59)	0.00006*** (2.59)	0.00006*** (2.84)
Business location (1=centre)	0.06541 (0.95)	0.00779 (0.09)	0.00778 (0.09)	0.00870 (0.10)
Ethnic Gurage	0.28152*** (3.64)	0.25027*** (3.08)	0.25027*** (3.08)	0.25068*** (2.98)
Ethnic Amhara	0.11449 (1.48)	0.09849 (1.27)	0.09849 (1.27)	0.09867 (1.27)
Age of business	0.78006 (0.00)	0.00241 (0.30)	0.00241 (0.30)	0.00241 (0.31)
Gender*marital status	-0.29734** (2.18)	-0.30789** (2.27)	-0.30789** (2.27)	-0.30786** (2.41)
Marital status*sc volume	-0.00102*** (-4.04)	-0.00156*** (-2.98)	-0.00156*** (-2.98)	-0.00156*** (-3.07)
Constant	5.79923*** (29.90)	5.61682*** (22.77)	5.61682*** (22.77)	5.61769*** (23.92)
F statistic/Wald Chi <sup>2</sup>	8.66***	117.71***	117.71***	170.91***
R <sup>2</sup>	0.4850	0.4335	0.4335	0.4340
Hausman test	-	1.38 (0.24)	-	-
Durbin score	-	1.54 (0.21)	-	-
C statistics	-	-	-	1.47 (0.23)

Note: Figures in parenthesis are t values for OLS and z- values for IV estimators.

\*\*\* P<0.01, \*\* P<0.05 5%, and \* P<0.10

Source: Field Survey, April-November 2013

Gender has the expected negative sign and is statically significant at 1 percent level. The coefficient for gender indicates that average monthly profit is 29 percent lower for women than men. This might be attributed to many probable causes. To start with, women do have double responsibility in taking care of household duties and managing street businesses. Their day starts early in the morning with household work and then going to their street business. After working for some hours in the streets, they have to go back home to do household chores. Due to this, women devote less time in street vending. Most women are also working in permanent places and their businesses are located near their homes where they cannot get many customers. In addition, women start their business with low amount of capital than men. Moreover, women are engaged in very small businesses which are extensions of their reproductive role including cooked and non-cooked food stuffs. These businesses demand low capital and generate lower income.

Ethnicity is presumed to be a factor that influences enterprise performance. As shown in Table 29, being ethnically *Gurage* is positively correlated with profit and the correlation is significant at 1 percent level. Being *Gurage* increases profit by 25 percent compared with the *Oromos*. But being a member of the *Amhara* ethnic group does not have a significant effect on profit compared to the *Oromos*. This finding is consistent with other studies. For example, a study by Mengistae (2001), has shown that enterprises owned by the *Gurage*, despite their low educational level, perform better than members of other ethnic groups such as the *Amharas* who have relatively higher level of education. This is probably because the *Gurages* are known for their hard-work and business skills. The *Gurages* are also well-known for helping each other and they have high level of kin and ethnic solidarity. As demonstrated in chapter six, *Gurages* also have the highest ethnic homophily index of -0.79 compared with the *Oromos*, -0.28 and the *Amharas*, 0.04.

The coefficient of marital status is positive and is statistically significant at 1 percent level. The positive relationship reflects that married vendors perform better than unmarried ones. The result indicates that being married increases profit by 88 percent compared to unmarried ones, holding other things constant. However, the coefficient of the interaction term between gender and marital status is negative and is significant at 5 percent level. This result implies that being married women reduces profit by 31 percent compared to unmarried men or unmarried women. This reflects that having a spouse makes women to be in an unfavorable position because usually they are not the sole decision makers of their businesses. According to the norm in the Ethiopian society, it is usually the husband who makes decisions in the household. Even when women are involved in some household discussions, the final decision is made by husbands.

The variable working capital has the expected sign and is significant at 1percent level. The coefficient shows that in each ETB 100.00 increase in working capital, average monthly profit increases by ETB 0.6.00. The contribution of working age family size appears to be insignificant in enterprise performance. One likely explanation is that owing to the small-scale of operation, street businesses are managed by the owner and hence family members are not involved in the operation of enterprises. Among business characteristics, place of vending has no significant effect on profit. This is perhaps because most of the street vendors are mobile in that they swap among different sites of the city taking advantage of different types of customers and following diverse patterns of urban movement. Age of respondents has positive effect on enterprise performance. The relationship is significant at 10 percent level. This is against the hypothesis that as age has an inverse relationship with enterprise performance.

Coming to the main variable of interest, i.e., SC, we observe that SC volume has got the expected sign and is statically significant at 5 percent level. A street vendor earns

better profit than anyone else the higher the level of SC volume he/she accesses. The coefficient shows that 100 percent increase in SC volume endowment raises profit by ETB 13.00. This reveals that SC contributes significantly to enterprise performance than human capital variables do. Previous studies corroborate this finding. For instance, Fafchamps and Minten (2002) found that SNs have a significant positive impact on entrepreneurs' economic performance. They also found that while SC was strong and robust in predicting the performance of agricultural traders, human capital variables such as years of schooling and years of experience were found to be less robust in predicting performance. Grootaert (1999) finds that for the poor segments of the society returns of SC are higher than returns of human capital. For the rich, however, the returns of human capital are higher than the returns of SC. Likewise, some studies, e.g., Grootaert et al., (2002) found out that poor rural households obtain higher returns from SC than rich ones.

When treated in parallel, the variables marital status and SC volume have positive and significant effect on profit. But when marital status interacts with SC volume, the coefficient becomes negative and is statistically significant at 1 percent level. The result indicates that married vendors benefit less from SC than unmarried vendors do. Specifically, each 100 unit of SC volume is worth about 17 percent less for a married vendor than it is for unmarried vendors. This is probably because in the sample the majority of married vendors are women. Being married women means that women have many household responsibilities and thus they might not get enough time to interact with people and accumulate large volumes of SC. Even when they do have time to interact with people, they are usually under the surveillance of their husbands. Women entrepreneurs are, thus, struggle to develop appropriate and effective networks due to their role as home-takers (Klyver and Grant, 2010). This in one way or another cripples the significance of network resources to married vendors.

### **8.6.2. Contact Resources Diversity and Enterprise Profit**

As argued by Lin (1999a), embedded resources in a network are more critical in instrumental actions than the strength and structure of networks. The estimation results discussed above reveal that accessible network resources are significant predictors of enterprise profit. The next question is that does contact resource heterogeneity affect enterprise profit as accessible resources do? The proposition is that diversity in social resources such as gender, ethnicity, religion, education, marital status, and occupation promotes enterprise performance because social resource diversity creates an opportunity to trigger diverse resources from alters. In other words, networks lacking contact resources diversity do not obtain many chances of utilizing a cross gender, cross ethnic, cross religion, cross education, and cross occupation contacts for enterprise purposes (Kalmijn and Flap, 2001).

In this sub-section of the chapter, the estimation results of contact resources diversity on enterprise profit are presented. As shown in Table 30 below, the coefficient of contact resource heterogeneity is positive and significant. This is in line with the expectation and hence we have to accept the hypothesis that contact resource diversity has a significant positive effect of enterprise profit. A street vendor makes higher profit than anyone else the higher the resource heterogeneity he/she mobilizes. The coefficient shows that in every 100 percent increase in contact resources heterogeneity, enterprise profit increases by 10 ETB. Those street vendors who do have diverse contact in social resources earn more profit than those who exhibit contacts of homogenous attributes. Indeed, social resources diversity increases street vendors' SC by extending their knowledge through ties to others beyond their sphere. A heterogeneous network also compensates an individual's incomplete perceptions and raises expectations for business performance (Goerzen and Beamish, 2005).

Table 30: Regression estimation results of resources heterogeneity predicting profit

<i>Variables</i>	<i>OLS</i>	<i>Instrumental Variables Estimation</i>		
		<i>2SLS</i>	<i>LIML</i>	<i>GMM</i>
Contact resources heterogeneity index	0.00036*** (2.68)	0.00101** (2.00)	0.00102** (2.00)	0.00099** (1.96)
Education in years	0.00037 (0.04)	0.01603 (0.99)	0.01614 (1.00)	0.01533 (0.95)
Vocational training(1=yes)	0.06446 (0.80)	0.08846 (1.04)	0.08866 (1.04)	0.08827 (0.98)
Business experience(1=yes)	0.03954 (0.63)	0.02079 (0.32)	0.02069 (0.31)	0.02307 (0.33)
Gender (women=1)	-0.30250*** (3.56)	-0.31767*** (3.67)	-0.31772*** (3.66)	-0.31862*** (3.96)
Marital status (married=1)	0.02483 (0.21)	0.05525 (0.45)	0.05541 (0.45)	0.05362 (0.46)
Age of respondents	0.00908* (1.90)	0.00743 (1.25)	0.00743 (1.25)	0.00752 (1.26)
Working age family members	0.02361 (1.15)	0.00020 (0.01)	0.00005 (0.00)	0.02299 (0.95)
Working capital	0.00008*** (2.96)	0.00008*** (2.87)	0.00008** (2.86)	0.00008*** (3.37)
Business location (1=centre)	0.06915 (0.98)	0.01379 (0.16)	0.01337 (0.15)	0.02012 (0.22)
Ethnic Gurage	0.28762*** (3.50)	0.21849** (2.24)	0.21806** (2.23)	0.22106** (2.19)
Ethnic Amhara	0.10334 (1.21)	0.12937 (1.46)	0.12950 (1.46)	0.12937 (1.51)
Age of business	0.01427 (0.83)	0.00434 (0.51)	0.00434 (0.50)	0.00445 (0.49)
Gender*marital status	-0.26941* (1.86)	-0.28897** (1.95)	-0.28903** (1.95)	-0.28655* (1.85)
Constant	5.82559 (23.53)	5.82542*** (26.52)	5.82439*** (26.47)	5.83081*** (28.60)
F statistic/Wald Chi <sup>2</sup>	7.61***	98.19***	98.02***	123.85***
R <sup>2</sup>	0.4338	0.3400	0.3388	0.3457
Hausman test		1.89 (0.17)	-	-
Durbin score		2.08 (0.15)	-	-
C statistics		-	-	2.08 (0.15)

Note: Figures in parenthesis are t values for OLS and z- values for IV estimators.

\*\*\* P<0.01, \*\* P<0.05 5%, and \* P<0.10

Source: Field Survey, April-November 2013.



Those controlled variables which were significant in the first model (see Table 29) such as gender, ethnicity (being ethnically *Gurage*), working capital, and the interaction term of gender and marital status are also significant. This indicates the robustness of the regression results. As shown in Table 30, gender has negative sign and is statically significant at 1 percent level. The coefficient for gender shows that average monthly profit is 31 percent lower for women than their men counterparts. Being a member of the *Gurage* ethnic group shows positive correlation with profit. Being *Gurage* increases profit by 21 or 22 percent compared with the *Oromos*. Similarly, the coefficient of working capital is positive and significant at 1 percent level. The coefficient shows that in each ETB 100 increase in working capital, average monthly profit increases by ETB 0.8. Moreover, being women and in married status declines enterprise profit by 29 percent. Age of respondents and marital status, which were significant predictors of enterprise profit in the first model are not significant. This is perhaps because the composite diversity index might minimize their potential effect on profit as it is a composite of index of six alter attributes.

### **8.6.3. Strength of Ties and Enterprise Profit**

In this study, strength of ties is proposed to positively affect enterprise profit. Table 31 below shows the estimation results of strength of ties on enterprise profit. As indicated in the Table, the four models are significant and are well fit to estimate the effect of ties strength on profit. The regression results reveal that gender, working capital, ethnicity, and the interaction term, gender\*marital statuses are yet significant predictors of enterprise profit. Being women is negatively related to enterprise performance. Being women reduces enterprise profit by 23-28 percent. The coefficient of working capital is positive and significant. The higher the working capital of street vendors is, the higher the enterprise profit and vice versa. Each every ETB 100 increase in working capital increases profit by ETB 0.8. Being *Gurage* is positively related to profit.

Table 31: Regression estimation results of average strength of ties predicting profit

<i>Variables</i>	<i>OLS</i>	<i>Instrumental Variables Estimation</i>		
		<i>2SLS</i>	<i>LIML</i>	<i>GMM</i>
Average tie strength	-0.06748 (0.23)	-0.80855 (0.54)	-1.51616 (0.71)	-0.86660 (0.60)
Education in years	0.01133 (1.13)	0.00688 (0.56)	0.00328 (0.22)	0.00558 (0.44)
Vocational training(1=yes)	0.03748 (0.47)	0.01063 (0.12)	0.01105 (0.10)	0.00360 (0.04)
Business experience(1=yes)	0.02577 (0.41)	0.01785 (0.28)	0.01146 (0.17)	0.03827 (0.61)
Gender (women=1)	-0.27747*** (-3.23)	-0.24999*** (-2.70)	-0.23045*** (-2.17)	-0.27012*** (-3.24)
Marital status (married=1)	0.04125 (0.34)	0.10795 (0.66)	0.16182 (0.79)	0.12251 (0.87)
Age of respondents	0.00772 (1.33)	0.00760 (1.33)	0.00750 (1.23)	0.00746 (1.29)
Working age family members	0.03221 (1.60)	0.02481 (1.06)	0.01885 (0.68)	0.02299 (0.95)
Working capital	0.00008** (3.00)	0.00011*** (2.57)	0.00012** (2.29)	0.00011*** (2.78)
Business location (1=centre)	0.10343 (1.47)	0.12315 (1.61)	0.13908 (1.59)	0.14476** (2.12)
Ethnic Gurage	0.29209*** (3.39)	0.37561** (2.29)	0.44308** (2.01)	0.38312*** (2.76)
Ethnic Amhara	0.08997 (1.05)	0.05953 (0.60)	0.03494 (0.30)	0.06763 (0.73)
Age of business	0.00371 (0.44)	0.00277 (0.32)	0.00193 (0.21)	0.00329 (0.39)
Gender*marital status	-0.29903** (2.06)	-0.32339** (2.18)	-0.34306** (2.11)	-0.29518** (2.12)
Constant	5.99176*** (20.51)	6.68882*** (5.55)	7.25185*** (4.25)	6.73903*** (5.67)
F statistic/Wald Chi <sup>2</sup>	6.59***	96.12***	84.60***	138.07***
R <sup>2</sup>	0.3988	0.3594	0.2901	0.3521
Hausman test	-	0.34 (0.56)	-	-
Durbin score	-	0.38 (0.53)	-	-
C statistics	-	-	-	0.33 (0.56)

Note: figures in parenthesis are t values for OLS and z- values for IV estimators.

\*\*\* P<0.01, \*\* P<0.05 5%, and \* P<0.10

Source: Field Survey, April-November 2013.

Coming to the strength of ties, as the findings in chapter five indicate, the core business discussion networks of respondents are made up of strong kinship and friendship ties with high level of mutual trust and frequent interaction. The average tie strength is found to be 0. 83. This figure shows that about 83 percent of street vendors' business network is made up of strong ties. Strong ties provide emotional and material support for poor street vendors. The emotional support from family and close friendship ties is important and presents a huge psychological comfort. Street vendors are often supported in terms of obtaining finance by members of their families and their close friends to survive from economic hardships while arriving to the city. Kinship ties provide a shortcut means in search for business knowledge and access to essential resources. Strong ties are more approachable, more reliable, and guarantee the transfer of both tangible and intangible resources (Granovetter, 1973). They are useful for migrant street vendors who are characterized by high levels of uncertainty and insecurity. In this regard, Uzzi (1996; 1997) notes that a networks based on strong ties promotes the development of trust and the transfer of quality information.

Despite the fact that strong ties are sources of emotional and material support for street entrepreneurs, the coefficient of strong ties is negative and do not have significant impact on enterprise success. The stronger the ties are, the lower the enterprise profit and vice versa. The negative sign of the coefficient of ties strength corroborates Granovetter's strength of weak ties argument. This inverse relationship is perhaps related to different probable causes. The first probable reason is related to the limitations inbuilt on strong ties. One of the shortcomings is that individuals may depend on strong bond support and become satisfied with what they have. This may damage individuals struggle to be successful in business as much as they would if they had no support from strong ties. Also, as argued by Elfring and Hulsink (2003) strong ties have the 'risk of over embeddedness'

and Uzzi (1996) calls it the ‘paradox of embeddedness’. This over embeddedness of street vendors on strong ties hinders the performance of enterprises (Uzzi, 1996). Strong ties are also vulnerable to external shocks and this may prohibit commitments to obtain information that exists beyond a given strong network (Elfring and Hulsink, 2003).

The second probable cause is that the effect of strength of ties may vary according to outcome variables measured (Hoang and Antoncic, 2003). For instance, Brüderl and Priesendorf (1998) analyzed the effect of strong bonds on survival and financial performance of firms and they found that strong ties had a significant positive influence on business survival but not on sales growth. In this study, enterprise success was measured by profit and strength of ties failed to predict profit significantly. Here, it is possible to deduce that strong ties are vital in providing resources for business start-up and other day-to-day business related activities of street vendors. However, tie strength does not have any significant effect in enterprise success. This result is consistent with other findings. In their study of Ethiopian footwear industry, Van Staveren and Knorringa (2007) found that strength of ties have a limited impact on enterprise performance. In contrast, Berrou and Combarous, (2012) found that strong ties have a significant positive impact on economic outcomes in the informal economy of Burkina Faso. From here we can learn that the effect strength of ties depends on the context and the subjects of study.

#### **8.6.4. Network Structure and Enterprise Profit**

Another important insight of the SN perspective is that actions and outcomes can be predicted by the positions that individuals’ hold in a network of relationships (Bourdieu, 1986; Coleman, 1988; Burt, 1992). The network theory of Burt (1992, 1997, 2000) argues that an individual who connects two or more disconnected individuals has more SC and more success than an individual who does not hold such a ‘brokering’ position (Xiao and Tsui, 2007). In this regard, as shown in chapter 5, respondents of this

study are characterized by high network density and high structural constraint. The calculated constraint index was found to be 0.81 (81percent). This high constraint index of street vendors indicates the presence of fewer opportunities that respondents bridge different connections. In other words, it is to mean that street vendors greatly depend on a single actor and hence receive redundant information from their contacts. As to Burt (1992, 1997, 2000), this closed network structure is a disadvantage to street vendors.

The hypothesis of the study was that structural constraint has a significant positive effect on profit. However, the findings of regression analysis (see Table 32 below) show an inverse relation between structural constraint and enterprise profit. Thus, we have to reject the hypothesis. The coefficient of structural constraint is negative. The higher the structural constraint is, the lower the enterprise profit and vice versa. This finding corroborates the argument of Burt (1992; 200; 2005). Yet, the coefficient is not significant and failed to affect enterprise profit. In this regard, Lin (1999a) claims that if one assumes that there are bridges that connect different information, the utility of the information depends on whether it holds the resources valued by an individual which in fact should be those which are not yet obtained. If not, then the bridge might have little benefit. If it does, the bridge is very valuable. This is to mean that not all bridges lead to better information, influence, social credentials or reinforcement (Lin, 1999a).

The controlled variables such as gender, ethnicity, working capital, and the interaction term between gender and marital status are still significant predictors of enterprise profit. Being women is negatively correlated with profit. A member of the *Gurage* ethnic group implies better enterprise performance than being a member of the *Oromo* ethnic group. Being women and married has a negative effect on enterprise profit. Working capital positively affects the profit of street vendors.

Table 32: Regression estimation results of structural constraint predicting profit

Variables	Instrumental Variables Estimation			
	OLS	2SLS	LIML	GMM
Structural constraint	-0.05614 (0.35)	-0.87865 (0.72)	-1.05646 (0.76)	-0.91953 (0.75)
Education in years	0.00648 (0.66)	0.00774 (0.75)	0.00801 (0.74)	0.00701 (0.71)
Vocational training (1=yes)	0.05486 (0.62)	0.01251 (0.09)	0.02708 (0.18)	0.01945 (0.15)
Business experience(1=yes)	0.11362* (1.75)	0.09157 (1.22)	0.08680 (1.09)	0.09331 (1.16)
Gender (women=1)	-0.24581*** (2.80)	-0.20144** (2.48)	-0.20606** (2.40)	-0.20439*** (2.60)
Marital status (married=1)	0.02818 (0.24)	0.00477 (0.04)	0.01189 (0.09)	0.00347 (0.03)
Age of respondents	0.00441 (0.76)	0.00334 (0.54)	0.00310 (0.48)	0.00335 (0.52)
Working age family size	0.04301** (2.08)	0.05808* (1.88)	0.06133* (1.81)	0.05754* (1.83)
Working capital	0.00008*** (2.74)	0.00010** (2.33)	0.00010** (2.22)	0.00010*** (2.38)
Business location (1=centre)	0.18005** (2.50)	0.18132 (1.38)	0.16738 (1.16)	0.19560** (1.51)
Ethnic Gurage	0.39215*** (4.79)	0.38267*** (4.44)	0.38062*** (4.23)	0.38063*** (4.34)
Ethnic Amhara	0.13544 (1.48)	0.03972 (0.23)	0.01902 (0.10)	0.04358 (0.25)
Age of business	0.00607 (0.72)	0.05906 (0.00)	0.00132 (0.10)	0.00015 (0.01)
Gender*marital status	-0.26903** (2.00)	-0.24339** (2.22)	-0.24306** (2.11)	-0.25518** (2.32)
Constant	6.14361*** (28.29)	6.79670*** (6.89)	6.93789*** (6.16)	6.83733*** (6.80)
F statistic/Wald Chi <sup>2</sup>	7.14***	92.69***	85.64***	106.84***
R <sup>2</sup>	0.4403	0.3224	0.2659	0.3100
Hausman test		0.55(0.45)		
Durbin score		0.49(0.48)		
C statistics				0.58(0.45)

Note: figures in parenthesis are t values for OLS and z- values for IV estimators.

\*\*\* P<0.01, \*\* P<0.05 5%, and \* P<0.10

Source: Field Survey, April-November 2013.

## 8.7. Summary of Findings

Understanding the factors that affect enterprise performance is imperative as it allows business advisors, policymakers, and other stakeholders to better support the microenterprise sector. Enterprise performance is a key indicator for success and this is evidenced in both empirical and theoretical models. OLS regression with instrumental variables estimation techniques was employed to predict enterprise profit against a number of controlled and explanatory network variables. The explanatory variables comprise of the network location and the embedded resources measures. From the network location measures average strength of ties and structural constraint were used. Contact resources heterogeneity and SC volume were used as a proxy of the embedded resources.

Four separate regression models were fitted to predict the causal effect of network measures on profit. The network measures were instrumented by religion dummy in order to single out the endogenous effect of SC on profit. The findings of the study reveal that the controlled variables such as working capital, gender, ethnicity, and the interaction term between gender and marital status significantly consistently predict enterprise performance of the poor in the urban informal economy. These four variables significantly predict profit across the four models and in all the three IV estimation techniques. The controlled human capital variables such as years of education, previous business experience, and vocational training failed to predict enterprise profit significantly. Marital status and respondents' age that was positive and significant in the first regression model failed to be significant in the last three models. This is perhaps because the composite network variables used in the last three models might become powerful and squeeze out the effect of age and marital status in enterprise performance.

Regression models also offer an opportunity to assess the relative importance of the three SC dimensions in enterprise performance. Among the three network perspectives

(relational, structural, and embedded resources), the resources embedded in networks contribute positively and significantly to enterprise performance when compared to the strength of ties and the structural holes measures. The coefficients of strength of ties and structural constraint are negative and corroborate the arguments of Granovetter (1973) and Burt (1992) respectively. But since the coefficients of these variables are not statistically significant, they are unable to predict enterprise profit. Instead, resources embedded in street vendors' network contributes positively in enterprise performance. In other words, for the street vendors in Addis Ababa, what matters most for business success is neither the strength of ties nor the bridging function of networks but the resources that are embedded in their PNs.

As argued by Lin (1999a), within the embedded resources perspective of PNs it is possible to divine the nature of weak and strong ties as well as network bridges. While network bridges can be strong or weak ties or can offer homogenous or heterogeneous resources to an ego, network diversity is always more likely to be bridges and more likely to contain weak ties (Lai et al., 1998). Indeed, resource diversity can enhance the breadth of perspective, cognitive resources, and overall problem solving capacity of the actors in a network (Goerzen and Beamish, 2005). Thus, in analyzing the contribution of SC in the informal economy context, attention could be given to the resources dimension of SC. Generally speaking, instead of the conventional human capital variables, the resources embedded in PNs play a significant role in the performance of enterprises in the informal sector. The findings, thus, corroborate Lin's social resources theory in an informal economy context of Ethiopia. Indeed, can deduce that SC is the capital of the poor and contributes positively to enterprise performance when compared to human capital variables.



## **Chapter 9**

### **Conclusion and Implications for Policy and Future Research**

#### **9.1. Introduction**

One of the most important movements of recent poverty reduction discussions has been the emergence of interest in microenterprise development programs as an effective approach to unemployment and poverty reduction (Woolcock, 2001). Microenterprises are believed to contribute to the reduction of poverty and vulnerability of the poor through enabling them to break the cycle of poverty, to enhance self-empowerment, and augment social dignity (Chowdhury, 2009). In Ethiopia, microenterprise development forms an important component in the promotion of economic growth and improvement of the well-being of the poor by providing income generating opportunities through encouraging indigenous investment (UNDP, 2012).

The main feature of microenterprise development programs is the use of social relationships as a substitute for collateral in credit provision and formation of enterprise groups. As such, to make the programs successful, it is imperative to study the SC of the target beneficiaries of microenterprise programs. Lessons we learn from studying the SC of street vendors' will contribute not only to make microenterprise programs successful but also to provide a framework for improving initiatives that address poverty by way of designing appropriate development projects. To this end, this study investigated the structure and composition of SC (measured in networks) and their relationships with economic performance taking street vendors in Addis Ababa. This chapter presents the conclusions and the policy implications of the outcomes of the study for microenterprise development programs in particular and poor targeted development projects in general.

#### **9.2. Conclusions**

The study examined the causes and debates on informality. The study finds that all though the majority of street vendors join informality due to lack of employment

opportunities, there are others that join informality to evade legal procedures and do not want to pay taxes. In the second stage, the study examined the composition and structure of street vendors' PNs. Consequently, the results demonstrate that street vendors are highly homogeneous in religion, ethnicity, gender, and marital status characteristics. They, on the other hand, have heterophilous networks on such attributes as income, age, and occupation. Their networks are made up of greater proportion of kin and friendship ties.

Street vendors do have dense and highly constrained network structures. More constrained network implies that street vendors have fewer bridges and hence obtain redundant information from their contacts. The supremacy of strong ties and the dense network structure of street vendors is a reflection of the emotional and material support they obtained from their close ties. The strong tie orientation of street vendors is in line with what Woolcock (2000) claims that the poor have many bonding networks and that networks obtained from strong ties are used to endure shocks and to pool resources for a variety of purposes. As Uzzi (1996; 1997) argued a proper balance of weak and strong ties is crucial for enterprise success. But, street vendors greatly depend on strong ties and are in short of weak connections which are sources of non-redundant information (Granovetter, 1973; 1983).

The third objective of the study was to investigate if there are inequalities in SC across social groups defined by gender and ethnicity. In this regard, the study revealed the presence of significant variations in the composition and structure of PNs between men and women and among ethnic groups. Women's networks exhibit larger percentage of strong ties than men. Women's network is identified by more ethnic and religion homogeneity than their men counterparts. In contrast, men are more gender and marital status homophilous than women. Men also have contacts with persons of diverse education

level than women. Relatively, men's networks also comprise of large proportion of owners of large-enterprises than women's network.

Moreover, men have contacts with alters having higher income than the contacts of women. This leads to differential resource access between the two sexes, i.e., men might obtain more financial and material support than women. But women can receive more emotional support due to high proportion of strong ties in their networks. While men exhibit more contacts from acquaintances and workmates, women do have relatively more neighborhood ties. Due to the presence of high proportion of strong ties in women's network, women display high constrained and less effective networks. Women also exhibit small network size. On the contrary, men exhibit larger network size, less constrained, and less redundant network structure than women. By and large, men display more diversified networks than women.

Scholars in the field of social network analysis state that ethnic identity is a very important attribute that shapes as to how the informal economy operates. The ethnic dimension of PNs is significant in Ethiopia where more than eighty indigenous ethnic groups are found. Recognizing this fact, the present study investigated if there are variations in the structure of PNs among the three dominant indigenous ethnic groups in the informal economy of Addis Ababa (the *Amharas*, the *Gurages*, and the *Oromos*). Consequently, the study reveals the presence of variations in the configuration of PNs among the three ethnic groups. Street vendors from the *Gurage Ethnic* group show high proportion of strong ties and exhibit more ethnic homophily compared to *Amharas* and *Oromos*. But the *Gurages* are embedded in more diverse education, marital status, occupation, and income networks than the *Amharas* and the *Oromos*. The income of the *Gurage* networks is greater than those possessed by the *Amharas* and *Oromos*. On the other hand, the *Amharas* are characterized by ethnic and religious heterogeneity and

demonstrate relatively high proportion of weak ties than the *Gurages* and *Oromos*. Structurally, the *Gurages* exhibit large network size but dense, less effective, and less efficient network structure. On the contrary, the *Amharas* do have small network size and less dense networks. The *Oromos* are in most of the cases in the intermediate position.

In the fourth place, this study examined if there are changes in the structure and composition of street vendors' PNs following phases of enterprise development. Accordingly, the study has found changes in the total number of ties over the phases of entrepreneurship. There are changes in the number of new ties created, ties kept, and ties that are lost. The study also found changes in the proportion of alters attributes and relational variables, changes in network homophily and heterogeneity. It also reveals changes in the structure of networks.

Lastly, the study investigated the casual effect of PNs on enterprise performance measured by enterprise profit. The explanatory variables comprise of the average strength of ties, structural constraint, contact resources heterogeneity, and SC volume. These four network measures were instrumented by religion dummy. By fitting instrumental variables estimation techniques, the study reveals the resources embedded in a network positively and significantly influence enterprise performance compared to the strength of ties and the network constraint. For the business success of street vendors, what matters most is neither the strength of ties nor structural holes but the resources embedded in street vendors PNs. These findings corroborate Lin's social resources theory which argues that instead of the strength of ties and brokerage function of networks, the valuable feature of networks is embedded resources. The findings of this study also indicate that human capital variables failed to predict street vendors' enterprise profit significantly. SC is, therefore, the resource of poor street vendors in Addis Ababa, Ethiopia.

### **9.3. Implications for Microenterprise and Community Development Practices**

The informal sector is a survival strategy for rural-urban migrants. However, the study revealed that all activities in the informal sector are not survival strategies. There are people involved in informal activities to evade government taxes. To combat informality, the Ethiopian government has started formalizing the informal sector activities through microenterprise development programs. However, owing to problems related to the exclusionary nature of the program and other bureaucratic channels in credit delivery and enterprise group formation, street vendors remain out of the reach of microenterprise programs. As a result, harassing and intimidating street vendors has become the day-to-day activity of government forces. However, harassing street vendors is not a sustainable solution to the problem. Eradicating street vendors will force the youth to be engaged in criminal activities. The worst thing is that, as the street vendors are supporting themselves and other family members harassing them may double or triple the number of victims. In addition, most of the poor who are customers of street vendors will lose the market for services and products. Eventually, this situation will lead to a chaos that will not be controlled easily. Thus, a properly worked out development strategy which addresses the demands of the poor in particular and the poverty reduction and economic growth agenda of the country in general should be devised. Microenterprise development programs should give attention to the interests and priorities of the poor segments of the population.

The extent of homophily, heterogeneity and density of street vendor's network is directly related to their interests and the benefits of alters in their social and economic life. Street vendors' network configuration is also the reflection of the degree of emotional, material, and financial support they obtained from their networks. Additionally, the current political system in Ethiopia favors ethnic politics and religious segregation of the Ethiopian community as mechanisms of divide and rule to prolong its political power. The

ethnic politics has also implications on PN formation especially regarding ethnic and religious attributes.

Networks are important social resources to consider for participatory community development and social work interventions such as microenterprise development programs that rely on SC. Discussions with officials of microenterprise programs and street vendors show that one of the challenges of formalizing the informal activities is the problem of enterprise group formation and credit delivery to the poor. This is perhaps because of lack of the understanding of the SC of target participants such as street vendors and other informal sector operators. As social relationships are very important mechanisms in microenterprise programs, planners and development agents have to consider the strong family and friendship bonds that prevail among the street vendors while establishing enterprise groups and providing microcredit services. In other words, planners have to give emphasis to the configurations of street vendors' network homophily and heterogeneity.

To reach at the poor and make microenterprise programs successful, planners and agents of microenterprise programs should give priority to the preferences and network patterns of the poor. In most case, people tend to get connected and form groups with other people who exhibit similar experience or characteristics. This is what is called homophily and the motive is that "similarity breeds connections"(McPherson et al., 2001). Similarity of attributes shortens the process of communication between actors in a network. In homophilous networks, it is easy to establish trust and solidarity among actors in a network. This in one way or another helps to reduce the costs associated with enterprise group formation and provision of the necessary services pertaining to credit delivery. The cost of sustaining established groups would also be lower in homophilous networks.

Street vendors were found to be homophilous on attributes of religion, ethnicity, sex, and marital status. Accordingly, while organizing enterprise groups and providing credit to microenterprise beneficiaries, officials can use these four network attributes as the criteria for organizing enterprise groups. Due attention should be given to the preference of men and women and also different preferences among ethnic groups. Grouping of individuals who share the same religion or same ethnic identity might, however, have a segregating effect on those who are outside of a given group. The solution for this problem might be using a mix of network attributes. For example, a combination of religious affiliation and ethnicity identity can cross-cut group boundaries and able to create integration between enterprise groups. In this regard, Karbo (2013) states that in the Ethiopia society, religious homophily has been playing a unifying role among diverse ethnic communities and encourages business cooperation.

Network homophily limits the spread of new ideas among actors of a network because like minded people are connected to each other and usually hold similar attitudes and experiences and reject outsiders who are not endorsing their attitudes and perceptions. This tendency limits network members' exposure to new ideas and hence paralyzes enterprise performance. Thus, network diversity becomes important to counterbalance the limits of homophily. Kalmijn and Flap (2001) argue that diversity in a network crosses the boundaries of homogeneous social groups and thereby diminishes the degree of in-group constraints on resources. Diverse contacts offer diverse information and resources that an individual may benefit by enabling him/her to recognize life opportunities.

Though network homophily is important for enterprise group formation, establishing enterprise groups is not an end by itself. Organizing enterprise groups is an initial step in microenterprise programs. The regression estimation results of this study give evidence that enterprise success is directly related to diversity in street vendors' social

resources. After starting business, therefore, entrepreneurs should create relations with diverse ethnic, religion, gender, education, and occupation groups to be successful in their businesses. Following the establishment of enterprise groups and providing credit for street vendors, microenterprise development planners should create forums for program participants to get contacts of diverse socioeconomic groups. Overall, recognizing a mix of network homophily and network diversity is important for microenterprise development programs depending on the stage of intervention.

As street vendors' networks are composed of strong family and friendship ties, microenterprise program planners can also consider family and friendship ties as a means of establishing enterprise groups. However, relying on the strong bonds is not a lasting solution as strong ties do have limitations in enterprise performance. The regression estimation results of this study reveal an inverse relationship between strength of ties and enterprise performance. According to the social network theory, individuals with ties outside their immediate circles or with weak ties perform better than others. To make microenterprise programs successful and meet their objectives of reaching the poor, planners and beneficiaries of microenterprise programs should weigh the trade-off between strong Vs weak ties, network homophily Vs network heterogeneity as well as network closure Vs structural holes.

While physical and human capitals are the properties of individuals, SC of individuals is a community good. The configurations of street vendors' networks are the reflections of the reality of the structure of the SC of the Ethiopian poor community. Specific studies of networks like this on street vendors can provide a general framework for understanding the patterns of PNs with the intention of using the results for poor targeted development interventions. The implication of this study is not only limited to the microenterprise development programs but also to the community development



interventions as a whole. The suggestion is that while developing and implementing development projects policy makers and community development planners should pay attention to SC as a fundamental resource that exists amongst the poor segment of the population.

Designing proper poor targeted policies needs to consider the SC of the poor. SC as an asset inherent in the community has a particular importance in participatory approaches to community development planning. For example, all types of community discussions and all kinds of mutual support through family and friendship ties and preferences to religion, ethnic, sex and marital status homogeneity are inherent among the Ethiopian community. These patterns of networking can be used as building blocks in participatory community development programs. In this regard, Kebede and Butterfield (2009) state that understanding SNs as part of community development fits within the asset-based development paradigm. On top of this, SC has the potential to bridge the financial, material, and human capital resource limitations of the poor. Accordingly, to reach at successful poverty reduction strategies, development programs should follow the bottom-up development approach and draw on the SC of the poor. Indeed, local development programs and projects should consider the SC of the poor as social assets that can contribute to social and economic development of Ethiopia.

#### **9.4. Limitations of the Study and Areas of Future Research**

This study investigated the structure and composition of PNs considering gender and ethnic inequality and the effect of PNs on enterprise performance in the informal economy in which SC plays a greater role. The subjects of the study are street vendors and the results of this study may not represent the circumstances of all informal sector operators. In addition, the study is geographically limited to Addis Ababa and did not include other cities of Ethiopia where ethnic diversity is less common. As SC formation is

an endogenous phenomenon, it varies from place to place and from sector to sector. Thus, to establish the importance of SC in the urban informal economy, it is imperative to conduct further research in a broader scope including other urban areas and other informal activities.

There are measurement problems related to SC. For some SC is measured in terms of networks, associations, and institutions. For others, it is measured by cognitive attributes including attitudes, norms of behavior, reciprocity, and trust. It is also claimed that measures of SC should be as inclusive as possible in their coverage of key dimensions and should balance between the structural and cognitive elements. Owing to the resource and time limitations, the present study approached SC only from the network perspective. To fully address the spirit of SC in the informal economy, it is important to include both the cognitive and structural components. In poor countries like Ethiopia where norms and values play a role in shaping the pattern of SC, further study is important to examine the cognitive dimensions of SC.

The random-walk sampling strategy employed in this study is not widely applied in other urban based studies in Ethiopia. Instead of heavily relying on the commonly applied snow-ball sampling techniques, studies that involve hidden populations can experiment and use the random-walk procedure and improve its validity and application in a wider scale. In addition, to the best of my knowledge, the NG and PG instruments are newly developed and applied in the Ethiopian informal economy context. Therefore, it is advisable to revisit these instruments and improve their quality and reliability for wider application of SC studies in Ethiopia. To address gaps in the study on the composition and structure of SC and its significance in development interventions, additional measures that fully address both the cognitive and structural dimensions of SC are needed.

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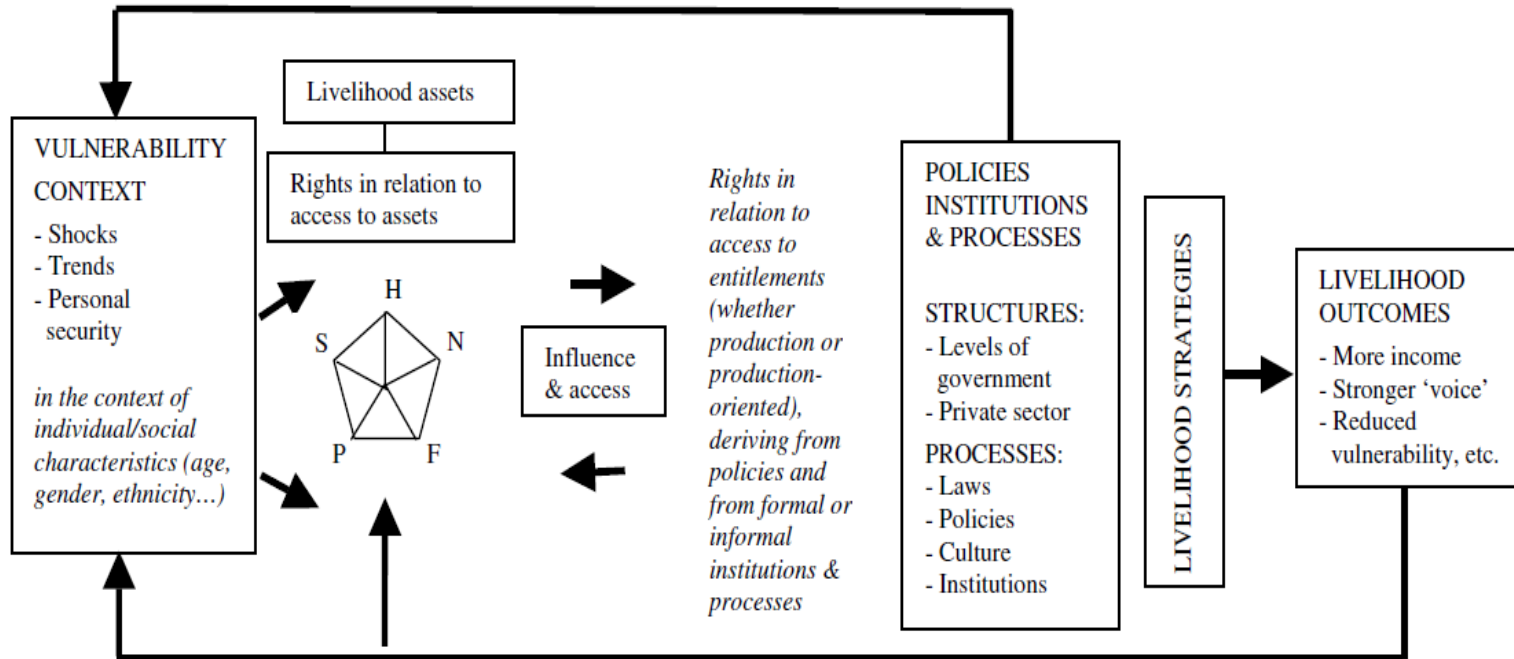


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## Appendix I The Sustainable Livelihoods Framework



F = Financial capital  
H = Human capital

P = Physical capital  
N = Natural capital

S = Social capital

Source: Farrington, J., Ramasut, T. and Walker, J (2002)

## **Appendix II**

### **Questionnaire**

#### **Dear Respondent,**

The aim of this survey is to analyze the contribution of social networks in microenterprise development and thereby building the livelihoods of the urban poor in Addis Ababa. The survey covers relevant aspects of your situations related to the nature of your enterprise, your social networks, and livelihood outcomes (income, assets, employment, consumption, etc). Any personal information that you provide will remain confidential and will be utilized only for the purpose of the fulfillment of Doctoral Degree research. The outcome of the research will contribute to the knowledge of social networks and microenterprise development in the Ethiopian context and to recommend poor targeted policies to consider and promote the role of social networks in building the livelihoods of the urban poor and in the fight against poverty. Therefore, you are kindly requested to provide your genuine response to the questions that follow.

Thank you in advance for your cooperation!

#### **Dear Interviewer,**

Before starting asking questions, approach the interviewee politely by giving greetings. First tell the respondent why you are there and please tell to them the purpose of the survey. After your greetings and discussions on the objective of the survey, ask the willingness of the respondent for interview. After getting permission from the person for interview, make sure that you have the necessary materials with you such as pencil, the questionnaire, and the code book. Start your discussion bit by bit. In case a customer comes, pause asking questions and let the respondent serve the customer first and then continue the interview afterwards. After the respondent serves customers, try to repeat the question by restating from what you have stopped. Try to probe the respondent to remember important events and issues to the questions raised. Give time to the respondent to think over the issues and assist him/her by giving clues and suggestions.

The social network questions have two components dealing with personal networks of micro-entrepreneurs: name generators and name interpreters. In the name generator item “column 2” of each table, you need to fill the names of alters that the ego mentions as having personal contacts for the resources mentioned. First ask the respondent about personal networks for each of the resources indicated in each social network question. Probe the respondent to mention a maximum of five persons for each resource indicated. After finishing the name lists of alters from the ego’s perspective, proceed to the name interpreter items. In case of name interpreters, you need to ask the ego about the characteristic of each alter. For the name interpreter items, check the code book and write only the codes in each table.

<b>A. Interviewer Details</b>	
Name of the interviewer	_____
Time of interview commenced	Day_____ Hour_____ Minute_____
Questionnaire Code	_____

<b>B. Street Vendor's Socio-Demographic Characteristics</b>	
1. Name (pseudo) of the respondent	_____
2. Location of Street Vending	Sub-city: _____ Cluster site:_____
3. Sex of the respondent	1. Male          2. Female
4. Respondent's place of birth	_____
5. Age of the respondent	_____
6. The highest grade level you completed :	_____
7. Level of education (category)	1. Illiterate      2. Read and write only      3. Grade 1-6 complete      4. Grade 7-8 complete      5. Grade 9-10 complete      6. Grade 11-12 complete      7. Certificate      8. Diploma      9. First degree and +      10. Other:_____
8. Marital status:	1. Single          2. Married      3. Divorced      4. Widowed      5. Cohabiting      6. Other:_____
9. Religion	1. Orthodox      2. Protestant          3. Catholic          4. Muslim      5. Others: _____
10. Ethnic background	1. Oromo      2. Amhara      3. Gurage      4. Tigre      5. Others
11. Do you have children?	1. Yes          0. No
12. If yes to question number 11, how many children do you have?	_____
13: How many of your children are in the working age group?	_____
14. How many dependents do you have both inside and outside the household?	_____
15. How many of other dependents are in the working age group?	_____

<b>C. Type of Enterprise, Enterprise Start-up , and Expansion</b>	
16. When you came to Addis Ababa, were there people who supported you in getting accommodation and other services?	1. Yes          0. No
17. If "yes" to question number 13, please mention 5 persons who gave you accommodation and other services?	

S.No	Names	Name Interpreters														
		Sex	Age	Religion	Marital status	Education	Ethnicity	Occupation	Occupation Sector	Role relation	Contact frequency	Length of acquaintance	Spatial proximity	Place of meeting	Level of trust	
1																

2																	
3																	
4																	
5																	

18. Type of enterprise: \_\_\_\_\_

19. When did you start the enterprise? \_\_\_\_\_

20. How did you start your enterprise? 1. Founded by your own 2. Founded with other shareholders 3. Inherited from families 4. Other: \_\_\_\_\_

21. Why do you join street vending? 1. No other choices 2. To supplement income 3. Preference to work without paying tax 4. It is profitable 5. Others \_\_\_\_\_

22. Have you had previous job? 1. Yes 0. No

23. If "yes" what was your main job before starting your current enterprise? \_\_\_\_\_

24. Do you have previous business experience before this one? 1. Yes 0. No

25. Is street vending a fulltime job? 1. Yes 0. No

26. Have you got any vocational (business) training before or after joining street vending? 1. Yes 0. No

27. If "yes" to question number 25, where and how did you get the training? \_\_\_\_\_

29. Do you keep accounting records of your business? 1. Yes 0. No

30. At the time of business planning, did people support you in obtaining business ideas and identifying profitable activities, advices, and moral support? 1. Yes 0. No

31. If yes to question number 30, would you please tell me the names of 5 persons who gave you business advice, information, and moral support?

S.No	Names	Name Interpreters															
		Sex	Age	Religion	Marital status	Education	Ethnicity	Occupation	Occupation Sector	Role relation	Contact frequency	Length of acquaintance	Spatial proximity	Place of meeting	Level of trust		
1																	
2																	
3																	
4																	
5																	

32. Are persons you mentioned above know each other? Would you please specify their level of intimacy as 1) strangers, 2) acquaintance, 3) friends 4) confidant or 5) Family?

Alter

Alter	1	2	3	4	5
1					
2					
3					
4					
5					

33. At the time of your business start-up, were there people who provide you credit or financial and material support? 1. Yes 0. No

34. If yes, would you please indicate the first names of 5 persons?

S.No	Names	Name Interpreters													
		Sex	Age	Religion	Marital status	Education	Ethnicity	Occupation	Occupation Sector	Role relation	Contact frequency	Length of acquaintance	Spatial proximity	Place of meeting	Level of trust
1															
2															
3															
4															
5															

35. Are persons you mentioned above know each other? Would you please specify their level of intimacy as 1) strangers, 2) acquaintance, 3) friends 4) confidant or 5) Family?

Alter	Alter				
	1	2	3	4	5
1					
2					
3					
4					
5					

36. Have you got contacts to get legitimacy and get your business well established or to expand your operation (increasing the number of employees, expanding the volume of operation, investing in new equipments to develop your business)? 1. Yes 0. No

37. If yes, are there people who you asked advices/ information and financial support for business expansion? 1. Yes 0. No



38. If you get support from other people to gain legitimacy in your business, would you please indicate the names of 5 persons?

S.No	Names	Name Interpreters															
		Sex	Age	Religion	Marital status	Education	Ethnicity	Occupation	Occupation Sector	Role relation	Contact frequency	Length of acquaintance	Spatial proximity	Place of meeting	Level of trust		
1																	
2																	
3																	
4																	
5																	

39. Are persons you mentioned above know each other? Would you please specify their level of intimacy as 1) strangers, 2) acquaintance, 3) friends 4) confidant or 5) Family?

Alter	Alter				
	1	2	3	4	5
1					
2					
3					
4					
5					

**D. Labor Arrangements and Wage**

40. Are there family members who are working in the enterprise? 1. Yes 0. No
41. If yes, how many of them are working with you? \_\_\_\_\_
42. Are you paying wage for family members who are working with you? 1. Yes 0. No
43. If yes to question number 42, how much is the average monthly wage per family member? Birr \_\_\_\_\_
44. If no to question number 42, how much do you think is the expected wage for them? \_\_\_\_\_
45. Are there employees in your enterprise? 1. Yes 0. No
46. If yes, how many employees do you have? \_\_\_\_\_
47. How much is the mean monthly wage per employee? Birr: \_\_\_\_\_
48. Would you please mention the ethnic background of the employees? \_\_\_\_\_

49. Would you please mention the birth place of the employees? \_\_\_\_\_

50. How much is the average daily working hour of your enterprises? \_\_\_\_\_ hrs.

51. Since the establishment of your enterprise, have the number of employees increased? 1. Yes 0. No

52. If you have employees, permanent or occasional and wage workers, were there personal contacts which served as intermediaries for their recruitment (for example you may have hired them through a family member, a neighbor, a friend, a customer, and so on)? 1. Yes 0. No

53. If yes, who are these personal contacts which have served as intermediaries for your recruitments or by whom you would pass to recruit employees for your activity? Would you please mention the names of up to 5 of these contacts?

S.No	Names	Name Interpreters														
		Sex	Age	Religion	Marital status	Education	Ethnicity	Occupation	Occupation Sector	Role relation	Contact frequency	Length of acquaintance	Spatial proximity	Place of meeting	Level of trust	
1																
2																
3																
4																
5																

**E. Partnership and Cooperation with Other Entrepreneurs**

54. Do you have relations of mutual aid, partnership or cooperation with other entrepreneurs( in the case of breakdowns or when you do not have the appropriate tool, machine or good and even when you cooperate in the process of production, share of markets or the exchange of customers)? 1. Yes 0. No

55. If yes, would you please mention the first names of 5 of those entrepreneurs whom you maintained such kind of relations?

S.No	Names	Name Interpreters														
		Sex	Age	Religion	Marital status	Education	Ethnicity	Occupation	Occupation Sector	Role relation	Contact frequency	Length of acquaintance	Spatial proximity	Place of meeting	Level of trust	
1																
2																
3																
4																



S.No	Names	Sex	Age	Religion	Marital status	Education	Ethnicity	Occupation	Occupation Sector	Role relation	Contact frequency	Length of acquaintance	Spatial proximity	Place of meeting	Level of trust
1															
2															
3															
4															
5															

**H. Administrative or Bureaucratic Relationships**

62. You might have relations with the public authorities, the municipality, and the police concerning the control and inspection for access to public markets and the location of businesses. In this regard, are there people who helped you to settle problems concerning administrative issues? 1. Yes 0. No.

63. If yes, would you please mention the name of 5 persons who helped you in settling administrative and bureaucratic problems?

S.No	Names	Name Interpreters													
		Sex	Age	Religion	Marital status	Education	Ethnicity	Occupation	Occupation Sector	Role relation	Contact frequency	Length of acquaintance	Spatial proximity	Place of meeting	Level of trust
1															
2															
3															
4															
5															

64. From the above mentioned persons or new unmentioned ones if any, would you please mention the 5 very important persons who helped you in the various phases of enterprise development and in your day-to-day business activities?

S.No	Names	Name Interpreters														
		Sex	Age	Religion	Marital status	Education	Ethnicity	Occupation	Occupation Sector	Role relation	Contact frequency	Length of acquaintance	Spatial proximity	Place of meeting	Level of trust	
1																
2																
3																
4																
5																

65. Are persons you mentioned above know each other? Would you please specify their level of intimacy as 1) strangers, 2) acquaintance, 3) friends 4) confidant or 5) Family?

Alter	Alter				
	1	2	3	4	5
1					
2					
3					
4					
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**I. Position Generators**

66. Now, I would like to know the people's occupations you have contact with. I have here a list of different occupations that people can have. Does anyone in your family, friends, and acquaintances have one of those occupations?

*Interviewer: Begin with asking whether Ego knows a family member in that occupation. If yes, move on the next question. If not, then ask about friends in that occupation. Only if not, ask about knowing an acquaintance in that occupation. If Ego says that somebody is both a family member and a friend he or she should be counted as a family member*

No	Do you know someone from the following occupations who gave you support for your enterprise?	1. Yes	2. No	If yes, what is the role relationship of these people?		
				Family	Friend	Acquaintance
1.	Accountant	(1)	(0)	(1)	(2)	(3)
2.	Artist (musician+ writer)	(1)	(0)	(1)	(2)	(3)
3.	Bank Manager	(1)	(0)	(1)	(2)	(3)
4.	Banker	(1)	(0)	(1)	(2)	(3)
5.	Broker	(1)	(0)	(1)	(2)	(3)
6.	Cleaning person/ House Keeping	(1)	(0)	(1)	(2)	(3)
7.	Construction worker	(1)	(0)	(1)	(2)	(3)
8.	Cook	(1)	(0)	(1)	(2)	(3)
9.	Director of a company	(1)	(0)	(1)	(2)	(3)
10.	Driver (lorry, bus, taxi)	(1)	(0)	(1)	(2)	(3)
11.	Engineer	(1)	(0)	(1)	(2)	(3)
12.	Farmer	(1)	(0)	(1)	(2)	(3)
13.	Foreman	(1)	(0)	(1)	(2)	(3)
14.	Hairdresser /barber	(1)	(0)	(1)	(2)	(3)
15.	High ranking Civil Servant	(1)	(0)	(1)	(2)	(3)
16.	Information technologist	(1)	(0)	(1)	(2)	(3)
17.	Lawyer	(1)	(0)	(1)	(2)	(3)
18.	Mechanic	(1)	(0)	(1)	(2)	(3)
19.	Medical Doctor	(1)	(0)	(1)	(2)	(3)
20.	Nurse and Midwifery	(1)	(0)	(1)	(2)	(3)
21.	Messenger	(1)	(0)	(1)	(2)	(3)
22.	Secretary	(1)	(0)	(1)	(2)	(3)
23.	Police	(1)	(0)	(1)	(2)	(3)
24.	Policy maker /advisor	(1)	(0)	(1)	(2)	(3)
25.	Postman	(1)	(0)	(1)	(2)	(3)
26.	Salesperson	(1)	(0)	(1)	(2)	(3)
27.	Teacher (primary and Secondary)	(1)	(0)	(1)	(2)	(3)
28.	University professor	(1)	(0)	(1)	(2)	(3)

29.	Unskilled daily laborer	(1)	(0)	(1)	(2)	(3)	
30.	Sports man	(1)	(0)	(1)	(2)	(3)	
31.	Security Guards	(1)	(0)	(1)	(2)	(3)	
32.	Petty Traders	(1)	(0)	(1)	(2)	(3)	
33.	Housemaid	(1)	(0)	(1)	(2)	(3)	
34.	Waiters and Bartender	(1)	(0)	(1)	(2)	(3)	
35.	Metal/Wood Worker	(1)	(0)	(1)	(2)	(3)	
36.	Electrician	(1)	(0)	(1)	(2)	(3)	
37.	Technicians	(1)	(0)	(1)	(2)	(3)	
38.	Soldier	(1)	(0)	(1)	(2)	(3)	
39.	Plumber, Pipe Fitter, and Painter	(1)	(0)	(1)	(2)	(3)	
40.	Tourist Guide/Tour Operator	(1)	(0)	(1)	(2)	(3)	

**J. Membership in Associations/Organizations**

67. You might be a member of several associations/organizations, such as cultural associations, sports associations and clubs, religious associations (*mahber, senbete*), rotary credit and saving associations (*equb*), self help associations (*eddir*), *youth associations and women association*, local business associations, development associations of your particular area. Please name some of formal and informal (indigenous) associations and groups that you are involved in your day to day activities

Name of the Organization/institution that you are a member: \_\_\_\_\_

Objectives of the Organization: \_\_\_\_\_

Membership Criteria: \_\_\_\_\_

Benefit to your business: \_\_\_\_\_

**K. Enterprise Capital and Working Premises**

68. How much did you invest to start your street business? ETB \_\_\_\_\_

69. How much is the current working capital of your enterprise? ETB \_\_\_\_\_

70. If your business site is not at home, what mode of transport are you using to go to your business site? 1. Walking on foot      2. Bus      3. Taxi

4. Others: \_\_\_\_\_

71. How long it takes to reach to your business site? 1. <30 minutes      2. 30-60 minutes      3. 1- 1:30 hrs      4. 1:30- 2:00 hrs      5. > 2:00 hrs

72. Do you have convenient working premises?      1. Yes      0. No

73. Your working condition is: 1. Working in a fixed and permanent place      2. Mobile (moving from place to place) 3. Others \_\_\_\_\_

**L. Street Vendor's Income and Business Expenses**





91. How much is the monthly consumption expenditure of your household? ETB: \_\_\_\_\_

92. Who is the bearer of consumption expenditure? 1. Yourself      2. Other family members      3. Yourself and other family members      4. Donors  
5. Yourself and donors      6. Yourself, other family members and donor s      7. Others: \_\_\_\_\_

93. Did you and your family members have access to public/private medical services? 1. Yes      0. No

94. If "yes", who was the bearer of medical expenditure? 1. Yourself      2. Other family members in the household      3. Relatives      4. Donors  
5. Free medical service user      6. Other: \_\_\_\_\_

95. How much is the approximate mean annual household medical expenditure? ETB \_\_\_\_\_

96. If you have school age children and other dependents in the household, how many of them have access to education? \_\_\_\_\_

97. How much is the approximate annual household educational expenditure? ETB: \_\_\_\_\_

**O. Perception of Micro-entrepreneurs on their livelihoods**

98. What is the trend in your business? 1. Increasing      2. Decreasing      3. No change

99. Do you think that your basic needs are met due to income obtained from street vending? 1. Yes      0. No

100. If "no", specify your reasons? \_\_\_\_\_

101. How do you perceive your livelihood? 1. Unable to lead independent life      2. Self sufficient and able to lead independent life      3. Self sufficient and support family      4. Others: \_\_\_\_\_

102. Do you believe that your involvement in street vending has increased your social integration and reputation among your family, entrepreneurs and the community at large? 1. Yes      0. No

103. If yes or no, what do you think are the reasons? \_\_\_\_\_

104. How do you rate your livelihood conditions? 1. Very poor      2. Poor      3. Non-poor      4. Rich

Thank you for the patience you had in answering the questions!

Interviewer Comments: \_\_\_\_\_

Time of interview concluded: Date: \_\_\_\_\_ Hour: \_\_\_\_\_ Minutes \_\_\_\_\_

### Appendix III

A sample of personal network data organized into the column-wise format for E-NET software

Ego	Sex	Age	Education	Marital Status	Religion	Ethnic	Income	Sex A1	Sex A2	Sex A3	Sex A4	Sex A5
001	Female	55	Illiterate	Married	Orthodox	Amhara	400	Male	Female	Female		
002	Female	38	Grades 1-4	Married	Orthodox	Amhara	700	Male	Male	Male	Female	Female
003	Male	20	Grades5-8	Single	Muslim	Amhara	1200	Male	Male			
004	Male	23	Grades5-8	Single	Muslim	Amhara	750	Male	Male			
005	Male	18	Grades5-8	Single	Orthodox	Amhara	800	Male	Male			
006	Male	35	College/university	Married	Muslim	Oromo	600	Female	Male	Female		
007	Female	30	Grades 1-4	Married	Orthodox	Amhara	700	Female	Male			
008	Female	24	Grades 9-10	divorced	Orthodox	Amhara	400	Male	Male	Female		
009	Male	28	Grades 5-8	Single	Muslim	Gurage	1300	Male	Male	Male		
010	Female	35	Illiterate	Single	Orthodox	Gurage	600	Female	Female	Male	Male	
011	Male	30	Grades 1-4	Single	Orthodox	Oromo	1000	Male	Female	Male		
012	Male	26	Grades9-10	Single	Orthodox	Oromo	500	Male	Male	Male	Female	
013	Male	24	Grades 1-4	Single	Orthodox	Oromo	500	Male	Male	Male	Male	
014	Female	28	Grades 9-10	Single	Orthodox	Amhara	550	Female	Male			
015	Female	23	Grades 5-8	Single	Orthodox	Amhara	400	Female				
016	Female	27	Illiterate	Single	Muslim	Gurage	450	Female				
017	Male	29	Grades 9-10	Single	Orthodox	Oromo	500	Male	Male			
018	Female	36	Illiterate	Married	Orthodox	Amhara	550	Female	Male			
019	Female	34	Grades 5-8	Married	Orthodox	Amhara	320	Female				
020	Male	35	Grades 1-4	Married	Orthodox	Amhara	750	Male	Male	Male		

Age A1	Age A2	Age A3	Age A4	Age A5	Education A1	Education A2	Education A3	Education A4	Education A5
40	32	40			Illiterate	Illiterate	Illiterate		
39	30	35	35	28	Illiterate	Illiterate	Illiterate	Grades 5-8	Grades 5-8
45	60				Grades 5-8	Grades 5-8			
40	35				Grades 5-8	Grades 5-8			
25	20				Grades 5-8	Illiterate			
30	37	40			Grades 5-8	Illiterate	College/University		
40	35				Grades 5-8	Grades 5-8			
30	30	25			Grades 1-4	Illiterate	Illiterate		
25	25	25			Grades 9-10	Grades 5-8	Grades 9-10		
63	57	34	52		Illiterate	Illiterate	Grades 1-4	Grades 1-4	
32	29	35			Grades 5-8	Grades 5-8	Grades 5-8		
22	20	30	23		Grades 1-4	Grades 9-10	Grades 5-8	Grades 5-8	
26	24	32	19		Grades 5-8	Grades 5-8	Grades 5-8	Grades 5-8	
40	45				College/University	College/University			
24					Grades 1-4				
18					Grades 5-8				
30	26				Grades 9-10	Grades 5-8			
32	40				Illiterate	Grades 1-4			
30					Illiterate				
40	35	40			Grades 5-8	Grades 5-8	Illiterate		
32	29	35			Grades 5-8	Grades 5-8	Grades 5-8		
45	28	80	70		Grades 5-8	Illiterate	Grades 1-4	Illiterate	
26	36	27			Illiterate	Illiterate	College/University		

Marital Status A1	Marital Status A2	Marital Status A3	Marital Status A4	Marital Status A5	Religion A1	Religion A2	Religion A3	Religion A4	Religion A5
Married	Married	Married			Orthodox	Orthodox	Orthodox		
Married	Single	Married	Single	Single	Orthodox	Orthodox	Orthodox	Orthodox	Muslim
Married	Married				Muslim	Muslim			
Married	Married				Orthodox	Orthodox			
Married	Single				Orthodox	Orthodox			
Married	Married	Married			Muslim	Muslim	Orthodox		
Married	Married				Orthodox	Orthodox			
Married	Married	Married			Protestant	Orthodox	Orthodox		
Single	Married	Single			Muslim	Muslim	Muslim		
Married	Married	Single	Married		Orthodox	Orthodox	Orthodox	Muslim	
Single	Married	Single			Orthodox	Orthodox	Orthodox		
Married	Single	Married	Married		Muslim	Orthodox	Orthodox	Orthodox	
Single	Single	Single	Single		Orthodox	Orthodox	Orthodox	Muslim	
Married	Married				Protestant	Orthodox			
Married					Orthodox				
Single					Muslim				
Single	Single				Orthodox	Muslim			
Married	Married				Orthodox	Orthodox			
Single					Orthodox				
Married	Married	Single			Orthodox	Orthodox	Orthodox		
Single	Married	Single			Orthodox	Orthodox	Orthodox		
Single	Married	Married	Married		Muslim	Orthodox	Orthodox	Orthodox	
Single	Married	Married			Muslim	Muslim	Orthodox		

EthnicA1	Ethnicity A2	EthnicA3	Ethnic A4	Ethnic A5	Occupation A1	Occupation A2	Occupation A3	Occupation A4	Occupation A5
Amhara	Amhara	Tigre			Daily Labor	Daily Labor	Microenterprises		
Amhara	Amhara	Gurage	Gurage	Gurage	Microenterprises	Government	Microenterprises	Microenterprises	Microenterprises
Gurage	Gurage				Microenterprises	Microenterprises			
Gurage	Gurage				Microenterprises	Microenterprises			
Amhara	Amhara				Microenterprises	Microenterprises			
Oromo	Oromo	Amhara			Government	Microenterprises	Government		
Oromo	Oromo				Microenterprises	Daily Labor			
Amhara	Gurage	Oromo			Private employee	Microenterprises	Government		
Others	Gurage	Gurage			Large enterprises	Large enterprises	Large enterprises		
Gurage	Gurage	Gurage	Others		Government	Daily Labor	Daily Labor	Private employee	
Oromo	Oromo	Oromo			Microenterprises	Microenterprises	Large enterprises		
Oromo	Gurage	Gurage	Oromo		Private employee	Microenterprises	Microenterprises	Microenterprises	
Gurage	Gurage	Amhara	Oromo		Microenterprises	Microenterprises	Microenterprises	Microenterprises	
Others	Amhara				Government	Government			
Amhara					Microenterprises				
Gurage					Microenterprises				
Gurage	Gurage				Government	Large enterprises			
Amhara	Amhara				Microenterprises	Large enterprises			
Amhara					Microenterprises				
Oromo	Oromo	Gurage			Microenterprises	Government	Large enterprises		
Oromo	Oromo	Oromo			Microenterprises	Microenterprises	Large enterprises		
Oromo	Oromo	Oromo	Oromo		Microenterprises	Government	Government	Unemployed	
Oromo	Oromo	Amhara			Microenterprises	Daily Labor	Microenterprises		

Income A1	Income A2	Income A3	Income A4	Income A5	Relation A1	Relation A2	Relation A3	Relation A4	Relation A5
800	1000				Friend	Friend	Friend		
4000	2700	5000	600	600	Family	Family	Workmate	Friend	Friend
4000	4000				Family	Family			
4000	4000				Family	Family			
2400	5000				Family	Acquaintance			
2500	3500	850			Family	Friend	Acquaintance		
1000	1500				Family	Family			
2000	2000	1000			Family	Family	Friend		
10000	5000	15000			Acquaintance	Acquaintance	Acquaintance		
800	400	700	2000		Family	Family	Family	Workmate	
600	800	10000			Family	Family	Friend		
200	300	400	200		Friend	Family	Family	Family	
350	400	300	450		Workmate	Workmate	Workmate	Workmate	
1000	5000				Family	Acquaintance			
2000					Family				
400					Family				
1200	1800				Family	Acquaintance			
500	5000				Friend	Workmate			
500					Acquaintance				
600	900	4000			Family	Family	Acquaintance		
600	800	1000			Family	Family	Friend		
300	1000	1000			Friend	Family	Family	Family	
-	500				Workmate	Family	Acquaintance		

Contact A1	Contact A2	Contact A3	Contact A4	Contact A5	Duration A1	Duration A2	Duration A3	Duration A4	Duration A5
Daily	Daily	Bi-weekly			39	32	14		
Weekly	Weekly	Bi-weekly	Daily	Daily	38	30	6	6	6
Daily	Daily				5	5			
Daily	Daily				20	20			
Weekly	Weekly				18	18			
Daily	Rarely	Rarely			10	12	10		
Weekly	Weekly				10	10			
Bi-weekly	Bi-weekly	Daily			7	7	4		
Rarely	Weekly	Rarely			6	10	7		
Daily	Daily	Weekly	Bi-weekly		35	35	30	3	
Rarely	Monthly	Rarely			10	10	10		
Bi-weekly	Daily	Daily	Rarely		5	8	12	26	
Daily	Daily	Daily	Daily		4	8	5	5	
Bi-weekly	Bi-weekly				10	6			
Daily					23				
Monthly					2				
Daily	Bi-weekly				10	4			
Daily	Bi-weekly				30	8			
Weekly					9				
Never	Rarely	Weekly			26	17	7		
Monthly	Rarely	Rarely			30	30	16		
Daily	Monthly	Daily	Daily		21	28	41	41	
Bi-weekly	Bi-weekly	Daily			3	5	4		

Trust A1	Trust A2	Trust A3	Trust A4	Trust A5	Knows 1-2	Knows 1-3	Knows 1-4	Knows 1-5
Trust	Strongly trust	Strongly trust			1	0		
Strongly trust	Strongly trust	Trust somehow	Trust somehow	Trust somehow	1	1	1	1
Strongly trust	Strongly trust				1			
Strongly trust	Strongly trust				1			
Trust	Trust				1			
Strongly trust	Trust somehow	Trust somehow			1	1		
Trust	Strongly trust				1			
Trust somehow	Trust somehow	Trust			1	0	0	
Trust	Trust	Strongly trust			1	1	1	
Strongly trust	Strongly trust	Strongly trust	Trust		1	1	1	
Trust	Strongly trust	Trust somehow			1	0		
Trust	Trust	Trust	Trust much		1	1	1	
Trust somehow	Trust	Trust somehow	Trust somehow		1	1	1	
Trust	Strongly trust				1			
Trust								
Trust somehow								
Strongly never trust	Trust somehow				1			
Strongly trust	Strongly trust				1			
Strongly trust								
Never trust	Never trust				1	0		
Trust	Strongly trust	Trust			1	1		
Strongly trust	Strongly trust	Strongly trust	Strongly trust		1	1	1	
Never trust	Strongly trust	Trust			1	1		



Knows 2-3	Knows 2-4	Knows 2-5	Knows 3-4	Knows 3-5	Knows 4-5
0					
1	1	1	1	1	1
1					
1	1		1		
0					
1	1		1		
1	1		1		
1					
1					
1	1				
1					

## **Appendix IV**

### **Key Informant Interview Guidelines**

1. Business planning and start-up (causes, types of business, criteria for selecting a specific business type, source of support while arriving to Addis Ababa, source of information, advice, and credit/ finance for enterprise planning and start-up).
2. Employment (the role of the family in business performance, presence of employees, wage for employees and family members, social networks and employment).
3. Working premises and conditions (work place, relations with other enterprises, presence of regular suppliers, and the role of social networks in securing business sites and suppliers).
4. Relationship with people having various occupational positions (higher and lower level) and their help in enterprise development and performance.
5. Membership in indigenous and local associations (formal and informal, government and NGO supported), membership criteria, objectives, and people found there, and the support obtained from associations and people for enterprise development.
6. Business dynamics (enterprise capital, number of employees and family members, branches) and innovativeness (improving quality of products, skills upgrading, market linkages, and improving productivity), the role of social networks in enterprise expansion and innovation.
7. Personal network dynamics following phases of enterprise development
8. Enterprise performance (income from enterprises, asset portfolios, expenses, changes observed in life following participation in informal activities and general perceptions on livelihoods).
9. The nature and characteristics of informal activities and particularly of street vending (size and condition of operation, operational problems, operators' level of education, training on entrepreneurship and skills development, the role of social networks in mitigating problems).
10. The policy and legal environment (government response to informal activities, legal or policy gap on informal activities on one hand and supporting the poor on the other).
11. Social networks and informal activities (the role played by social networks, nature of networks and criteria for networking, the role of gender and ethnicity in networking, the influence of the current ethnic politics in enterprise development and performance, etc.).
12. The way forward (suggestions to integrate the informal sector into the mainstream economy, suggestions to incorporate the role of social networks in poor targeted policies and strategies)

## Appendix V

Distribution of samples who named at least one alter per item and the total number of alters, mean and standard deviation of alters mentioned, N=154

No	<i>Is /are there people who.....</i>	% yes	number of alters mentioned				
			Total	Mean	Std.Dev.	Min	Max
1	gave you accommodation, food and other necessities while you came to AA	89.6	271	1.75	1.20	0	5
2	provided you business ideas and advice while planning your business	98.1	386	2.50	1.17	0	5
3	gave you credit or financial and material support while starting your business	92.8	206	1.33	0.69	0	4
4	helped you to expand your business and improve business performance	88.9	340	2.20	1.25	0	5
5	you create a contact for recruitment of employees, if any	0.01	1	1	0.08	0	1
6	you establish business cooperation or partnership	96.1	386	2.50	1.30	0	5
7	is/are regular supplier/s of your products or services	81.8	181	1.17	0.96	0	5
8	assisted you while you were involved in improving the delivery of your products	73.3	249	2.20	1.04	0	5
9	helped you to solve any administrative problems related to your business	7.14	18	0.12	0.45	0	3
10	are very important to your business and help you in various aspects of your enterprise performance	100	474	3.09	1.15	1	5
	Average	<b>73</b>	<b>251</b>				

## Appendix VI

Percentage distribution of street vendors' network composition by alter attributes and relational variables, N=154.

S.No	Attribute	Attribute Category	% of network composition
1	Sex	Men	68.51
		Women	31.49
2	Ethnicity	Amhara	28.02
		Gurage	42.42
		Oromo	24.24
		Tigre	1.73
		Others	3.57
3	Education	Illiterate	28.89
		Grades 1-4	13.41
		Grades 5-8	25.26
		Grades 9-10	11.25
		Grades 11-12	10.65
		College/University	10.49
4	Marital Status	Married	57.35
		Single	41.23
		Divorced	0.86
		Widowed	0.65
5	Religion	Orthodox	55.58
		Muslim	33.37
		Protestant	11.03
6	Relation	Family	50.46
		Friend	20.79
		Acquaintance	18.37
		Workmate	8.07
		Neighbor	2.28
7	Contact Frequency	Daily	53.89
		Bi-weekly	12.98
		Weekly	11.68
		Monthly	9.09
		Rarely	12.33
		Never	0.65
8	Level of Trust	Strongly Trust	58.52
		Trust	26.22
		Trust somehow	12.85
		Never Trust	1.89
		Strongly Never Trust	0.32
9	Occupation	Microenterprises	56.06
		Medium and large enterprises	9.31
		Government employee	11.63
		Private sector employee	12.61
		Daily Laborers	5.82
		Students	0.97
		Unemployed	2.26
		Pension	1.14

## Appendix VII

### ANOVA Test Results for the Change in the Proportion of Alter Attributes and Relational Variables over the Phases of Enterprise Development

S.No	Attribute	Attribute Category	Percentage of Network Composition			F
			Opportunity	Resource	Legitimacy	
1	Gender	Men	60.33	64.54	60.74	0.50
		Women	39.66	35.45	39.25	0.50
2	Ethnicity	Amhara	32.66	33.21	27.59	0.69
		Gurage	39.05	39.51	43.11	0.32
		Oromo	24.27	25.87	25.72	0.07
		Tigre	1.16	0.69	1.08	0.11
		Others	2.83	0.69	2.47	1.44
3	Religion	Orthodox	56.66	52.23	54.49	0.31
		Muslim	34.00	36.57	35.36	0.13
		Protestant	9.33	11.18	10.14	0.14
4	Education	Illiterate	26.27	28.67	25.66	0.21
		Grades 1-4	12.61	15.38	12.07	0.43
		Grades 5-8	27.71	22.94	25.99	0.53
		Grades 9-10	11.94	18.97	12.19	0.56
		Grades 11-12	8.72	6.64	8.93	0.35
		College/University	16.66	12.23	11.23	1.20
5	Marital Status	Married	61.88	71.32	58.45	3.26**
		Single	35.00	22.72	35.02	4.05**
		Divorced	2.11	2.79	5.79	1.78
		Widowed	0.66	3.14	0.72	2.42*
6	Relation	Family	48.33	67.24	34.12	22.08***
		Friend	31.27	17.24	30.00	6.57***
		Acquaintance	14.27	7.22	14.47	5.20***
		Workmate	0.00	0.00	17.81	44.30***
		Neighbor	6.11	8.27	3.01	1.98**
7	Contact frequency	Daily	48.00	40.25	61.59	6.90
		Bi-weekly	16.66	11.68	15.94	0.87
		Weekly	10.66	12.98	7.24	1.29
		Monthly	10.66	12.33	6.52	1.44
		Rarely	13.33	14.93	7.89	1.38
		Never	0.66	0.64	0.00	0.45
8	Spatial proximity	Addis Ababa	58.13	56.81	67.34	2.72*
		Neighborhood	14.32	16.49	11.11	1.05
		Other urban	6.51	5.59	5.42	0.12
		Rural	11.18	13.59	5.34	3.39**
		Together	10.04	9.20	6.04	1.15
9	Occupation	Microenterprises	54.35	40.55	48.28	1.76
		Medium and large enterprises	2.66	13.28	15.45	10.29***
		Government employee	17.50	12.70	14.67	1.18
		Private sector employee	16.71	15.85	13.11	0.52
		Daily labor	5.99	8.85	3.73	0.10
		Students	1.38	0.23	1.32	1.32
		Unemployed	3.66	0.81	1.68	3.23***
		Pension	1.49	1.04	0.96	0.21
		Farming	0.00	3.14	0.00	0.00
NGO work	0.27	1.75	0.72	1.07		
10	Alerts' age		34	37	33	5.43***
10	Alerts' income		1259	2074	2153	10.26***
12	Years of Acquaintance		13	15	10	9.63***

\*\*\* P<0.01, \*\* P<0.05, \* P<0.10

## Appendix IX

Name of Interviewers and average network size elicited per interviewer

Interviewer's name and size of networks per interviewee							
Interviewee	Behailu	Bethelhem	Eden	Habtamu	Kalkidan	Desalegn	Miskir
1	3	5	4	2	3	2	1
2	4	5	5	2	3	5	3
3	5	5	2	2	2	4	4
4	5	3	2	3	2	4	2
5	3	4	2	4	3	5	2
6	4	3	3	3	4	4	3
7	5	2	3	2	3	5	3
8	4	2	5	5	4	3	3
9	4	3	5	4	3	3	4
10	3	2	4	4	5	2	4
11	3	4	3	4	4	4	4
12	5	3	2	5	4	4	3
13	4	3	2	2	4	3	2
14	3	3	3	2	3	3	3
15	3	4	3	3	4	4	4
16	1	2	3	3	3	2	5
17	1	3	2	4	3	2	1
18	1	2	2	3	4	2	2
19	1	3	1	5	3	2	5
20	2	2	3	3	3	2	3
21	2	5	3	1	1	1	2
22	2	2	5	1	2	1	4
Average	3.09091	3.18182	3.04545	3.04545	3.18182	3.04545	3.04545