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**COLLEGE OF DEVELOPMENT STUDIES**

**CENTER FOR REGIONAL, URBAN AND LOCAL DEVELOPMENT  
STUDIES**

**DEPARTMENT OF REGIONAL AND LOCAL DEVELOPMENT STUDIES**

**Determinants of Economic Informality and Its Impact on Household Livelihood in  
Ethiopia; The case of street vendors in Bahir Dar**

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**A Thesis Presented In Partial Fulfillment of the Requirements for the Degree of  
Master of Arts in Regional and Local Development Studies**

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## **DECLARATION**

I, Mr. Abeje Ewunetu, Id.No. GSR/6104/10 hereby declare that this thesis entitled “Determinants of Economic Informality and Its Impact on Household Livelihood in Ethiopia; The case of street vendors in Bahir Dar” submitted as a partial fulfillment of the requirements for the award of the degree of MA, in Regional and local Development Studies to the College of Development Studies, Addis Ababa University, through the Department of regional and local development studies is my original work and has not been presented to the award of any degree in any university. All sorts of materials used for this thesis have been dully acknowledged.

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## **APPROVAL**

This is to certify that this thesis entitled “Determinants of Economic Informality and Its Impact on Household Livelihood in Ethiopia; The case of street vendors in Bahir Dar” submitted as a partial fulfillment of the requirements for the award of the degree of MA, in Regional and local Development Studies to the College of Development Studies, Addis Ababa University, through the Department of Regional and Local Development Studies, done by Mr. Abeje Ewunetu Id.No. GSR/6104/10 is an authentic work carried out by him under my guidance.

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## ACRONYMS

|       |                                         |
|-------|-----------------------------------------|
| CIA   | Assumption of Conditional independence  |
| ATT   | Average Treatment Effect on the Treated |
| CSA   | Central statistics agency               |
| ILO   | International labor office              |
| MoLSA | Ministry of Labor and Social Affairs    |
| PSM   | Propensity score matching               |
| SLI   | Sustainable Livelihood Index            |
| SMEs  | Small and micro enterprises             |
| SV    | Street vendor                           |

## ***Abstract***

*Having seen its desperate importance, this study examined the cause and impact of informal economic activities specifically street vending sector. Concerning the methodology, quantitative and qualitative approaches of a research was employed. Both primary and secondary sources of data were used. Purposive and convenience sampling techniques were used to select two sectors, 222 business operators and 100 users for the study. Data collection was effected by use of structured questionnaire and interview. Both descriptive and inferential statistical techniques were used in data analysis. Propensity Score Matching was also employed to examine the impact of economic informality on household livelihood in terms of livelihood index.*

*It was identified that people get involved in street vending activities due to Social and economic factors. The study further investigated that harassment and eviction, lack of capital, absence of working place, and access to credit are among the challenges face street vendors in the study area. The results of the study also reveal that accessibility to buyers, having more dependents and low price of products/service encouraged people to choose street vendors over normal shop and small and micro enterprises. Finally the study revealed that participation in informal economic activity (street vending) has the power to decrease livelihood index of households from -0.191 to -0.220. In light of the above findings and in order to improve street vending sector, the study suggests that policy makers considers legalizing street vending and planning for appropriate location in urban areas, build capacity of street vendors, formulate a street vending policy and strengthen stakeholder relationship.*

**Key words:** Informal Sector, Street Vendor, Livelihood, Economic Informality

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Worldwide, economy of nations consists of formal and informal economy. Yusuff (2011) define formal economy as that economic zone that is legally sanctioned, regulated through state intervention, and marked by regular work. In contrast, the informal economy is a sector consists of all activities operating outside the official legal and fiscal system, with a resulting lack of reliable statistical information (yusuff, 2011). In the economic sense, the word formal sector has been in existence since beginning of industrial revolution. As the study by Brown *et al* (2009), the concept of informal economy was recently defined by the ILO (1972) as characterized by ease of entry, reliance on indigenous resources and small size of operations. More recently, the term informal economy has been adopted as a better description of the diversity of workers operating informally.

In developed countries informal activity refers mostly to tax evasion and the use of undeclared labor (often undocumented foreigners). In emerging economies, informal activity is the source of employment for a significant share of the labor force, often making up for the weak potential of the formal sector to create sufficient jobs. The significance of the informal sector in low income developing countries, particularly in Sub-Saharan African economies, makes it a priority issue that should be mainstreamed in the development agenda of the international community. Its implications in terms of productivity, competitiveness, regulatory framework, and quality of employment are critical elements for moving resources to more productive agricultural and industrial sectors as well as better integrating those economies into regional and international value chains (Ahmadou, 2014).

In countries with high rate of population growth or urbanization, the informal economy tends to absorb most of the growing labor force. In Ethiopia, as indicated in a document produced by Ministry of Labor and Social Affairs (MoLSA) entitled: Labor Market Dynamics in Ethiopia (2013), out of the total employed population in urban areas of the country, 34.1% were engaged

in the informal economy. In Amhara region alone, the proportion of people engaged in the informal economy was 34% (MoLSA, 2013). The sector also provided most of the population with a means of livelihood or essential supplementary income. Most probably the sector is also the only reliable source of livelihood for women and the poor, for whom the formal sector has no accommodation for economic engagement (MoLSA, 2013). As stated in Wiego Working Paper No 3, a large share of employed individuals worldwide does not earn enough to lift these individuals and their dependents above the poverty threshold (Kaspos 2004). The quality gap between formal, regular employment and informal employment represents one of the principal cleavages in the overall structure of employment. Research has shown that workers in informal employment earn less, have more volatile incomes, lack access to basic public services and protections, and face higher risks of poverty compared to workers in formal employment (Chen et al. 2005). Hence, the quality of employment matters, not simply the quantity of opportunities.

The informal sector encompasses in itself a number of activities. Among these activities, street vending is more visible and important due to its entrepreneurial character and its relation with urban spaces. According to Bhowmik (2005), street vendors are those entities selling goods and services in the street without having a permanent built-up structure. A study by Habtamu (2012), find out that since street vending seems to be permanent features of Ethiopia urban economy, there is an urgent need to formulate an explicit and comprehensive policy towards vendor activities. Therefore, the issue of informal and non-standard employment deserves special attention. Hence, this study will concerned on examining the determinants and effect of informality specific to street vendors found in Bahir dar city administration.

## **1.2. Statement of the Problem**

The informal sector matters because of its sheer size (for example about half of national output, more than 80% of total employment and 90% of new jobs in African low income countries is contributed by the informal sector ), and its implications for economic development, notably its effects on employment opportunities, productivity, fiscal revenues, and growth (Ahmadou, 2014). It is an important occupation for the survival of people who are not absorbed in the formal sector. A study by Losby *et al.* (2004), cited in Tamrat and Nega (2015), revealed that the

informal sector has become a shield for the disadvantaged people for many of the developing nation's larger cities.

Bahir dar city is highly congested with street vendors. It is common to see people engaged in different activities on the streets of the city. They sell a variety of goods such as shoes, cigarette, garments, bags, second hand clothes, books, cosmetics, agricultural products, cooked food and other items. This led to problems like congestion, overcrowding, crime with pedestrians, drivers and the public in general. Hence, street vendors are blamed for problems created in the sidewalks of streets. According to a study by Bhowmik (2005), Timalisina (2007) and kumar and Singh (2009), cited in Tamrat and Nega (2015), insanitary condition of urban spaces, congestion, chaos, crime and illegal access to urban spaces are some of the issues they are accused of. On the other hand, the sector is dramatically growing phenomenon in the city.

But in spite of large proportion of operators in the informal sector in general and street vending in particular, much emphasis has not yet been given to this urban economic units. Vendors are often treated with exclusionary policies and practices and face ongoing harassment from local government officials. There is often a hostile legislative environment; street vendors are simply removed from public space and relocated to more marginal locations with low pedestrian footfall and/or inadequate facilities. According to a study by W. Jonga (2012), vending was a risk activity because vendors were illegal and were always harassed by police and established businessmen. Another study by Recio (2013), revealed that if government persists in ignoring such capacities, then it will fail not only to tame the keen peddlers, but also to gain from the substantial economic benefits that could be harnessed by engaging such players. In addition, policies, regulations and institutional support programmes are not available or designed for the street vending activity. Hence, ignoring or controlling informality will not be the ultimate solution to make street vendors productive and play an increasingly important role in economic growth. Thus, in order to ensure the optimal efficiency of informal businesses, understanding the needs of informal traders and the contributions made by the informal sector is necessary.

Therefore, to control the adverse effect of informality and to formulate policies which will made street vendors productive, understanding the causing factors and its effect is very important. Hence, studying economic informality specifically street vending business is an appropriate and

priority issue. Most research studies (Tefera, 2011, Jonga, 2012, and Fransen and van Dijk, 2008) conducted so far is mainly done based on the broad definition of informality, considering informal business employment, housing and land services. Whereas: this study refers only on street vendors who are engaged in selling different items on the street. The main reason for this study's focus on street vending activities in Bahir Dar is, studies by the aforementioned authors did not emphasize on the sellers and people's choice of sectors and impacts of vending in livelihood. Particularly, this study tries to give due consideration to address them. Now there is very little information on the status and the role street vendors play in economic development. This is due to the absence of well-conducted research work on street vending and lack of disaggregated data on the operators, which makes it impossible to estimate the share of street vendors in the informal sector in the area under investigation. So the provision of information on vendors and their customers to urban planners and policy makers might help them formulate long term policy towards vendors in the country in general and in the study area in particular.

To the best of my knowledge, there are no researches on this topic in the study area. Hence, this study would be the first to examine informal economic activities specifically street vending business in Bahir dar. As a result, this gap in the research has motivated the current study.

### **1.3. Objectives of the Study**

#### **1.3.1 General objective**

The main objective of this study was identifying the cause and impacts of informal economic activities specifically street vending business in the study area.

#### **1.3.2 Specific objectives**

Specifically the study aims;

1. To identify reasons why people are engage in street vending business in Bahir Dar
2. To understand people choice for business sectors in the study area
3. To examine impacts of street vending on the livelihood of vendors in the study area

## **1.4 Research Questions**

The study was answered the following basic research questions so as to realize both general and specific objectives stated so far:

- What are the critical factors that make people to engage in street vending business?
- What is people's choice for sectors?
- What are the challenges of practicing street vending business?
- What are the impacts of vending on vendor's livelihood?
- What is the extent of people livelihood index in the study area?

## **1.5. Significance of the Study**

Research studies are mainly conducted either to solve practical social problems and/or add valid knowledge to the existing ones. Therefore, this study, in one way or another, is expected to assist municipal officials and other policy makers to introduce interventions that will assist in solving problems of street vending in a sustainable manner. In addition, it may also be used as an entry point for further studies.

## **1.6. Scope of the Study**

The scope of this study was delimited to areas under the jurisdiction of Bahir dar city administration, Amhara Regional State. Besides, the study was look at only economic informality which is practiced by unregistered vendors on streets of Bahir dar city. The study also depending only on the data collected from street vendors, small and micro enterprises, Bahir Dar people and some public officials.

## **1.7. Organization of the Study**

The rest of the chapters are organized as follows; Chapter two is a presentation of the relevant literature on the subject that was reviewed. It looks at concepts and theories as they relate to the research topic and research questions. Chapter three describes the research methodology including a brief description of the study area, data collection procedures and analytical techniques.

Chapter four reports the results of the study and the discussion. Finally, a summary of the major findings, conclusion and recommendations were presented in chapter five.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1. Theoretical literature

##### 2.1.1. Concept and Definition of Informal Sector

The concept of informal economy first appeared in 1973 in a report by the International Labour Office (ILO), defined as an economic activity, which takes place within the informal sector and it is unregulated by law but governed by custom or personal ties (Katalin, 2015). Prior to the 1970s when the International Labour Organization sponsored several surveys of labor markets in developing nations, issues of informality and the informal economy were regarded simply as a failure of the market that could be corrected with policy (Aryeetey, 2015). Since then the debate on the informal economy and its position and role in developing economies has gained considerable new attention and interest, especially in Sub-Saharan African economies, where there is evidence that a majority of the population depends on the informal economy for their livelihoods, and that this structure is also drawn from socio-cultural norms influenced by many years of social engagement.

But the hidden nature of informal activity has posed a significant challenge to defining and measuring it accurately (Oviedo et al, 2009). As cited in the study of yusuff (2011), informal economy for instance was called irregular economy by Ferman et al (1973), the subterranean economy by Guttmann (1977), the underground economy by Simon (1982). Abumere (1989) described the economy as invisible, hidden, shadow, non- official, unrecorded, imperfectly recorded in the official national accounting systems. These different terminologies show that no single definition of informal economy could serve different fields.

According to ILO report (2010), informality is a term used to describe the collection of firms, workers, and activities that operates outside the legal and regulatory frameworks. It implies that a large number of people and economic activities are outside the legal-institutional framework. It takes many forms, from the unregistered small firm, to the street vendor, to the large, registered “formal” firm that employs a share of its workers without offering them written contracts with

access to benefits and unemployment protection (Oviedo et al, 2009). Aryeetey (2015), define the informal economy generally as the part of the economy that does not fall under the purview of organized economic activities. According to Chen M. A. (2006), a very well-grounded and informed political approach has to become aware that the informal economy is very diversified, covering a wide range of activities (starting the surviving strategies toward the dynamic enterprises), is caused by many factors, may contribute to the poverty decreasing and is also affected by the public policies and legislation in force, but is differently affected as the formal economy.

### **2.1.2. Basic Theories on Informal Economy**

There are studies that confirm the persistence and growing tendency of informality in developing countries and scholars have developed different theorizations on the existence of informality. A core dividing line between different theoretical perspectives on informality is the degree to which informal employment is assumed to be freely chosen and the extent to which it is assumed to be an outcome of constraints that limit opportunities and choice (Kucera and Roncolato, 2008).

Over the years, the debate on the large and heterogeneous informal economy has crystallized into four dominant schools of thought regarding its nature and composition. As cited in K. Parameswara (2015), a theory of informality includes; dualist, legalist, voluntarist and structuralist schools. Various theoretical perspectives exist to explain the causes and patterns of the informal sector in the developing countries. However, the dominant schools of thought are; the modernization or dualistic labor market approach; the neoliberal or legalist approach; the structural, dependency or neo-Marxist approach and the voluntarist approach.

#### **2.1.2.1 Dualist School**

According to Hart (1973); ILO (1972); Sethuraman (1976); Tokman (1978) cited in Chen (2012), the Dualist school sees the informal sector of the economy as comprising marginal activities distinct from and not related to the formal sector that provide income for the poor and a safety net in times of crisis. The Dualists argue that informal operators are excluded from modern economic opportunities due to imbalances between the growth rates of the population

and of modern industrial employment, and a mismatch between people's skills and the structure of modern economic opportunities (Chen, 2012).

The Dualists subscribe to the notion that informal units and activities have few (if any) linkages to the formal economy but, rather, operate as a distinct separate sector of the economy and that the informal workforce assumed to be largely self-employed comprise the less advantaged sector of a dualistic or segmented labour market. They pay relatively little attention to the links between informal enterprises and government regulations. But they recommend that governments should create more jobs and provide credit and business development services to informal operators, as well as basic infrastructure and social services to their families (Chen, 2012).

#### **2.1.2.2 Structuralist school**

Moser (1978); Castells and Portes (1989) cited in Chen(2012) argues that the Structuralist school sees the informal economy as subordinated economic units (micro-enterprises) and workers that serve to reduce input and labour costs and, thereby, increase the competitiveness of large capitalist firms. The Structuralists argue that the nature of capitalism/capitalist growth drives informality: specifically, the attempts by formal firms to reduce labour costs and increase competitiveness and the reaction of formal firms to the power of organized labour, state regulation of the economy (notably, taxes and social legislation); to global competition; and to the process of industrialization (notably, off-shore industries, subcontracting chains, and flexible specialization) (Chen, 2012).

The Structuralists see the informal and formal economies as intrinsically linked. They see both informal enterprises and informal wage workers as subordinated to the interests of capitalist development, providing cheap goods and services. They argue that governments should address the unequal relationship between “big business” and subordinated producers and workers by regulating both commercial and employment relationships (Chen, 2012).

### 2.1.2.3 Legalist school

As De Soto (2000) cited in Chen (2012) says the Legalist school sees the informal sector as comprised of “plucky” micro-entrepreneurs who choose to operate informally in order to avoid the costs, time and effort of formal registration and who need property rights to convert their assets into legally recognized assets. The Legalists argue that a hostile legal system leads the self-employed to operate informally with their own informal extra-legal norms.

This approach argues that the rigid rules and regulations and the terms and conditions for operating a unit in the formal sector are such that it creates an additional burden for the unit owners, and hence force them to bypass formal rules and regulations by operating in the informal sector. De Soto (1989) argues that the informal sector thrives in order to avoid the cost of formality in terms of stringent rules and regulation, taxes, time, and effort required for complying with formal procedures. According to this approach, the issue of informality is no longer an exclusive problem of development, (p.21) because the cost relating to regulation and enforcement is a relevant issue for any country, whether developed or developing. Therefore, in this approach, ‘informal work arrangements are a rational response by micro-entrepreneurs to over-regulation by government bureaucracies’ (Becker 2004: 10).

The way out of the informal economy lies in creating institutions and incentives and removing relevant barriers that discourage formality (Godfrey 2011). Firms prefer the informal economy because formal laws (such as property rights protection) and institutional procedures (for example, business registration requirements) make it either impossible or impractical to move to the formal economy. Therefore, exclusion from the formal sector raises the costs of doing business, creating a double penalty for entrepreneurs and households trying to compete informally (Godfrey, 2011).

In the legalist view, informal firms are an untapped reservoir of entrepreneurial energy, held back by government regulations (La Porta and Shliefer 2014). In this view, unleashing this energy by reducing entry regulations or improving property rights would fuel growth and development. Moreover, when informal firms are asked what benefits they may enjoy if they formalize, they mention access to credit and access to raw materials as being the incentives to

formalize, rather than more access to government programmes, the legal system, and infrastructure. Finally, La Porta and Shleifer find from their own work that very few informal firms formalize, largely due to the fact that they are much less productive than formal firms.

The Legalists focus on informal enterprises and the formal regulatory environment to the relative neglect of informal wage workers and the formal economy per se. But they acknowledge that formal firms what De Soto calls “mercantilist” interests collude with government to set the bureaucratic “rules of the game” (De Soto 1989). They argue that governments should introduce simplified bureaucratic procedures to encourage informal enterprises to register and extend legal property rights for the assets held by informal operators in order to unleash their productive potential and convert their assets into real capital.

#### **2.1.2.4 Voluntarist school**

The Voluntarist school also focuses on informal entrepreneurs who deliberately seek to avoid regulations and taxation but, unlike the legalist school, does not blame the cumbersome registration procedures. The Voluntarists argue that informal operators choose to operate informally after weighing the costs benefits of informality relative to formality.

The Voluntarists pay relatively little attention to the economic linkages between informal enterprises and formal firms but subscribe to the notion that informal enterprises create unfair competition for formal enterprises because they avoid formal regulations, taxes, and other costs of production.

They argue that informal enterprises should be brought under the formal regulatory environment in order to increase the tax base and reduce the unfair competition to formal businesses.

*Below the table, links to holistic frameworks are offered.*

|                                           | DUALISTS<br>Introduced by<br>ILO World<br>Employment<br>Mission Kenya<br>1972                                                                             | STRUCTURALISTS<br>Introduced by<br>Manuel<br>Castells and<br>Alejandro Portes<br>1989                                                                                      | LEGALISTS<br>Introduced by<br>Hernando De<br>Soto 1989                                                                                                                                                 | VOLUNTARISTS<br>Introduced by<br>William<br>Maloney 2004                                                                                                              |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Who they focus on</b>                  | those engaged in traditional and survival activities                                                                                                      | petty traders and producers; sub-contracted workers; casual workers                                                                                                        | informal enterprises and entrepreneurs                                                                                                                                                                 | the self-employed, notably entrepreneurs—especially male entrepreneurs – and their informal enterprises                                                               |
| <b>How they view the informal economy</b> | As autonomous activities with few (if any) links with the rest of the economy; activities provide income for the poor and a safety net in times of crisis | as subordinated economic units (informal enterprises) and workers that serve to reduce input and labour costs of large capitalist firms and increase their competitiveness | as comprised of plucky entrepreneurs who choose to avoid the unnecessary and burdensome costs, time and effort of formal registration and who need legal rights to convert assets into formal property | entrepreneurs who choose to operate informally in order to avoid taxation, commercial regulations, electricity and rental fees, and other costs of operating formally |

|               | <b>DUALISTS</b><br><i>(EXCLUSION)</i>                                                                                                                                                                                                                                 | <b>STRUCTURALISTS</b><br><i>EXPLOITATION</i>                                                                                                                                                                                                                                                                                                                                                                                                            | <b>LEGALISTS</b><br><i>ENTRY(BARRIERS)</i>                                                                                                                                                                                          | <b>VOLUNTARISTS</b><br><i>EXIT</i>                                                                                                                                                                                                                                                                                                       |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Causal theory | Informal operators are excluded from modern economic opportunities due to a) imbalances between the growth rates of the population and of modern industrial employment; and b) a mismatch between people's skills and the structure of modern economic opportunities. | Informality is due to the nature of capitalism and capitalist growth: specifically, the attempts by formal firms to reduce labour costs and increase competitiveness; the reaction of formal firms to the power of organized labour, state regulation of the economy (notably, taxes and social legislation) and global competition; and the process of industrialization (e.g. off-shore industries, sub-contracting chains, flexible specialization). | A hostile legal system leads to informal activities and informal, extralegal norms. Cumbersome government rules and procedures create barriers to formalization and thus stifle the productive potential of informal entrepreneurs. | Informal operators who choose to operate informally or even criminally after weighing the costs and benefits of informality relative to formality. Unlike the legalist school, this school does not blame cumbersome registration procedures but says informal is a deliberate choice by entrepreneurs to enjoy benefits of informality. |

**Source:** *sig working paper (2012)*

As stated in sig working paper (2012) while these various approaches have different starting points and theoretical building blocks, they broadly correspond to the two mutually exclusive and diagonally opposite views discussed earlier informality as exploitation and informality as accumulation. The underlying vision of the dualism is that informality, whether understood as a relation or as a characteristic of the firm, the sector, or the economy, is inherently exploitative. On the other hand, legalist and institutionalist schools see the informal sector as a means of accumulation and as being inherently dynamic.

The informal sector is a place where market activities can flourish unfettered by rules and regulations and can remain outside the reach of the state (as in the legalist school), or where informal relations develop both between different types of informal units as well as between informal and formal units as mechanisms of governance to handle increasingly complex economic exchange and production, and where these relations are ultimately efficiency enhancing (as in the institutionalist school) (sig working paper 2012).

Furthermore, in considering these theoretical approaches, it is useful to make a distinction between social protection and regulation. It is possible for individuals to lack social protection, but still be subject to regulation and public authority. For example, Roever (2006) cited in sig working paper (2012) argues that street vendors often face a range of regulations regarding how and where they can engage in trading and frequently are subject to harassment by municipal authorities. Lumping together regulations and social protections when analyzing the institutions influencing the dynamics of informal employment is not appropriate, and may create difficulties in defining the appropriate regulatory environment to support people's livelihoods (sig working paper 2012).

### **2.1.3 Types of Informality**

Fernandez *et al.* (2016) theorize that individuals are employed in the informal labour market for three broad reasons:

1. They do not possess the necessary skills in order to produce at the level required by the formal labour market.
2. Their productivity is comparable to workers in the formal labour market but they are prevented from entering due to barriers to formality.
3. Their productivity is comparable to workers in the formal labour market but they choose to work in the informal labour market due to benefits of informality. They call these three types of informal workers 'subsistence', 'induced' and 'voluntary', respectively.

The differences between these three types of informality can be viewed as differences in the following three dimensions: degree of choice, productivity, and barriers to formality.

**Subsistence informality** describes those informal workers who are insufficiently productive to be successfully employed in the formal sector. Entry into informal employment is involuntary, productivity is low when compared with formal sector employees and barriers to formality are not the main driver of entry into informal employment.

**Induced informality**, while also the outcome of an involuntary decision to enter informal employment, describes those informal employees who are excluded from the formal sector due to barriers to formality. These barriers can be implicit (e.g. due to discrimination) or explicit (e.g. due to legislation), and they differ from the subsistence informal in that productivity is similar to that of workers in the formal labour market.

Finally, **voluntary** informal workers choose the informal sector over the formal sector. Their productivity is similar to formal sector workers and they do not experience barriers to formality; rather, they choose to work in the informal sector because of benefits to informality, including evasion of market regulation.

## **2.1.4 Determinants of Informality**

The driving forces of informal sector are different from one country to another that affected by culture, politics and economic backgrounds. However some factors apply in most of them is summarize in the following.

### **High unemployment and poverty rate**

Other authors such as Skinner (2008) recognized poverty as one of the key driving forces driving one to engage in street trade businesses as it serves as a source of livelihood in many households .The high level of poverty and the high cost of living drive people into finding alternative ways to survive and as Onyenechere (2009) puts it, the poor economic conditions and a high level of poverty influence people's decision to get involved into street trade as a means to provide for their families. Cyprian (2011) mentioned that, poverty is usually caused by loss of employment, lack of interest in the formal sector, the need for one

to be entrepreneurial and a high unemployment rate are some of the reasons that force people to enter into the informal sector as street traders, which according to Tshuma and Jari (2013:252) promotes and empowers them to escape from malnutrition, hunger, and diseases by working in this industry and in 2014 alone the informal sector in South Africa employed about 1.5 million people.

### **Migration and urbanization**

In underdeveloped countries, the high increase in population growth in urban areas has led to the growth in the informal sector (De Soto, 2000) which is evident in many Sub-Saharan African urban areas where the increase in population in cities has minimized the employment opportunities for the underprivileged (Lyons & Brown (2007). Skinner (2008) argued that, urbanization, relocation and economic growth trends indicate that there has been a swift growth in the number of street traders working in urban areas on the African continent. Adedeji, *et al* (2014) further argued that with regard to the high rate of urbanization in Africa which is currently on 39% and the urban growth rate of 3.2% (2005 - 2010), the formal economic sector of urban areas in Africa cannot cope with the rising population in employment provision. Tipple (2005) concluded that the informal sector is therefore the main employer of many underprivileged city residents due to the fact that it is impossible for the formal economy to create employment opportunities for the high number of unemployed people.

Due to push and or pull factor of migration the rate of migration from the rural to the urban area will be greater than that of the number of jobs generated by the formal sector. According to Hayat (2000), agricultural sector was unable to accommodate the rapidly growing labour force in the rural areas. This resulted in higher rate of rural-urban migration particularly to most of them, lack skill and education coupled with the failure of the formal sector to generate additional employment, forced to participate in informal activity which found to be the immediate and livelihood.

In most countries, people relocate to the capital metropolis looking for better opportunities with the hope of improving their lives and Tshwane being the capital of South Africa, increases the chances of local and international migrants relocating to the city hoping to

find better job opportunities to improve their lives (Mokgatetswa, 2014). According to Rosales (2013) and Deluca (2012), the inability for undocumented migrants to find employment in the formal sector forces them into street trading as a means to survive due to the low barrier of entry.

### **Low level of education**

Moore *et al.* (2010) and WIEGO (2011) attributed the increase in the informal sector activities, partly to the low education, low skills requirements and low barrier of entry into the sector. The high level of competition in finding jobs in the formal sector and the inability for the uneducated and unskilled to get a well-paid job in the formal sector have influenced people's decision in engaging in the informal economic sector (Karthikeyan & Mangaleswaran, 2014), which according to Mbaye and Mohammed (2006) amounts to approximately 75% of non-farming jobs in Gambia, approximately 50% in Thailand, 75% in Morocco, 70% in Bangladesh, as well as 51% in Philippines. Skinner (2008) echoed the above by stating that although some street traders may be educated, many are considered to have a low level of education making it almost impossible for such people to get a well-paid job in the formal sector.

According to Tshuma and Jari (2013:251), whilst most of those engaging in this sector are those who could not be accommodated within the formal sector either due to their lack of education or skills, some consider this to be an easier option to engage in entrepreneurial activities without having to comply with a lengthy process of formally registering a formal business and paying tax.

### **Ease of entry and exit**

As stated by Jelilie and Addibu (2006), the formal sector is normally characterized by legal requirements, legal licensing, organization and a meticulous process of documentable form of operation and this has been the main source of employment in city centers but the informal economy is characterized by a low barrier of easy entry and exit, dependable on local resources, demanding manual labor and adaptable expertise and skills obtained outside the traditional education system. Furthermore, it is considered worldwide to be the main

source of job creation method in many cities (Willemse, 2011).

Callaghan and Gwatidzo (2013) further argued that, mainly due to the difficulty in entering the formal sector with rigid entry conditions forced many to venture into the informal sector. The International Labour Organization (2013) argued that, the key factor influencing the increase in the informal traders is the high unemployment rate as well as poor economic growth in mainly developing countries. Individuals who struggle to find work in the formal sector revert to street trading activities because of the low barrier of entry and many migrants who engage in such activities find it difficult to enter into the South African formal economy which is sometimes influenced by the rigid labour legislations (Van Heerden, 2011).

### **Entrepreneurial ambitions**

Many view street trading as an entrepreneurial way of starting one's own business. Brewer and Gibson (2014) stated that, these types of entrepreneurs are considered to be low performing/freelancers who have a minimal level of education or none at all, and who get involved in unlicensed street trading businesses primarily for survival purposes. Karthikeyan and Mangaleswaran (2014) agreed with this view by stating that individuals who engage in informal businesses usually lack expertise and knowledge compared to what is required in the formal sector, however, Van Heerden (2011) mentioned that, low entrepreneurial skills and lack of experience in sustaining and growing their businesses lead to lack of business growth opportunities for the street traders. Chiu (2013) gave a very similar view on why many people enter into the informal sector as it serves as an entrepreneurial opportunity for others and also gives them the opportunity to create a family business that can be handed down from one generation to another. Street trading enables the jobless to become self-sufficient, alleviate poverty, improve the way of life for households as well as serve as an additional source of income for many families (Horn, 2011).

### **Government rules and regulations**

The cause of increment of informal sector is tax burden, as we know neoclassical economic model if marginal tax increase, substitution effect that people choose leisure than work as same

as people substitute informal sector by reducing working time from formal sector (Belev, 2013). Due to over government rule and regulation who chooses to operate informally in order to avoid the costs, time and effort of formal registration (De Soto, 1989 cited on chen,2012).

### **Choice of illegal operation**

The illegalist school subscribes to the notion that informal sector driving by entrepreneurs purposely want to avoided costs of formally operating that regulations fee, taxation water and electricity cost. So that the school belief that the cause of informality is entrepreneurs choice to operate illegally (Maloney, 2004 cited on Chen, 2012).

### **Social and other factors**

Compared to other low-wage urban jobs like daily laborer, housemaid, etc. most choose it part to its freedom from extra burden from their employer, to its simple operation and irregular and flexible working hour so as to fulfill social obligations and home works, etc. (Webster &Fidler, 1996).

According to Thi et al. (2014) being formal entails significant costs including direct costs such as registration and license fees, and indirect costs such as the opportunity cost of time spent becoming formal. Djankov et al. (2002) provide preliminary evidence that countries with heavier regulation of entry have larger informal sectors. Furthermore, regulations including labor market rigidities, including minimum wage, dismissal costs and other employment laws meant to protect workers are potential determinants of informality (Strabu, 2005).

According to Gutiérrez Romero (2010) cited in Thi et al.(2014) most of the studies analyzing the informal economy in the short run show that it naturally tends to decline over time, especially in developed countries. However, there is a contrary prediction for developing countries where informality remains an important phenomenon and experiences marked increases (Perry et al, 2007).

Informal economic activity has diverse causes and effects. Evidences point to the following potential determinants of informal activity (Thi et al., 2014):

- ❖ Burdensome regulations (high entry costs, strict labor regulations, high taxes, complicated procedures, and so on)
- ❖ Low institutional quality (corruption, weak rule of law, lack of accountability, and so on)
- ❖ Low human capital
- ❖ High economic inequality
- ❖ Low trust in institutions
- ❖ Low quality of public services (infrastructure, social protection)
- ❖ Lack of access to resources (land, credit, and so on)
- ❖ Low monitoring and enforcement
- ❖ Individual preference for independent work

Likewise, the literature argues that informal economic activity has several potential economic costs:

- ❖ Sub-optimal production scales
- ❖ Low investment
- ❖ The “free rider” problem (overuse of public goods, low tax collection)
- ❖ Unfair competition
- ❖ Low innovation
- ❖ A large fraction of poor population uninsured again

### **2.1.5 The Informal Economy and Street Vending**

Informal economic activities have been around since the dawn of civilization, antedating nations’ formal commerce and trading protocols by centuries.

According to Ricardo *et al* (2013) Street vending in particular has become an object of scholarly attention, as it interfaces informal economic behaviour with the uses of public urban space, in which there is a variety of interests, including government’s interest in order and norms. As an ancient and important occupation, street vending can be found in virtually every country and major city around the world. It may be defined simply as the retail or wholesale trading of goods and services in streets and other related public axes such as alleyways, avenues and boulevards.

Morales (2000) cited in Ricardo *et al* (2013) say ‘‘why do people vend in the first place’’? First, people vend to make money and increase their autonomy. Second, they vend to learn and practice skills. Third, people vend to set up new businesses or have a consistent source of income. Fourth, people vend to socialize children and as a social event.

Hiemstra *et al.* (2006) cited in Ricardo *et al* (2013) vending, of street food for instance, may be stationary, residential or ambulatory, and combines characteristics of planned, opportunistic and reactive behavior. This is consistent with the schema of Bromley (2000) who elaborates that street vending may be practiced full time, part-time, seasonally or occasionally. It may be fixed, occasionally mobile or almost continuously mobile, and it can go on at any or all times of the day or night. The firms involved can range from one-person micro-enterprises through numerous forms of partnership and family businesses, up to franchises, pieceworkers and wagedworkers of larger off-street businesses (Ricardo *et al* 2013). Street vendors tend to cluster in those spaces with a high level of business opportunity. Agglomeration in a few locations increases turnover because:

- A. Concentrations of vendors become known and attract more customers;
- B. More on-street business may forestall and block easy entry to nearby off-street businesses; and
- C. More street vendors increase pedestrian and vehicular congestion, slowing everything down and enabling them to spend more time looking at merchandise and receiving sales pitches.

This typical bazaar economy trading is focused on intense day-to-day interaction of vendor and buyer where each tries to get the best deal. This is in contrast to the ‘firm-centered’ economy, while in between lie varying degrees of informality, depending on how far the seller has entered the legal permit and taxing system (Ricardo *et al*, 2013).

According to ILO (2013) Street vendors are part of an extremely visible category of workers that has always existed, despite frequent efforts to repress them. Some observers argue that the number of street vendors worldwide is increasing, both because of the generalized rural exodus of low skilled workers towards cities, as well as global economic crisis and the lack of employment opportunities. Others, however, point out that there is very little data on street

vendors, and argue that it is consequently difficult to ascertain if their numbers are growing faster than would be accounted for naturally by urban population growth.

Street vending is closely connected with the availability of urban public space – pavements, roads, parks, beaches, etc. and many of the difficulties associated to the activity, including the generally negative way it is perceived by wider society, are linked to the ways in which such spaces are managed by the authorities. As a result, street vendors face a “complex coexistence of persecution, regulation, tolerance and promotion” (ILO, 2013).

### **2.1.6 Challenges of Street Vending**

Street or market vending can be highly regulated, but most of the time, it is informal, operating outside the law, without permit or standardized facilities. Street vendors more often than not face significant difficulties in carrying out their livelihood activities (ILO, 2013).

According to ILO (2013) they suffer from poor access to services and infrastructures such as water, electricity and financial services. Shopkeepers may accuse street vendors of unfair competition; they are often treated as criminals, and are often seen as impeding the city’s development. They are concerned with confrontation with police or municipal authorities, and frequently need to pay bribes in order to be able to continue selling on the streets, as well as to escape evictions and the confiscation or destruction of their property. Street vendors suffer from clear decent work deficits.

They often endure poor working conditions such as irregular income and long hours, lack of social security, and poor health and safety standards, amongst others. Gender balance varies greatly from one country to the other, but in many countries a majority of street vendors are women. It has been pointed out, moreover, that men are often in a better position, being more likely, in some countries, to sell non-perishable goods from push-carts or bicycles, while women are more likely to sell perishable goods from baskets or a cloth spread on the ground (ILO, 2013). According to Chidoko *et.al.* (2011), the following are challenges that face street vendors.

**Lack of capital and collateral:** While the government and other stakeholders in the economy have begun to realize the sector’s importance, there is still little assistance for many small

businesses and some are operating at below capacity. Many entrepreneurs in the informal sector have no access to banking facilities at all. Most have no collateral to secure loans from banks.

**Lack of necessary skills** e.g. accounting and managerial: Most informal business operators lack the necessary skills in operating their businesses. They at times do not keep proper records. They at times rely on their memory for purposes of business records. Relying on memory as an alternative to written records has the biggest drawback of forgetting.

**Limited Life span:** Most informal businesses have short life span that does not go beyond the life span of the owner. The business can only thrive as long as the owner still has the will to remain in the business.

**Registration requirements:** In developing countries the bureaucratic registration procedures drive many businesses into the informal sector. The informal sector comprises unregistered businesses.

**Labour:** Labour is usually family based. They operate with a low level of organization, with little division between labour and capital, as factors of production.

**Equipment:** This is a challenge for the informal sector players. They usually do not have enough and appropriate equipment to execute their duties.

### **2.1.7 Impact of the Informal Sector**

As stated by Clainos Chidoko, *et.al.* (2011), there is widespread agreement that the sector impacts positively on the economy through various avenues.

**Contribution to Gross Domestic Product:** More goods are availed to the market through increased production leading to the informal sector contributing significantly to gross domestic product.

**Employment Creation:** With the high unemployment, job creation, particularly that focusing on the smaller enterprises in the informal economy, is important.

Increase in investment: Through increased income as a result of engaging in economic activities, the entrepreneurs will be able to accumulate savings and hence continuing investing and reinvesting in the sector.

Other positive contributions: These include reduction of crime levels, reduction of rural to urban migration and reduction of poverty levels. There is also importation of essential goods/equipment required in the formal sector and provision of goods at lower cost because of lower overheads. Informal sector can also act as a base for apprenticeship training.

## **2.2. Countries Experience**

Since good practices regarding street vending are scarce in our country, experiences are presented in the context of different developing countries. According to ILO (2013), different countries have street vending experiences and good practices; some of them are presented below.

In **Dares Salaam, Tanzania** street vendors have been issued licenses and are allowed to operate since the early 1990s. Shelves and tables have been standardized and guidelines have been adopted setting up a framework for managing street vending. The city council has been persuaded to adopt a consultative approach which greatly helped in the implementation of the plan and resolved many issues such as crime and street cleanliness.

In **Bogotá, Colombia** the Constitutional Court stated that it was necessary to reconcile the two conflicting constitutional rights to public space and to work when dealing with the expulsion of street vendors. Expulsions are therefore permitted only when they have been ordered through a proper judicial process, and when there are guarantees that the evicted traders will not be neglected. According to the Court, training for vendors and improved access to credit are permissible alternatives to relocation.

In **India** the Supreme Court confirmed in 1989 that street vendors had the right to vend and that streets were not only “meant exclusively for passing and re-passing and no other use”. In 2004, a National Policy on Urban Street Vendors was adopted, reflecting a change from prohibition to regulation of street vending. It seeks to legalize street vending by providing for legal vending zones, establishing fee-based regulation rather than limited number of licenses, promoting the

organization of street vendors and implementing participatory mechanisms, amongst other initiatives.

Implementation of the policy at state level has proved challenging, however, with only a few draft State-level laws based on this policy currently under discussion. A new National Policy was adopted in 2009, revising the 2004 Policy. The revised policy insists on the need for a legislative framework and includes a Model Street Vendors (Protection of Livelihood and Regulation of Street Vending) Bill.

In **Thailand** two examples of good practices shows that:

In the first case, an individual won a concession from the ministry who owned the area to manage a private market. The market is well-organized and managed, resulting in a win-win situation for all parties involved. The owner goes around the market every day and is responsive to the vendors' problems.

In the second case, the market is in a private company's housing estate. The private company organized and managed the market. A high rent is charged and high standards of hygiene, orderliness, and security are maintained. At first, the vendors were not happy to relocate, but gradually, as business at the market picked up and the managers tried to persuade the vendors, relocation was completed and the market flourished. Through renovation by the company, the market has good infrastructure, including restrooms and a car park, and this has contributed to the increase in customers and consequently, an increase in income for vendors. Hence, vendors are also willing to pay higher rent.

### **2.3. Empirical Literature**

A study on the role of informal sector in alleviating youth unemployment in Hawassa city, Ethiopia by Tefera (2011) shows that vendor's livelihood has improved after they joined the sectors. Furthermore, it concludes that operators who are more educated, natives to the city, more profitable, stayed longer in the activity, and have a culture of saving, have depicted better livelihood improvement vis-à-vis their counterparts. However, lack of working capital, working

premises, adequate market and raw materials were reported as the major impediments for the operators.

Wellington Jonga (2012) carried a study to investigate challenges and prospects of Street vending at megenagna (Ethiopia). The major problem identified was unemployment, poverty and an attempt to establish a source of income for purposes of livelihood. However, the researcher discovered that vending was a risk activity because vendors were illegal and were always harassed by police and established businessmen. The vendors and the local politicians were not sure of the by-laws or any regulations that controlled such activities in Addis Ababa. The results seem to portray the image that the vendors have become spectators to activities and institutions they created or live in.

Another study on informality in Addis Ababa, Ethiopia, by J. Fransen and V. Dijk (2008), conclude that all households take part in informality as consumers and/or producers, with very high levels of informality in employment, services, land and housing. Informal businesses contribute 26% of urban employment with relatively low and decreasing value added per person.

The findings of the study by Etsubdink (2008), on Cause and Effect of Informal Sector: the case of Street vendors in Addis Ababa, Ethiopia shown that; the reason of informal operators to become in the informal sector is unable to fulfill criteria of formal sector and lack of job opportunity in the formal sector. The study reveals informal sectors is source of income for the poor or means of employment and also it is a base of formal sector. Furthermore, most of the street vendor's constraint was shortage of capital and problem faces from Government field and other incidents.

A study on Informality in the Process of Development and Growth, by N. Loayza concludes that in a typical developing economy, the informal sector produces about 35 percent of gross domestic product and employs 70 percent of the labor force.

In addition, a study on Street Trading in Cape Town CBD: A study of the relationship between local government and street traders by V. Heerden (2011), indicated that there is a positive relationship between traders and the City of Cape Town, but that local government does not live up to expectation when it comes to the facilitation of informal business development. In this

study, policy interventions are put forth that would lead to the creation of a facilitative relationship between the City of Cape Town and street traders.

A study on Informality and Long-Run Growth by Müller et al. (2014) reveals that although informality serves to protect low-skilled workers from extreme poverty in the short-run, it prevents income convergence between developed and developing nations in the long run. Sudden elimination of informality would induce severe welfare losses for several generations on the transition path. The study concludes that subsidizing education is the most cost-efficient policy, and it can be targeted towards low-skilled parents to reduce costs.

Wadzanai (2011) carried a study to investigate the impact of informal trade on poverty reduction in Zimbabwe. The findings show that the informal cross border trade contributes positively to poverty reduction. The contribution has been noticed through the improvement in the socioeconomic well-being of traders, traders to acquire assets, and improved food security. This calls for the government to develop policy and regulations for effective informal business operation, hence contribute to the national development. In sub-Saharan countries where formal employments are little and the level of education of many youth is minimal, informal business could serve as an alternative source of employment.

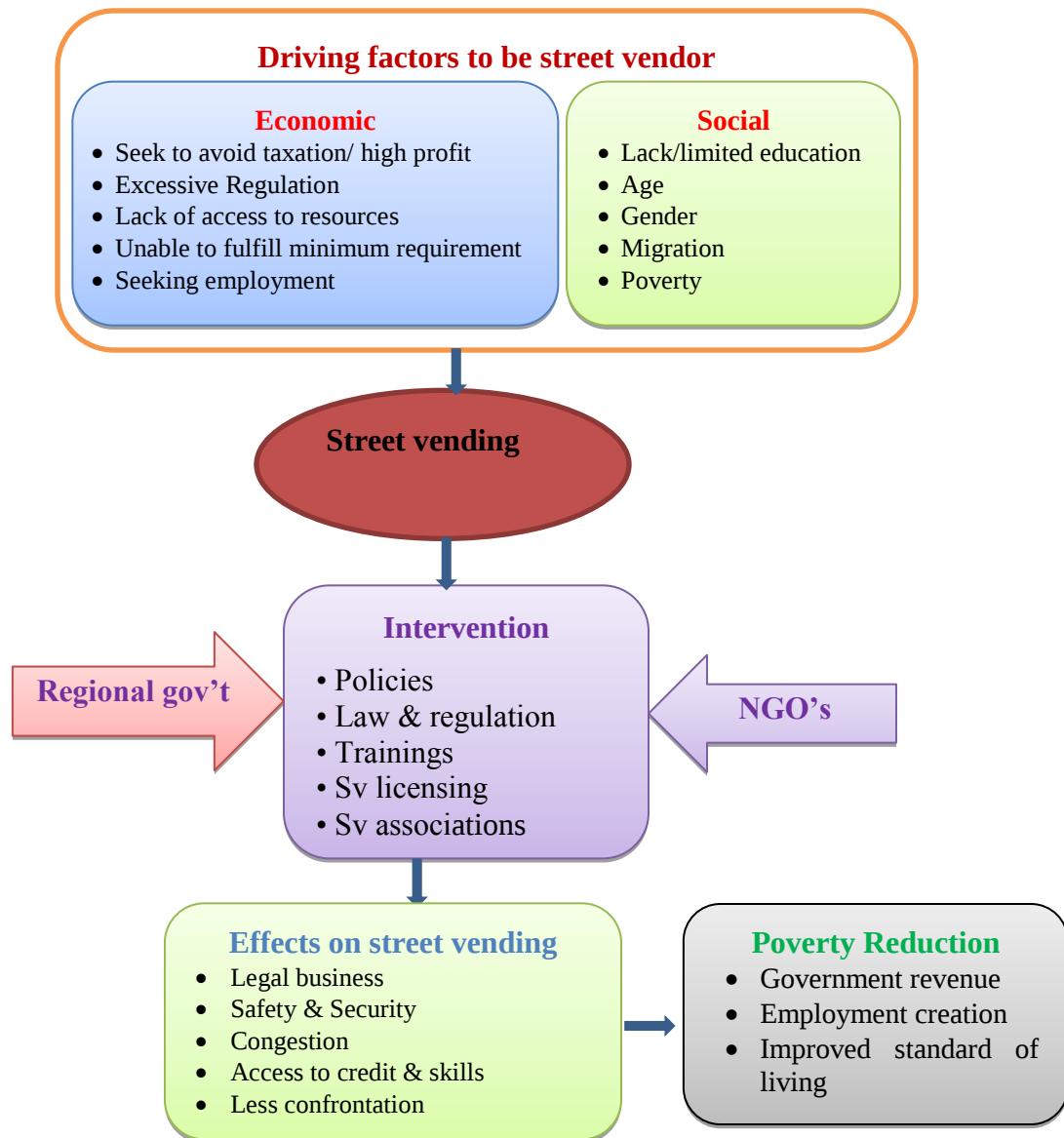
### **Gap Analysis**

Studies done mostly in Ethiopia so far were based on the broad definition of informality, considering all informal business employment and they are also based on data collected from street vendors.

In addition, they did not also emphasize on the sellers and customer's choice of sectors and impacts of vending in livelihood. Particularly, this study tries to give due consideration to address them. Finally, this research focuses on street vendors alone by collecting data from formal and informal operators and people in the study area.

## 2.4. Conceptual framework

Figure 2.1 conceptual framework of the study



*Source: own demonstration (2019)*

Figure 2:1 is used as a conceptual model to analyze the practical realities of street vending. The framework incorporates a driving approach which emphasizes factors such as seeking to avoid taxation or need of high profit, excessive regulation, and lack of access to resource, being unable to fulfill minimum requirement, seeking employment etc. as the driving forces that push people

into street vending. The economic as well as social factors push people into street vending activities which have both positive and negative impacts on economy and the environment. People operate in a context of vulnerability.

Hence, for the better practice of street vending, there is a need for intervention for the sector to grow in sustainable manner. This means that if the street vendors will be empowered in terms of business permits (license), policy, regulation, appropriate business skills, vending association, and business security they would provide impetus to income growth and general business development which in turn could reduce poverty.

With street vending intervention in place, there are job opportunities; income household improved, government revenue increased which lead to the improvement of standard of living and poverty reduction as well.

## CHAPTER THREE

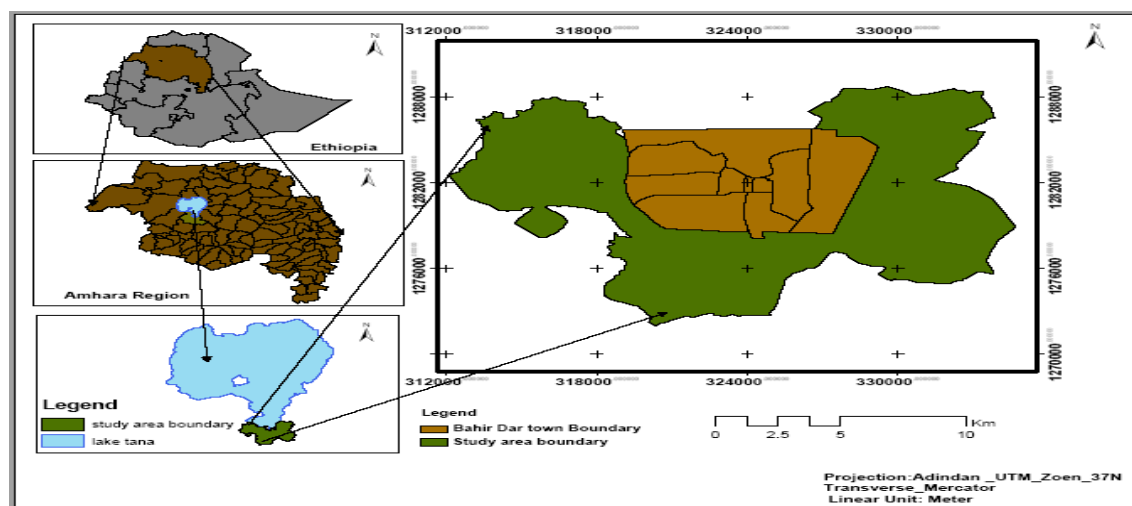
### RESEARCH METHODOLOGY

#### 3.1. Background of the Study Area

Bahir Dar is the third largest city in Ethiopia. It is the capital of the Amhara region, inhabited by the Amhara people, a country's ethnically and geographically second largest group. Based on the 2007 Census conducted by the Central Statistical Agency of Ethiopia (CSA), Bahir Dar Special Zone has a total population of 221,991, of whom 108,456 are men and 113,535 women; 180,174 or 81.16% are urban inhabitants, the rest of population are living at rural kebeles around Bahir Dar.

Bahir Dar is located at the exit of the Abbay from Lake Tana at an altitude of 1,820 meters (5,970 ft.) above sea level. The city is located approximately 578 km north-northwest of Addis Ababa. The three largest ethnic groups reported in Bahir Dar Special Zone were the Amhara (96.23%), the Tigrayan (1.11%), and the Oromo (1.1%); all other ethnic groups made up 1.56% of the population. Amharic was spoken as a first language by 96.78%, and 1.01% spoke Oromiffa; the remaining 2.21% spoke all other primary languages reported.

*Figure 3.1: Locational Map of the Study Area*



Source: [www.researchgate.net](http://www.researchgate.net)

### 3.2. Research design

This study was applied sequential mixed research approach one after the other. I choose to apply this method in order to describe and identify the existing factors and impacts of street vending. Therefore, it was employed both quantitative and qualitative approaches for analysis of the subject under study.

### 3.3. Type and source of Data

Both primary and secondary data was collected to accomplish the objective of the study. So the sources of data for the study were both primary and secondary. The primary data was collected from street vendors, micro and small enterprises and selected government departments. Secondary data was collected from relevant documents like reports, news-papers and magazines; and when necessary, material downloaded from most referred web sites.

### 3.4. Population

The study was conducted in Bahir dar city. The population of the study was all street vendors working in the streets of Bahir dar and formal business operators (SMEs). In addition, based on the reason that they have better information concerning the issue under investigation, government officials was interviewed as key informants about the street vending business. Therefore, since the total population was large and unknown, the sample size was determined using the sample size formula for finite population shown below.

### 3.5. Sample size

**Data was collected from three entities:**

#### **a. From formal and informal sector participants**

The sample size for formal and informal sector participants is determined using the formula

Cochran (1977) 
$$n = \frac{z^2 pq}{e^2}$$

**Where**, n is the sample size,

**z** =is the selected critical value of desired confidence level, 1.96

**p**= is the estimated percentage of respondents both in formal and informal sector

**q** = p-1 and

**e** = is the desired level of precision 0.06. p = 0.5 is used to calculate the sample size. By substituting the values in the above formula, sample of size (n = 222) respondents will be selected.

| Sector      | Formal/ small and micro enterprises / | Informal /street vendor/ | Total |
|-------------|---------------------------------------|--------------------------|-------|
| Sample size | 111                                   | 111                      | 222   |

**Source: own compilation (2019)**

**b. From the population of Bahir Dar**

The sample size for the population of Bahir Dar is determined using the formula,  $n = \frac{N}{1+Ne^2}$

In which n= the size of the sample

N= the size of the population, 180,174

e= the margin of error, 10% (90% confidence level). By substituting the values in the above formula, sample of size (n = 100) respondents will be selected.

**c. From key interviewed as key informants: purposively the study will ask 6**

| Key informants                                    | Number |
|---------------------------------------------------|--------|
| Bahir dar city trade and industry office          | 1      |
| Bahir dar city micro and small enterprises office | 1      |
| Bahir dar city code enforcement office            | 1      |
| Street vendor                                     | 2      |
| Bahir dar city municipal office                   | 1      |

### 3.6. Sampling techniques

In this study, the researcher was used non-probability sampling techniques. Purposive sampling was used to select the study area and a sample of 6 key informant respondents. The researcher purposefully selected 4 government officials and 2 vendors in the city for the study since they

have better information concerning the issue under investigation and information was gathered through interview. The sample respondents from formal and informal sector participants and from the population of Bahir Dar were selected using Convenience sampling and information was gathered through questionnaire.

### **3.7. Data collection method**

In this study data was collected through the use of various techniques of data collection like, questionnaire, interview, observation and document analysis.

### **3.8. Method of data analysis**

For this study both quantitative and qualitative method were employed to undertake the process of data analysis. In analyzing the data the researcher used both inferential and descriptive statistical tools. The qualitative data was analyzed through narratives and used in discussions.

#### **3.8.1. Descriptive analysis**

Descriptive statistics is one of the techniques used to summarize the data collected from a sample representing of a given population. Descriptive statistics such as mean, standard deviation, frequency and others was used during data analysis. It is used to analyze important variables.

#### **3.8.2. Qualitative analysis**

Information obtained through interview, observation and document analysis was analyzed descriptively by narrating or describing it.

#### **3.8.3. Econometrics analysis**

Data collected through survey questionnaire was analyzed and interpreted using econometric analysis to examine the determinants of street vending business and its impact on the livelihood of vendors in the study area. Both binary logistic model and Propensity Score Matching model was employed to determine the relationship that will exist between dependent and independent variables. The analysis was done through STATA software.

### 3.8.3.1 Model used in the paper

| Models |                              | Research questions to be addressed                                  | Objective of the model                             | Why the model                                                                                                                                                                             |
|--------|------------------------------|---------------------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | Propensity Score Matching    | ❖ What are the impacts of being street vender on vendors livelihood | To identify impacts of street vending              | <ul style="list-style-type: none"> <li>• To see impact of street vending</li> </ul>                                                                                                       |
| 2      | Log it model                 | ❖ What Determines street vending business                           | To identify determinant of street vending business | <ul style="list-style-type: none"> <li>• To determine sellers choice</li> <li>• Dependent is dummy (involvement of economic activity, being informal, street vendor or formal)</li> </ul> |
| 3.     | Multinomial Log it model     | ❖ What is people's choice of sectors                                | To determine people choice for those sectors       | <ul style="list-style-type: none"> <li>• To understand people choice for those sectors</li> <li>• Dependent is dummy (street vendor, normal shop or MSE)</li> </ul>                       |
| 4.     | Sustainable livelihood index | ❖ What is the livelihood index of households?                       | To develop a livelihood index                      | <ul style="list-style-type: none"> <li>• To estimate livelihood</li> </ul>                                                                                                                |

**Source: Own formulation**

Detail of the above models and description of variables are discussed below:

## I. Model specification

### 1. Propensity score matching

#### **The Theoretical Framework: Propensity Score Matching (PSM)**

Propensity Score, Matching construct a statistical comparison group then based on a model of the probability of participating in the treatment using observation characteristics. The degree of similarities between different units is measured on the basis of the probability of being exposed

to the intervention given a set of observable characteristics not affected by the program. Once the two groups are matched based on observation, The average treatment effect of the intervention is calculated as the mean effect of treatment can then be calculated as the average difference in outcomes between the treated and non-treated units after matching across treated and control groups (Khandkeret al, 2010).

This propensity value is estimated based on a statistical model, e.g., logit or probit model, and thereby estimate the average treatment effect of the outcome difference between the two groups using nearest-neighbor, caliper, stratification and kernel matching. It is more robust compared to others. However, it requires a large sample size and good quality data. It may not able to control all preexisting difference between the two groups (Pufahl and Weiss 2009).

### **Assumption of Conditional independence (CIA)**

Conditional independence states that given a set of independent observable  $X$  that are not affected by the intervention (treatment) potential outcomes  $Y$  are independent of treatment assignment  $T$ . If  $y_i^T$  Represent outcome for participants and  $y_i^C$  Represent outcome from non-participants, conditional independence implies

$$y_i^T y_i^C \perp T_i / X_i \dots\dots\dots (1)$$

Where  $\perp$  indicate Independency,  $X$  is a set of observational characteristics.

Rosenbaum and Rubin (1983), this assumption is also called un-confoundedness and it implies that uptake of the program is based entirely on observed characteristics. To estimate the TOT as opposed to the ATE, a weaker assumption is needed:

$$y_i^C \perp T_i / X_i \dots\dots\dots (2)$$

### **Assumption of common support**

Assumption of common support, this assumption requires that there need to be a region of common area where households with the same characteristics have a probability of being both

participants and non-participants (Gertler et al, (2011) and Khandker et al, (2010). Treatment units therefore have to be similar to non-treatment units in terms of observed characteristics unaffected by participation; thus, the common support assumption implies that the probability of receiving treatment for each possible value of the vector  $X$  is strictly within the unit interval that fall outside the region of common support area would be dropped. (Baum, 2013) Mathematically, it is represented by: for each value of  $X_i$ , there is a positive probability of being both treated and untreated

$$0 < P(T_i = 1/X_i) < 1 \dots\dots\dots (3)$$

This assumption improves the quality of matches as it excludes the tails of the distribution of ( $X$ ). If there is a sizable overlap in PS between participants and nonparticipants, PSM estimates TOT as the average Mean difference in the possible outcome ( $Y$ ) within the common support region. It weights the comparison unit by the PS distribution of participation. The cross section estimated as follows. (Khandker et al, 2010)

$$TOT_{PSM} = E_{P(x)|T=1} \{E[Y^T | T = 1, P(x)] - E[Y^c | T = 0, P(X)]\} \dots\dots\dots (4)$$

More clearly, the treatment effect with cross section data and within the common support can be written as follows (Heckman, Ichimura, and Todd 1997, Smith and Todd 2005).

$$TOT_{PSM} = \frac{1}{N_T} [\sum_{i \in T} Y_i^T - \sum_{j \in c} (\omega)(i, j) Y_j^c] \dots\dots\dots (5)$$

Where  $N_T$  is the number of participants  $i$  and  $(\omega)(i, j)$  is the weight used for aggregated outcome for the matched non participants.

### Application of the PSM method

To calculate the program treatment effect, one must first calculate the propensity score  $P(X)$  on the basis all observed covariates  $X$  that jointly affect participation and the outcome of interest. The aim of matching is to find the closest comparison group from a sample of nonparticipants in

the sample of program participants. “Closest” is measured in terms of observable characteristics not affected by program participation (Khandker et al. 2010).

### **Step 1: estimating a model of program participation**

In order to calculate the program treatment effect on samples of participants (impact of street vending) propensity score should be estimated on all the observed covariates  $X$  in the data that are likely to determine participation when one is interested only in comparing outcomes for those participating ( $T=1$ ) with those not participating ( $T=0$ ), this estimate can be constructed from a probit or logit model of program participation (Khandker et al., 2010)

The value of propensity score ranges from 0 to 1. When estimating the propensity score, two choices have to be made. The First one concerns the model to be used for the estimation, and the second one the variables to be included in this model. With regard to the model, since this study has binary treatment variable as a dependent to estimate the propensity scores (participation and non-participation in vending) logit model is chosen for the application. Regarding the choice of variables which was included in the model, only variables that influence simultaneously the participation decision and the outcome variable should be included. It is important to consider what factors distinct the beneficiaries from non-beneficiaries. Because these factors are associated with outcomes, controls for them are essential. The problems with PSM estimation are explicit criteria used in determining participation in the intervention and also to consider factors associated with self-selections in the program (Baum, 2013). Accordingly PSM was used to compare the households’ livelihood.

### **Step 2: Defining the region of common support and Balancing Tests**

The distribution of the probability of participating in the intervention may differ for treated and control groups; therefore it is important to look where distribution of propensity score overlaps drop non-treated that fall outside of the region of common support. Hence, an important step is to check if there is at least one treated unit and one non-treated unit for each value of the propensity score. Several methods are suggested in the literature, but for this study a visual analysis of the density distribution of the propensity score in the two groups (treated and non-treated group) is used to check overlap and common support before matching samples.

Balancing tests can also be conducted to check whether the distributions of the treated group and control groups are similar or balanced. This implies that the propensity scores of the groups from vendor participant samples and non- vendor participants need to be similar since propensity scores are based on similar observed X. Formally, one needs to check if  $\hat{P}(X | T = 1) = \hat{P}(X | T = 0)$  (Khandker et al. ,2010).

### **Step 3: Matching Participants to Nonparticipants**

Based on the propensity score different matching criteria can be used to assign participants to non-participants. Doing so entails calculating a weight for each matched participant-nonparticipant set. The choice of a particular matching technique may therefore affect the resulting program estimate through the weights assigned:

**A) Nearest-neighbor matching:** one of the most frequently used matching techniques is NN matching, where each treated unit is matched to the unit in the comparison group that presents the closest estimated propensity score. One can also choose n nearest neighbors and do matching (usually n=5 is used). Matching can be done with or without replacement. Matching with replacement (an untreated unit can be used more than once as a match) and matching without replacement (an untreated unit can be used only once as a match). Once each treated unit is matched with a control unit the difference between the outcomes of the treated units and the outcome of the matched control units is computed, however, it is obvious that some of these matches are fairly poor because for some treated units the nearest neighbors may have a very different propensity score.

**B) Caliper or radius matching:** One problem with NN matching is that the difference in propensity scores for a participant and its closest nonparticipant neighbor may still be very high. This situation results in poor matches and can be avoided by imposing a threshold or “tolerance” on the maximum propensity score distance (caliper). This procedure therefore involves matching with replacement, only among propensity scores within a certain range. A higher number of dropped nonparticipants are likely, however, potentially increasing the chance of sampling bias (Khandker et al. 2010).

**C) Stratification or interval matching:** This procedure partitions the common support into different strata (or intervals) and calculates the program's impact within each interval. Specifically, within each interval, the program effect is the Mean difference in outcomes between treated and control observations. A weighted average of these interval impacts estimates yields the overall program impact taking the share of participants in each interval as the weights (Khandker et al., 2010).

**D) Kernel matching:** The matching methods discussed above have in common, that only some observations from the comparison group are used to construct the counterfactual outcome of a treated unit. Kernel matching uses weighted averages of all individuals in the control group to construct the counterfactual outcome. Weights depend on the distance between each individual from the control group and the unit exposed to the treatment for which the counterfactual is estimated. The kernel function assigns higher weight to observations close in terms of propensity score to a treated individual and lower weight to more distant observations. The choice between different matching techniques implies a trade-off between bias and variance reduction. For instance, nearest-neighbor matching only uses the participant and its closest neighbor. Therefore, it minimizes the bias, but might also involve an efficiency loss, since a large number of close neighbors are disregarded. Kernel-based matching on the other hand, uses more (all) non-participants for each participant, thereby reducing the variance but possibly increasing the bias. Finally, using the same non-treated unit more than once (nearest neighbor matching with replacement) can possibly improve the matching quality (Ahmed Jemal et al., 2011).

### **Matching quality**

The quality of the matching procedure is evaluated on the basis of its capability in balancing the control and the treatment groups with respect to the covariates used for the propensity score estimation. There are several procedures for this the basic idea of all approaches is to compare the distribution of these covariates in the two groups before and after matching on the propensity score. If there are significant differences after matching, then matching on the propensity score was not successful in making the groups comparable and remedial measures have to be taken. A good matching procedure should reduce the standardized bias for each of the covariates used in the estimation of the propensity scores. Thus, this approach requires comparing the standardized

bias for each covariate  $X$  before and after matching. A similar approach uses a two-sample  $t$ -test to check if there are significant differences in covariant means for both groups. After matching the covariates should be balanced in both the treatment and the non-treatment group therefore no significant difference should be found. After matching there should be no systematic differences in the distribution of the covariates between both groups. The pseudo- $R^2$  after matching should be fairly low. The same can be done inspecting the  $F$ -statistics before and after matching. In fact, these statistics indicate the joint significance of all regressors used for the estimation of the propensity score. (Caliendo and Kopeinig, 2005)

### **Calculating the Average Treatment Impact**

If conditional independence and a sizable overlap in propensity scores between participants and matched nonparticipants can be assumed, the PSM average treatment effect is equal to the mean difference in outcomes over the common support, weighting the comparison units by the propensity score distribution of participants. To understand the potential observed mechanisms driving the estimated program effect, one can examine the treatment impact across different observable characteristics, such as position in the sample distribution of income, age, and so on (Khandker et al., 2010).

### **Sensitivity analysis**

Propensity scores are obtained from observational data that lacks randomization the matching only control for the differences on the observed variables and there may be some bias resulting from the unobserved covariates that could affect whether subjects receive treatment or not (Luellen et al., 2005). Estimation based PSM is unbiased if there is no unmeasured confounders and if all relevant covariates have been incorporated in the estimation model (Keele, 2010). If there are unobserved variables which affect assignment into treatment and the outcome variable simultaneously hidden bias may arise to which matching estimators are not robust (Becker & Caliendo, 2007).

## **Estimating Standard Errors with PSM: Use of the Bootstrap**

The estimated variance of the treatment effect in PSM should include the variance attributable to the derivation of the propensity score and the determination of the common support. Failing to account for this additional variation beyond the normal sampling variation will cause the standard errors to be estimated incorrectly (Caliendo and Kopeinig 2008). It is possible to use bootstrapping as a solution where repeated samples are drawn from the original sample, and properties of the estimates (such as standard error and bias) are re estimated with each sample.

### **Variables Definition and Measurement**

#### **For Propensity Score Matching Estimation**

##### **1. *Treatment Variable***

**Participation in vending or not:** The treatment variable in this study is a household's involvement in vending. It takes value 1 if the household involve in vending and takes 0 if a household didn't involve in the vending.

##### **2. *Covariates for Propensity Score Matching***

**Sex of household:** This refers to dummy to the sex of the household from both treated and control groups and it takes the value 1 if the sample respondent is male, 2 if the sample respondent is Female.

**Age of household:** This is the age in years.

**HH head education level (HHEDU):** Educational level of the household head. It is continuous variable and defined as the highest grade level completed by the household head.

**Family size (HHSIZE):** It refers to the number of total household members who live and consume from the same household.

##### **3. *Outcome variables (Impact indicator variables)***

Outcome variables are variables which resulted from participation in **street vending**. There is one outcome variables: livelihood index.

## 2. Log it model

To examine the factors that determine street vending, log it model was used. Here, the dependent variable, involvement of economic activity, is a dummy variable and hence, which is given as follows:

$$\frac{p(\text{formal}=1)}{p(\text{not formal}=0)} = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + \beta_7 x_7 + \beta_8 x_8 + \beta_9 x_9 + \beta_{10} x_{10} + \varepsilon$$

$$\frac{p(\text{formal}=1)}{p(\text{not formal}=0)} = \beta_0 + \beta_1 \text{age} + \beta_2 \text{Gender} + \beta_3 \text{Initial capital} + \beta_4 \text{Education level} + \beta_5 \text{Migration} + \beta_6 \text{Excessive regulation} + \beta_7 \text{Seeking employment} + \beta_8 \text{Seeking to avoid taxation} + \beta_9 \text{Loan Availability} + \beta_{10} \text{Market linkage} + \varepsilon$$

### II. Variable description

| Variable name                    | definition                                                                    | Expected sign      |
|----------------------------------|-------------------------------------------------------------------------------|--------------------|
| Involvement of economic activity | Dummy (being formal or informal)                                              | Dependent variable |
| Age                              | Categorical (1=below 18, 2= from 18-30, 3=from 31-45 years, 4= above 45)      | -                  |
| Gender                           | Binary (1=female, 0=male)                                                     | -                  |
| Lack of Initial capital          | Binary (1=yes, 0= no)                                                         | +                  |
| Education level                  | Categorical(1=noeducation,2=primary,3=secondary,4=diploma and above)          | -                  |
| Migration                        | Binary (1=Naïve, 0= Migrant )                                                 | +                  |
| Excessive regulation             | Binary (0=unable to fulfill minimum req't, 1= able to fulfill minimum req't.) | +                  |
| Seeking employment               | Binary (1=seek emp't,0=not seek emp't)                                        | +                  |
| Seeking to avoid taxation        | Binary (1=avoid taxation, 2=not seek to avoid taxation)                       | +                  |
| Loan Availability                | Binary (1= available, 0= un available)                                        | +                  |
| Absence of Market linkage        | Binary(1= there is mrkt linkage,0= there is no mrkt linkage                   | +                  |
| Accessibility of buyers          | Binary 1= accessible, 0= not accessible)                                      | +                  |

**Dependent Variable:** a dependent variable of this research is involvement of economic activity (being informal, street vendor or formal).

**Independent Variables:** The explanatory variables selected for this study were broadly categorized under social and economic factors. In what follows, a brief explanation of the explanatory variables selected for this study (Age, gender, migration, educational level, number of maintain, initial capital, Seeking employment, to avoid taxation and Excessive regulation) and their likely influence on involvement of economic activity are presented below.

**Age:** Age level determines involvement of economic activity. Age has negative effect on reasons of informal operator to become in informal sector.

**Gender:** Women respondents have higher probability of reasons of informal operator to become in informal sector than men.

**Migration:** A migrant respondent has higher probability of reasons of informal operator to become in informal sector than non-migrant.

**Level of education:** it has negative effect on reasons of informal operator to become in informal sector.

**Lack of Initial capital:** Operator's initial capital has positive effect on reasons of informal operator to become in informal sector.

**Seeking employment:** Operator's need for employment has positive effect on reasons of informal operator to become in informal sector.

**To avoid taxation:** Operator's need to avoid taxation has positive effect on reasons of informal operator to become in informal sector.

**Excessive regulation:** Cost and time for registration, minimum requirement for registration determines involvement of economic activity.

**Market linkage:** Market linkage created by the government determines involvement of economic activity. It is assumed that operators become formal if there is market linkage by government.

**Accessibility of buyers:** it is expected that accessibility of buyers determines involvement of economic activity.

### 3. Multinomial Log it model

To determine people's choice of sectors, multinomial log it model was used. Here, the dependent variable, choice of sectors is a dummy variable and hence, which is given as follows:

$$P_{ij} = \frac{\exp^{B_j X_i}}{1 + \sum_{k=1}^J \exp^{B_k X_i}} \quad J = 1, 2, \dots, J, \beta = 0$$

**Where;**

- $P_{ij}$  represents the probability that  $Y = j$ , for  $j = 1, 2, \dots, j$ ,
- $j$  is the number of choices (Street, MSE or Normal shop ),
- $X$  represents the set of characteristics for individual/ households  $i$ , and
- $\beta$  is a set of parameters that describe the influence of  $X$  on the probability of preferring a given item (Greene, 1997).

### **Variable description**

| Variable name   | definition                                                   | Expected sign      |
|-----------------|--------------------------------------------------------------|--------------------|
| Choice          | Categorical (1=formal shop, 2=sv,3=SME)                      | Dependent variable |
| accessibility   | Binary 1= accessible, 0= not accessible)                     | +                  |
| Safety          | Binary (1=safety 0=not safety)                               | +                  |
| Quality service | Binary (1=quality 0=not quality)                             | +                  |
| Age             | (1=below 18, 2= from 18-30, 3=from 31-45 years, 4= above 45) | +                  |
| Gender          | Binary (1=female, 0=male)                                    | +                  |
| Income          | Continuous (amount of money earned)                          | +                  |
| Hh size         | Continuous (no. of family number)                            | —                  |
| Marital status  | Binary (1= married, 0=unmarried)                             | +                  |
| Education       | (1=noeducation,2=primary,3=secondary,4=diploma and above)    | +                  |
| price           | Binary (1=high price, 0=low price)                           | +                  |

**Dependent Variable:** a dependent variable of this research is: people choice of sectors

### **Descriptions of Independent Variables**

**Age:** Age level determines choice of sectors. As people get older they tend to be choosy.

**Gender:** There is a belief that females are sensitive to where they want to buy their materials than their male counterparts.

**Accessibility:** it is expected that accessible sectors are preferred to non-accessible institutions by consumers.

**Safety:** it is assumed that consumers choose sectors that insure the safety of their money.

**Quality of Service:** the nature of service delivered can affect customers' choice. The more the quality the better will be its chance to be chosen.

**Income:** the amount of income of a consumer is expected to affect their choice of sectors.

**Household size:** family size is expected to have influence on choice of sectors.

**Marital status:** being married makes conscious of choice of sectors.

**Education Level:** It is expected to have a positive impact on choice of saving institutions. A more educated consumer is expected to be conscious of where they buy as compared to less educated ones.

**Price:** This is continuous variables and measured the actual price of items sold/purchased. It is assumed that consumers choose sectors that ask fair price.

#### 4. Sustainable livelihood index

The DFID (1999) sustainable livelihood framework approach was used for calculating the Sustainable livelihood index (SLI) for each of formal and informal sectors and for different wealth groups as defined by a participatory wealth ranking (better off, medium, poor and very poor). Percentage values (for each sector and livelihood group) of each indicator obtained from the household questionnaire were first standardized using equation 1 (minimum: 0, maximum: 100).

$$\text{Index Sv} = \frac{Sv - S_{\min}}{S_{\max} - S_{\min}} \dots\dots\dots (1)$$

Sv: the original subcomponent or indicator value for sector V, v = 1, 2.

Smax and Smin: the maximum and minimum subcomponent values determined using all the subcomponent values from both the sectors.

Then the index values for each capital (human, social, physical and financial) will be calculated using equation 2:

$$Cv = \frac{\sum_{i=1}^n Ii}{n} \dots\dots\dots (2)$$

Cv: the value for each household capital for sector V,  
v = 1, 2.

Ii: the effect indicator value for capital i, i = 1-5.

n: the number of indicators forming the capital.

The LEI is scaled from 0 (least effected) to 1 (most effected). The sector-level LEI is calculated as the weighted average of all capitals using equation 3:

$$LEI_v = \frac{\sum_{i=1}^5 I_i - W_i C_{vi}}{\sum W_i} \dots\dots\dots (3)$$

LEI<sub>v</sub>: the Livelihood Effect Index for sector v.

C<sub>vi</sub>: the value of capital i for sector v.

W<sub>i</sub>: the weight of each capital, decided by the number of indicators in the capital. LEI values for the different wealth groups were calculated as for sectors.

### 3.9. Ethical consideration

The topic and the aim of the study was introduced to participants before they asked to provide information and the respondents were assured confidentiality on any information provided. Any data from any organization or relevant authority was used with their permission.

## CHAPTER FOUR

### DATA ANALYSIS AND DISCUSSION

#### 4.1. Descriptive Analysis

This chapter discusses the main findings from the descriptive and econometrics analysis on determinants of informal economic activity (street vending) and its effect on household livelihood and other important variables using a data collected from 322 respondents.

##### 4.1.1. Demographic Characteristics of Respondents

This sub-section presents the demographic profile of the respondents including age, sex, education, marital status, religion, family size, and migration status.

**Table 4.1 demographic characteristics of respondents**

| Variable         | Category         | Percent | Total    |
|------------------|------------------|---------|----------|
| Sex              | Male             | 135     | 222      |
|                  | Female           | 87      |          |
| Age              | below 18         | 18      | 222      |
|                  | from 18-30 years | 106     |          |
|                  | from 31-45 years | 82      |          |
|                  | above 45         | 16      |          |
| Education        | Illiterate       | 29      | 222      |
|                  | up to grade 8    | 76      |          |
|                  | from grade 9-12  | 75      |          |
|                  | diploma holder   | 38      |          |
|                  | degree holder    | 4       |          |
| Marital status   | Single           | 124     | 222      |
|                  | Married          | 98      |          |
| Migration status | Migrant          | 132     | 222      |
|                  | Not migrant      | 90      |          |
| Family size      | Obs.             | Mean    | Std.dev. |
|                  | 222              | 1.8     | 0.87     |

Source: Own Survey, May, 2019

#### **4.1.1.1 Sex of the Respondents**

From table 4:1 above, 61% of the respondents were male while 39% were female. This indicates that most of the respondents are male. . Though the available literature shows that street vending is dominated by women, researcher's result revealed that male dominated the sector. This result supports the finding of Losby et.al. (2002), that one of the few studies considered gender suggests that male are more likely than women to be engaged in informal work activities.

#### **4.1.1.2 Age of the Respondents**

In Bahir Dar city, street vendors were mainly dominated by youth and adults that fell between the age cohort of < 18 and 18-30. Cumulatively, they comprise about 70% of the respondents. This implies that young people are more energetic and are therefore more able to respond to harassment and eviction when it occurs as compared to the older people.

The distribution of age by gender shows that males are older than females. As indicated in the table, while 39.64 percent of males are above the age of 30, it is 32.5 percent of female respondents that are above 30 years old. On the other hand, 67.5 and 61.42 percent of them are female and male respondents who are less than 30 years old respectively.

#### **4.1.1.2 Educational Level**

At a micro level, numerous studies indicate that a raise in income is associated with additional years of education (Ozturk, 2001).

About 29 of the respondents did not attend any formal education. About 76 of the respondents have attended primary education, 75 respondents have completed secondary school, and only 42 of them 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 college graduates.

This shows that, there is a difference between women and men regarding educational level. The Table indicates that whereas 19.54 percent of women did not attend any formal education, it is only 8.89 percent of men who did not go for formal schooling.

Similarly, while 24.44 percent of men attended college/university education, it is only 10 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.

#### **4.1.1.3 Marital Status and Religion**

As shown in Table 4.1 above, regarding the marital status, the study revealed that 55.85 percent of the surveyed respondents are single, 44.14 percent are married. There are variations between men and women regarding marital status. While 66.67 percent of male are single, it is only 39 percent of women who reported as single.

The majority of women (61 percent) are married. This indicates that most of the women do have double responsibility of taking care of household duties and running street businesses compared to men. Regarding religion of respondents, majority (65.32%) of them are followers of Orthodox Christianity and the rest 34.68% are Muslims.

#### **4.1.1.4 Family Size**

The income gained from street vendors is a source of livelihood not only for street vendors themselves but also for their children and other household dependents. As indicated in table 4.1 above, the average number of children is 1.8. There are variations between men and women regarding the average number of children. While the mean number of children for women is 1.85, it is 1.6 children for men. The reason might be the majority of women are married.

#### **4.1.1.5 Migration Status**

The data on migration status of the respondents shows that the majority (59.53%) are migrants to Bahir Dar. About 40 % 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. This indicates that migration has great repercussions to the emergence of the urban informal sector.

#### **4.1.2 The Relationship between Vending and Demographic Variables**

##### **Vending and age**

People in the young age cohort (up to 30 years) are found to be participants in street vending. The result showed that from the total 18 respondents who have less than 18 years of age 13 of them were participating in street vending.

In addition, those who are in the age span between 18 and 30 years more than 53% of them are street vendors. This relationship is significant at 10 percent significant level as it can be evidenced by the chi2 test.

##### **Vending and education**

Most (63.96%) of the street vendors are either illiterate or they have attended only primary education. Further fig. 4.3 below indicates that, from 29 sampled respondents who are not able to read and write 25 of them are working on streets.

On the other hand, more than 69 % of the individuals who were not vending had secondary and college/university education level. The chi2 test also evidenced this relationship is significant at 0% of margin of error.

##### **Vending and migration status**

The informal sector is the source of employment and the last option for migrants. The result shows that from the total 132 migrant respondents 80 of them are street vendors. This relationship is significant at 1% of significant level as it can be evidenced by the chi2 test.

##### **Vending and marital status**

The survey result showed that, single households are the highest participant in vending. From 124 single respondents 69 of them participate in vending while only 42 married respondents participate in vending out of 98. This relationship is significant at 10 % of significant level as it can be evidenced by the chi2 test.

## Vending and family size

The survey had shown that more than 53% of the vendors have a family size of more than one. This shows that the majority of street vendors have full responsibility for at least one person to take care of in addition to themselves. This relationship is significant at 1 % of significant level as it can be evidenced by the chi2 test.

**Table 4; 5 Tabulation for the Relationship between Vending and Demographic Variables**

| Variable         | Category         | Vending | Not vending | Chi2     |
|------------------|------------------|---------|-------------|----------|
| Age              | below 18         | 5       | 13          | 0.075*   |
|                  | from 18-30 years | 49      | 57          |          |
|                  | from 31-45 years | 47      | 35          |          |
|                  | above 45         | 10      | 6           |          |
| Education        | Illiterate       | 25      | 4           | 0.000*** |
|                  | up to grade 8    | 46      | 30          |          |
|                  | from grade 9-12  | 30      | 45          |          |
|                  | diploma holder   | 10      | 28          |          |
|                  | degree holder    | 0       | 4           |          |
| Marital status   | Single           | 69      | 55          | 0.058*   |
|                  | Married          | 42      | 56          |          |
| Migration status | migrant          | 80      | 59          | 0.000*** |
|                  | Not migrant      | 52      | 31          |          |
| Family size      | One dependent    | 61      | 41          | 0.005*** |
|                  | >one dependent   | 50      | 70          |          |
| Total            |                  | 111     | 111         |          |

**Source: Own Survey, May, 2019,**

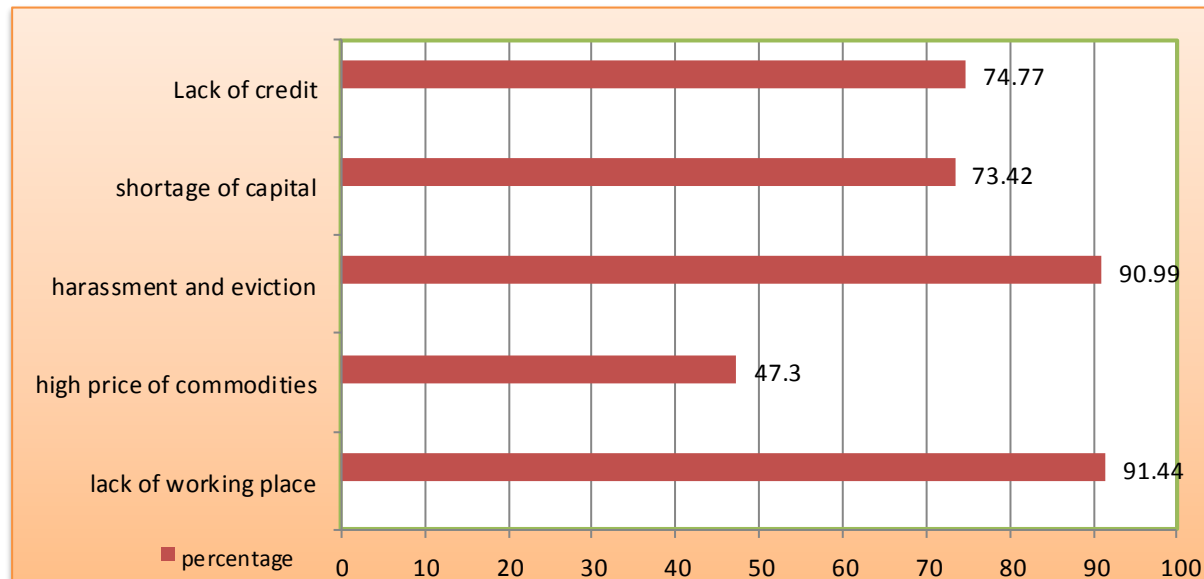
**\*\*\*, and \* indicate significance at 1, and 10 % respectively**

### 4.1.3 Challenges of street vendors in the study area

Another aim of this study was to explore and analyze different challenges that street vendors face in their operation. According to ILO (2013) they suffer from poor access to services and infrastructures such as water, electricity and financial services.

The literature also revealed that street vendors face challenges such as conflict with local authority, lack of capital, lack of business skills, and lack of demand, lack trading sites, and access to credit. This section describes the analysis of those challenges found in the study area.

**Fig.4.4: challenges faced by street vendors in Bahir Dar**



Source; Own computation

#### A. Harassment and Eviction

Using a public space as a place of work is a defining feature of street vending. Harassment was part and parcel of their everyday experience. Confiscations of goods by local authority were not only economically costly, but some of the street vendors spoke of the humiliation and frustration they go through.

They do run their business by fear of losing their capital. From the sampled respondents, the most majority (90.99%) of them said that harassment and eviction by police and code enforcement officers were the main challenge faced in streets (working place).

### **B. Lack of Working Place**

Since, street vending was not legally recognized in Bahir Dar as an economic activity, there is no authorized space for these types of activities. The street vendors have to struggle to get access spaces for vending their goods.

This explains why all of street vendors accessed their working space through invasion. A majority (91.44%) of respondents agreed that lack of working space were the critical constraint that they face in their everyday activities.

### **C. Lack of Credit and Shortage of Working Capital**

Most street vendors are from poor families and they cannot provide collateral in order to access credit. Consequently, street vendors are not really able to change their informal status into formal one as they are not able to meet the requirements.

The study found that 74.77% of respondents believes that lack of credit were a significant challenge to them. This indicates that government and other stakeholders in the economy have to realize the sector's importance. As far as the working capital and price of commodities concerned, about 73.42% of respondents said as they face shortage of working capital and are operating at below capacity.

### **Correlation Analysis for factors that attract people to street vending**

The correlation analysis is aiming to see the extent of strength or weakness relationship among variables. A correlation approach to 1(-1) shows a strong correlation and the one approaches to 0 shows weak relationship. Correlation analysis could have three important advantages. First, it tells whether the relationship between the dependent variable is positive or negative. Second, it tells whether the relationship is strong or not. Third, it tells about whether there is multicollinearity problem or not.

The correlation between involvement and loan availability is 0.02 which implies that there is less correlation. A strong relationship is observed between education and involvement of economic activity (-0.38). (Appendix F)

#### 4.1.4 Driving factors that attract people to street vending

In this study, the data collected concerning the reasons for participating in street vending show that economic as well as social factors push people into street vending activities.

##### 4.1.4.1 Social factors

Respondents were asked the reasons that attract people to street vending. The following reasons are identified as social factors and discussed below.

**Table 4.6: Descriptive statistics for social factors that attract people to street vending**

| Variable         | Category                  | Formal sector<br>% | Informal sector<br>% | Chi2     |
|------------------|---------------------------|--------------------|----------------------|----------|
| Sex              | Male                      | 57.66              | 63.96                | 0.336    |
|                  | Female                    | 42.34              | 36.04                |          |
| Age              | below 18                  | 4.50               | 11.71                | 0.075*   |
|                  | from 18-30 years          | 44.14              | 51.35                |          |
|                  | from 31-45 years          | 42.34              | 31.53                |          |
|                  | above 45                  | 9.01               | 5.41                 |          |
| Education level  | un able to read and write | 3.60               | 22.52                | 0.000*** |
|                  | up to grade 8             | 27.03              | 41.44                |          |
|                  | from grade 9-12           | 40.54              | 27.03                |          |
|                  | diploma holder            | 25.23              | 9.01                 |          |
|                  | degree holder             | 3.6                | 0                    |          |
| Migration status | migrant                   | 46.85              | 72.07                | 0.000*** |
|                  | Not migrant               | 53.15              | 27.93                |          |

\*\*\*, \*\* and \* indicate significance at 1, 5 and 10 % respectively

Source: Own computation

**Involvement in economic activity:** it is the first research objective that this paper would like to investigate. Being participant in formal or informal economic sector has its own effect on the livelihood of households.

**Sex:** Around 57% of formal sector respondents are male and the rest percentage is covered by females. Whereas, about 64 % of street vendor respondents are males and only the rest 36 % of respondents were female street vendors.

The chi2 test results are positive (even if it is insignificant) and it showed that, male are more likely to participate in vending than female respondents. The possible explanation for these may be male dominated business operation on street because of the role difference between male and female and because of the knowhow and information that they have to operate the business successfully.

**Age:** The finding of table 4.6 indicates that most (82%) of the street vendor participants were aged between 18 up to 45. To this end, the Probability of chi2 test also signifies that, the young and productive segments of the society were engaged in the informal economy

**Education:** Around 22 % of street vendor respondents have no any formal education whereas; only 3% of formal sector participants did not have formal education. In the survey, about 41% had only primary education level. For them, it is more difficult to find a formal job than those who had at least tertiary level of education. It is also evidenced from the test result that, those who have poor education level are significantly participating in street vending compared to those who have better education.

The probability of chi2 test (P-value) is significant at 1 % of significant level and which showed that, males are more likely to participate in vending than female respondents. From these result, it is possible to say that education matters for involvement of economic activity.

**Migration status:** Due to push and or pull factor of migration the rate of migration from the rural to the urban area will greater that of the number of jobs generated by the formal sector. About 72.07% of street vendor and 46.85% of formal sector respondents people who come from different parts of the region.

The probability of chi2 test (P-value) is significant at 1 % of significant level and which showed that, migrant households are more likely to participate in vending than natives. The finding of this paper also corresponds with the work of Timalisina (2007). This study shows that as a result of rural to urban migration, the informal sector including street vending activities are increasing from time to time.

#### 4.1.4.2 Economic factors

Greater number of people who lost their job turned to vending as a possible source of income and in respond to inflation. Due to economic factors, the people who are laid-off or cannot find alternative formal jobs often end up working in the informal economy (Chen, 2012). Respondents were asked about the reasons to be street vendor and responded as follows.

**Table 4; 7: Descriptive statistics for Economic factors that attract people to street vending**

| Variable                 | Categories                    | Formal sector | Informal sector | Chi2     |
|--------------------------|-------------------------------|---------------|-----------------|----------|
|                          |                               | Percent       | Percent         |          |
| Searching for employment | yes                           | 66.67         | 81.98           | 0.009*** |
|                          | no                            | 33.33         | 18.02           |          |
| To avoid taxation        | Seek to avoid tax             | 30.63         | 13.51           | 0.002*** |
|                          | Not seek to avoid tax         | 69.37         | 86.49           |          |
| Lack of initial capital  | Yes                           | 69.37         | 88.29           | 0.001*** |
|                          | No                            | 30.63         | 11.71           |          |
| Excessive regulation     | Unable to fulfill requirement | 49.55         | 79.28           | 0.000*** |
|                          | Able to fulfill requirement   | 50.45         | 20.27           |          |
| Loan availability        | Available                     | 74.77         | 72.97           | 0.760    |
|                          | Unavailable                   | 25.23         | 27.03           |          |
| Market linkage           | There is market linkage       | 53.15         | 57.66           | 0.500    |
|                          | There is no market linkage    | 46.85         | 42.34           |          |
| Accessibility to buyers  | yes                           | 76.58         | 63.06           | 0.028**  |
|                          | no                            | 23.42         | 36.94           |          |

\*\*\*, \*\* and \* indicate significance at 1, 5 and 10 % respectively.

*Source: Own Survey, May, 2019*

**Lack of initial capital:** The survey results also revealed that lack of initial capital were one of the factors that push people to enter into street vending. Most (88.29%) of street vendor respondents stated that they have no startup capital to run a business in the formal sector. whereas, only 11% of street vendor respondents said as initial capital were not a reason for participating in the informal sector.

To this end, the Pr of chi2 test also signifies that, those who less or no initial capital are more likely to participate in vending than their counterparts with a p value of chi2 0.001. This finding is also supported by Tefera (2011) that lack of working capital, working premises, adequate market and raw materials were reported as the major impediments for the operators.

**Searching for employment:** it was identified as one of significant factor that push people into street vending. As per the response obtained on table 4.7, 81.98% of informal sector respondents said "yes" for the reasons that attract people to street vending. The probability of chi2 test (P-value) is significant at 1 % of significant level which showed that those who have no any job opportunity are more likely to participate in vending than female respondents.

**Excessive regulation:** Around 49 and 79% of the formal and street vendor respondents feel that inability to fulfill minimum requirement were another reasons that attract people to street vending respectively. The probability of chi2 test (P-value) is significant at 1 % of significant level and which showed that the majority of street vendors joined informality because of lack of necessary skills, bureaucratic registration procedures and expensive rent in the formal market.

De Soto (1989) cited on chen (2012) also got a similar result that due to over government rule and regulation people chooses to operate informally in order to avoid the costs, time and effort of formal registration.

**Absence of market linkage:** About 53 and 57% of formal and street vendor respondents stated that people go to streets for vending because there were no market linkages by the government

and they claimed that they are unable to sell their products in shops as customers do not go there. This implies that people go to streets to overcome the main market access challenges.

**To avoid taxation:** The other factor for people to choose informal sector was seeking to avoid taxation. Respondents were asked concerning tax evasion and 69.37 and 86.49% of formal and informal sector participant respondents said “no”.

The probability of chi2 test (P-value) is significant at 1 % of significant level and which showed that, seeking to avoid taxation is not a potential factor for informality. The possible explanation for these may be my respondents are street vendor participants. And hence, these entities are informal sector participants because they have no other option. But those who join informal sector for the sake of tax avoidance are those who have better initial capital.

**Loan availability:** Majority (74 and 72%) of formal and informal sector respondents confirmed that having credit access decrease the probability to involve in street vending.

**Accessibility to buyers:** it was expected that accessibility of customers determine involvement of economic sector. Around 76 and 63% of formal and informal sector participant respondents confirmed the expectation by saying “yes”.

The probability of chi2 test (P-value) is significant at 5 % of significant level and which showed that, being accessible to buyers increases the probability to involve in the formal sector..

#### **4.1.5 Determinants of business sector choice**

The following section presents comparisons of descriptive statistics on survey data for each sector. The data used in this study collected from the people of Bahir Dar with the total of 100 households.

Literatures in the informal sector verify that Socioeconomic and demographic characteristics of households are amongst the major determinants which influence household choice for formal, SMEs or informal market. To this end selected household socioeconomic and demographic characteristics of the sampled population are described as follows for three sectors.

The list and descriptive statistics of the dependent and independent variables included in the various regression analyses are given in Table.

**Table 4.8; Summary of Descriptive Statistics for determinants of business sector choice**

| Variable               |                           | Normal shop | Street vendor | SME   | Chi2     |
|------------------------|---------------------------|-------------|---------------|-------|----------|
| <b>Sex</b>             | male                      | 52.38       | 40.54         | 33.33 | 0.309    |
|                        | Female                    | 47.62       | 59.46         | 66.67 |          |
| <b>Education</b>       | un able to read and write | 2.38        | 10.81         | 4.76  | 0.785    |
|                        | up to grade 8             | 21.43       | 24.32         | 19.05 |          |
|                        | from grade 9-12           | 33.33       | 24.32         | 42.86 |          |
|                        | diploma holder            | 21.43       | 24.32         | 19.05 |          |
|                        | degree holder             | 21.43       | 16.22         | 14.29 |          |
| <b>Age</b>             | below 18                  | 9.52        | 27.03         | 23.81 | 0.254    |
|                        | from 18-30 years          | 40.48       | 32.43         | 28.57 |          |
|                        | from 31-45 years          | 28.87       | 10.81         | 23.81 |          |
|                        | above 45                  | 21.43       | 29.73         | 23.81 |          |
| <b>Accessibility</b>   | Accessible                | 38.10       | 70.27         | 42.86 | 0.012**  |
|                        | Not accessible            | 61.90       | 29.73         | 57.14 |          |
| <b>Safety</b>          | Safe                      | 80.95       | 24.32         | 71.43 | 0.000*** |
|                        | Not safe                  | 19.05       | 75.68         | 28.57 |          |
| <b>quality service</b> | quality service           | 85.71       | 43.24         | 66.67 | 0.016**  |
|                        | no quality service        | 14.29       | 56.76         | 33.33 |          |
| <b>Friend pressure</b> | Yes                       | 40.48       | 51.35         | 42.86 | 0.610    |
|                        | No                        | 59.52       | 48.65         | 57.14 |          |
| <b>Price</b>           | Yes                       | 64.29       | 86.49         | 66.67 | 0.065*   |
|                        | No                        | 35.71       | 13.51         | 33.33 |          |
| <b>Marital status</b>  | Single                    | 30.95       | 59.46         | 52.38 | 0.032**  |
|                        | Married                   | 69.05       | 40.54         | 47.62 |          |
| <b>Economic status</b> | low income                | 35.71       | 51.53         | 57.14 | 0.195    |
|                        | middle income             | 64.29       | 48.65         | 42.86 |          |

**Source: Own Survey, May, 2019**

\*\*\*, \*\* and \* indicate significance at 1, 5 and 10 % respectively.

**People choice of sectors:** it is the second research objective that this paper would like to investigate.

**Sex of household:** As it can be seen in table of the total sampled households (N= 100) 42 of them choose normal shop, 37 choose street vendors and the remaining 21 chose small and micro enterprises. Moreover, as it can be seen from (table 4.8), there were some gender differences as well. The researcher found that most households under the study were headed by females and overall, it can be concluded from this trend that female male headed household are better in marketing activities among the respondents in the three sectors.

As it can be seen from table 4.18 of the 42 households who choose normal shop to buy, 52.38 percent were male households. Whereas 47.62 percent households were female headed that choose normal shop for shopping.

Table 4.12 also illustrates that 37 percent of households choose street vendors as their favorite choice and from this 59.46 percent were female headed households and the rest 40 .54 percent were male headed households.

Finally, the result clearly shows that out of the total households, 21 percent households choose SMEs. From this, 66.67 percent were female headed participant and the rest 33.33 percent were male headed household participants. This result signifies that the majority of sampled household respondents choose normal shop in their shopping activity. The reasons for choosing normal shop are to get guarantee for purchased product/services.

**Age of households:** The survey result indicates that the sampled households were on average between 18-45 years old for the three types of business sectors. However, the numbers of respondents who are below 18 years of age for street vendor were 27.03% which were greater than normal shop 9.52% and SME 23.81%.

**Education level of households:** education differs across the three business sectors and table 4.8 showed that out of the 37 households who choose normal shop to buy, 10% of them were illiterate. Whereas, 2.3% and 4.7% of respondents are unable to read and write who choose normal shop and SME for shopping respectively.

**Marital status:** it is expected that females are sensitive to where they want to buy their materials than their male counterparts. To this end, as it can be seen from (table 4.8) there were some marital status differences between sectors. The researcher found that 37 percent of households choose street vendors as their favorite choice and from this 59.46 percent were single households and the rest 40.54 percent were married households. On the other hand, out of 42 respondents 69.05 percent households were married that choose normal shop for shopping.

The probability of chi2 test (P-value) is significant at 5% of significant level and overall, it can be concluded from this trend that single household are choosing street vendors among the respondents in the three sectors.

**Accessibility:** There was a significant difference in access to buyers in the market among the three sectors.

The results presented in table 4.18 shows that around 61.90% normal shop and 57.14% SME customers confirmed that sectors was not accessible while buying goods/services from them. Moreover, the table clearly showed that 70.27% of street vendor customers confirmed that street vendors were accessible. The probability of chi2 test (P-value) is significant at 5% of significant level. This result revealed that, street vendors are accessible to their customers.

**Safety:** As it can be seen in table 4.8 of the total sampled households (N= 100) 42 of them choose normal shop, 37 choose street vendors and the remaining 21 chose small and micro enterprises. With reference to table 4.8, out of those respondents 85.71, 43.24 and 71.43 % of normal shop, street vendor and SME customers confirmed that sectors were safe. The result depicted that, street vendors are not safe. To this end, the Probability of chi2 test also signifies that, consumers choose sectors that insure their safety.

**Quality service:** according to the study, 85.71% and 85.71% of normal shop and SME customers said that they were getting quality service. While the other 56.76% of street vendor customers claimed that there were no qualities in goods/services purchased. From the result the researchers observed that, normal shop and SME have offered better quality services/goods for their customers.

The probability of chi2 test (P-value) is significant at 1% of significant level and which showed that, service quality increases the probability to be chosen by customers.

**Price:** The other factor for people to choose among sectors was price. Respondents were asked if they were attracted by the price or not, 86.49 % and 66.67% of street vendor and SME customers responded that they are attracted by low price respectively. To this end, the Probability of chi2 test also signifies that, consumers choose sectors that provide low price.

**Economic status:** As it can be seen in table 4.8 of the total sampled normal shop customer households 64.29% of them have middle income status. This result revealed that, when income increases people tend to choose normal shop than SMEs and street vendors.

#### **4.1.6 The impact of informality on the livelihood of participants**

This part describes the descriptive analysis of variables used in the impact analysis. The researcher used Sustainable Livelihoods Index (SLI) as a useful tool in assessing the livelihood elements of the urban poor households.

##### **4.1.6.1 Summary statistics for the individual asset group's indices of households**

One of the main objectives of this study is to identify the impact of participation in the informal sector through developing a Sustainable Livelihood Index (SLI). This index was based on Sustainable Livelihood Approach (SLA) framework.

A total of 16 livelihood indicators were identified from the data set and broadly grouped into four groups of assets namely human, physical, social and financial assets. Then, an aggregate SLI for each household was constructed by averaging all the four groups of livelihood assets with an equal weight. Below table 4; 9 shows the aggregate index for each livelihood capital.

**Table 4; 9: descriptive analysis of household's livelihood capital index**

| Livelihood capital                  | Indicators                                    | Total Mean  | Formal sector | Informal sector |
|-------------------------------------|-----------------------------------------------|-------------|---------------|-----------------|
| <b>Physical capital<br/>(0.52)</b>  | Television                                    | .5720721    | .6936937      | .4504505        |
|                                     | Radio/Tape                                    | .5          | .3063063      | .6936937        |
|                                     | Electricity service                           | .8288288    | 1             | .6576577        |
|                                     | Sofa set                                      | .3648649    | .5585586      | .1711712        |
|                                     | Refrigerator                                  | .3513514    | .4684685      | .2342342        |
|                                     | Telephone service                             | .2927928    | .3963964      | .1891892        |
|                                     | Commodity set                                 | .8603604    | 1             | .7207207        |
|                                     | Bed                                           | .8828829    | 1             | .7657658        |
|                                     | Rent/ own house                               | .1711712    | .3423423      | 0               |
|                                     |                                               | <b>0.53</b> | <b>0.63</b>   | <b>0.42</b>     |
| <b>Financial Capital<br/>(0.12)</b> | Income (average monthly income)               | 4777.477    | 6365.766      | 3189.189        |
|                                     | Saving (average monthly saving)               | 447.973     | 732.8829      | 163.0631        |
|                                     |                                               | <b>0.30</b> | <b>0.38</b>   | <b>0.34</b>     |
| <b>Human Capital<br/>(0.18)</b>     | % of adult household who can read and write   | 86.93694    | 96.3964       | 77.47748        |
|                                     | Number of days unable to work due to sickness | 1.076577    | .981982       | 1.171171        |
|                                     | Food frequency per day                        | 3           | 3.162162      | 2.837838        |
|                                     |                                               | <b>0.58</b> | <b>0.57</b>   | <b>0.4</b>      |
| <b>Social Capital<br/>(0.18)</b>    | Participation in formal group                 | .3693694    | .5495495      | .1891892        |
|                                     | Participation in informal group               | .6801802    | .7387387      | .6216216        |
|                                     |                                               | <b>0.73</b> | <b>0.64</b>   | <b>0.4</b>      |

**Source: Own Survey, May, 2019**

On average, the informal sector obtained relatively low index at less than 0.5 for all the asset groups. According to the above table, the sub index with the best performance was social capital. The best results were presented in the Number of households participating in the informal sector.

As for human asset, among indicators to represent human asset in this study is % of adult household who can read and write.

Table 4; 9 above revealed that, the informal sector participants obtained relatively low index. This result indicated that their basic needs such as home household furniture, an access to water resources and electricity were inadequate.

From the analysis, it also shows that majority (86%) of the households can read and write. However result showed that the informal sector participants were faced low human capital. This will result in slow technology transfer and further lead to inefficiencies in the implementation of entrepreneurial project.

On the other hand, the study found that on average the financial asset for all sectors was the lowest, ranging from 0.3 to 0.34 as compared to other livelihood assets. Result showed that street vendor participants were obtained low SLI for the financial asset. Thus, approaches toward enhancing their financial status such as encouraging them to involve in microcredit system might be alleviating the poor out of poverty trap.

#### 4.1.6.2 Extent of sustainable livelihood index for formal an informal sector participants

*Table 4; 10: Distribution of the respondents according to their extent of sustainable livelihood index*

| No    | SLI  | SME   |         | no. | SLI  | Street vendor |         |
|-------|------|-------|---------|-----|------|---------------|---------|
|       |      | Freq. | Percent |     |      | Freq.         | Percent |
| 1.    | Low  | 11    | 9.91    | 1.  | Low  | 63            | 56.73   |
| 2.    | Poor | 39    | 35.14   | 2.  | Poor | 37            | 33.33   |
| 3.    | High | 61    | 54.94   | 3.  | High | 11            | 9.91    |
| Total |      | 111   | 100%    |     |      | 111           | 100%    |

**Source: Own computation**

The data presented in table 4; 10 reveal that the more than half (54.97 per cent) of SME respondents were having medium extent of sustainable livelihood, while 35 per cent of them had poor extent of sustainable livelihood index, whereas only 9.9 per cent of them had low extent of sustainable livelihood.

In the case of street vendor 56.73 per cent of the respondents were having low extent of sustainable livelihood, while 33.33 per cent of them had poor extent of sustainable livelihood, whereas only 9.91 per cent of them had medium extent of sustainable livelihood. It could be concluded that majority (90%) of the street vendor respondents were having low to poor extent of sustainable livelihood, while in the case of SME respondents 90 per cent were having poor to medium extent of sustainable livelihood.

**Table4; 11: Descriptive analysis of variables by level of SLI**

| Variable         | Formal sector (SME) |            |               | Informal sector (SV) |            |               | Chi2         |
|------------------|---------------------|------------|---------------|----------------------|------------|---------------|--------------|
|                  | Poor                | Low income | Medium income | Poor                 | Low income | Medium income |              |
| Sex              |                     |            |               |                      |            |               |              |
| male             | 4                   | 15         | 28            | 21                   | 13         | 6             | 0.220        |
| female           | 7                   | 24         | 33            | 42                   | 24         | 5             |              |
| Age              |                     |            |               |                      |            |               |              |
| below 18         | 1                   | 1          | 3             | 7                    | 6          | 0             | 0.650        |
| from 18-30 years | 4                   | 18         | 27            | 33                   | 16         | 8             |              |
| from 31-45 years | 4                   | 17         | 26            | 22                   | 12         | 1             |              |
| above 45         | 2                   | 3          | 5             | 1                    | 3          | 2             |              |
| Education        |                     |            |               |                      |            |               |              |
| Illiterate       | 1                   | 3          | 0             | 17                   | 7          | 1             | 0.001<br>*** |
| primary          | 4                   | 10         | 16            | 24                   | 17         | 5             |              |
| secondary        | 5                   | 15         | 25            | 16                   | 11         | 3             |              |
| diploma & above  | 1                   | 11         | 20            | 6                    | 2          | 2             |              |
| Marital status   |                     |            |               |                      |            |               |              |
| single           | 6                   | 24         | 25            | 40                   | 21         | 8             | 0.107        |
| Married          | 5                   | 15         | 36            | 23                   | 16         | 3             |              |
| Migration status |                     |            |               |                      |            |               |              |
| migrant          | 5                   | 19         | 35            | 15                   | 14         | 2             | 0.009<br>*** |
| not migrant      | 6                   | 20         | 26            | 48                   | 28         | 9             |              |
| Place of origin  |                     |            |               |                      |            |               |              |
| rural            | 4                   | 13         | 19            | 28                   | 16         | 2             | 0.204        |
| Urban            | 7                   | 26         | 42            | 35                   | 21         | 9             |              |
| Total            | 11                  | 39         | 61            | 63                   | 37         | 11            |              |

\*\*\* indicate significance at 10 %.

**Source: Own computation**

It is critically observed from the above table that, the chi2 test of two variables viz., education level (0.001) and migration status (0.009) were statistically significant. It can be concluded that education level and migration status were the important variables for the SLI for both SME and street vendors.

The above table result leads to be concluded that there were a gap of sustainable livelihood between the formal and informal respondents. The probable reasons for such type of results might be that the credit access and training by the government of the SME are directly affected to their better livelihood.

#### **4.1.6.3 Summary statistics for exogenous variables used in the analysis**

Here, the descriptive statistics of different variables used in the analysis were measured in terms of some demographic indicators. There are some differences between street vending participant and non-participant households (SMEs).

About 60% of the survey households are male headed and the remaining 39.19 percent is female headed. As it is indicated in table 4.12 below, 63.04 percent of the participant households is male headed while the remaining 36.96 percent of respondents was female headed households.

With regard to age of household head, about 84% of the total households are within the age range of 18-45 years of age. The study also reveals that, about 55% of the household head of the total sample were single. There is significant marital status difference among participant and non-participant households. As it can be seen in table 4.12, 62.16% of participant households are single while only 49.55% of non-participant households are single headed households.

Most (63%) of the total households are from different urban parts of the region whereas, about 37% of total households are from the rural part of the region. Moreover, as it can be seen from (table 4.12), there were some origin differences as well.

The researcher found that 41.44% of the participant respondents come from rural areas of the region for vending while only 32.43% of non-participant respondents, who come to Bahir Dar to involve in business activity, were from rural areas of the region.

**Table 4; 12: Summary of Descriptive Statistics for Impact Analysis**

|                        |                  | N=222<br>Full sample | N= 111<br>Participants | N = 111<br>Non-participant |
|------------------------|------------------|----------------------|------------------------|----------------------------|
| Variable               |                  | percentage           | percentage             | Percentage                 |
| <b>Sex</b>             | male             | 60.81                | 63.04                  | 57.66                      |
|                        | Female           | 39.19                | 36.96                  | 42.34                      |
| <b>Age</b>             | below 18         | 8.11                 | 11.71                  | 4.5                        |
|                        | from 18-30 years | 47.75                | 51.35                  | 44.14                      |
|                        | from 31-45 years | 36.94                | 31.53                  | 42.34                      |
|                        | above 45         | 7.2                  | 5.4                    | 9.01                       |
| <b>Marital status</b>  | Single           | 55.86                | 62.16                  | 49.55                      |
|                        | Married          | 44.14                | 37.84                  | 50.45                      |
| <b>Place of origin</b> | rural            | 36.94                | 41.44                  | 32.43                      |
|                        | Urban            | 63.06                | 58.56                  | 67.57                      |

**Source: Own computation based on survey, 2019**

## **4.2. Econometric Analysis**

### **4.2.1 Econometric analysis for determinants of involvement in economic activity**

This paper is aiming to see the extent relationship between the dependent variable involvement of economic activity and independent Variables include: age, sex, initial capital, education level, migration status, excessive regulation, seeking employment and to avoid taxation. Here, the dependent variable, involvement of economic activity, is a dummy variable and hence, the study uses logit model since it has two advantages over the probit model. First, the odds ratio interpretation of logit model makes more interesting than probit model (Green, 1998). Second, probit model is more appropriate for latent variable while our dependent variable is not latent by its nature. The regression result is presented below.

**Table 4.13: Results of the logit model for determinants of involvement of economic activity**

| Variable                | coefficient | P >  z                      |
|-------------------------|-------------|-----------------------------|
| Sex                     | 1.688859    | 0.000***                    |
| Age                     | -.4750249   | 0.066*                      |
| Education               | -1.412558   | 0.000***                    |
| Migration status        | 1.02738     | 0.006***                    |
| To avoid tax            | -.8085792   | 0.082*                      |
| Excessive regulation    | 1.509179    | 0.000***                    |
| Loan availability       | -1.540635   | 0.002***                    |
| Accessibility to buyers | -.9053576   | 0.029**                     |
| Market linkage          | .7493998    | 0.044**                     |
| Lack of initial capital | 1.634395    | 0.001***                    |
| Seeking employment      | .7321015    | 0.079*                      |
| _cons                   | 1.8332      | 0.121                       |
| Number of obs = 222     |             | LR chi2 (11) = 112.51       |
| Prob > chi2 = 0.0000    |             | Log likelihood = -97.625074 |

Source: Own computation based on survey, 2019

\*\*\*, \*\* and \* indicate significance at 1, 5 and 10 % respectively

As we can see from the above regression table, all independent variables together are significantly affect the dependent variable which is represented by Prob> chi2 which is less than 1% and concluded that all independent variables together are determinant factors. Regarding to individual significant level, sex, education, migration status, lack of initial capital, excessive regulation, to avoid tax, loan availability, accessibility to buyers and seeking employment are significant.

Before the discussion part, post estimation tests are presented to be sure that the selected model is consistent and efficient. The study undertakes post estimation tests of model specification and multicollinearity test.

**Model Specification Test:** checks the existence of measurement error or specification error in our estimates. The test result confirms that, the p value for hat square is 0.85 and the p value of hat is >10, implies that there is no problem of model specification, where we fail to reject the null hypothesis which says there is model specification problem (appendix B).

**Multicollinearity test:** This test checks for the correlation among independent variables or not. The variance inflation factor result is 4.1 which is lower than the threshold of 10 (appendix A), which evidenced the absence of multicollinearity problem. Interpretation of coefficients from logit shows logs odd not marginal effects. However, those interpretations do not show marginal effect and their economic meanings are not attractive like marginal effects. Hence, below the marginal effect for each variable at their mean level presented.

**Table 4.14: Marginal effect for logit model on the determinants of street vending**

Marginal effects after logit  
y = Pr(involment) (predict)  
= .47726603

| variable  | dy/dx     | Std. Err. | z     | P> z  | [        | 95% C.I. | ]       | x |
|-----------|-----------|-----------|-------|-------|----------|----------|---------|---|
| sex*      | .3925787  | .08939    | 4.39  | 0.000 | .217387  | .56777   | .608108 |   |
| age       | -.1185107 | .06449    | -1.84 | 0.066 | -.244911 | .00789   | 2.43243 |   |
| educ      | -.3524095 | .06401    | -5.51 | 0.000 | -.477864 | -.226955 | 2.6036  |   |
| migrat~s* | .2492687  | .08638    | 2.89  | 0.004 | .079963  | .418574  | .594595 |   |
| toavoi~x* | -.1947048 | .10512    | -1.85 | 0.064 | -.400733 | .011324  | .220721 |   |
| excess~n* | .3529878  | .081      | 4.36  | 0.000 | .194224  | .511752  | .644144 |   |
| loanav~y* | -.3611553 | .09984    | -3.62 | 0.000 | -.556832 | -.165479 | .738739 |   |
| access~s* | -.2221388 | .09732    | -2.28 | 0.022 | -.412874 | -.031404 | .698198 |   |
| market~e* | .1844172  | .08925    | 2.07  | 0.039 | .009489  | .359345  | .554054 |   |
| lackof~l* | .3623024  | .0856     | 4.23  | 0.000 | .194537  | .530067  | .788288 |   |
| seekin~t* | .1778757  | .09682    | 1.84  | 0.066 | -.011896 | .367647  | .743243 |   |

(\*) dy/dx is for discrete change of dummy variable from 0 to 1

**Source: Own computation**

## Discussion and Interpretation of Coefficients

The econometrics result on table 4.14 shows that 11 independent variables affect involvement of economic activity: sex, age, education, migration status, to avoid tax, excessive regulation, loan availability, accessibility to buyers, market linkage, initial capital and seeking employment.

**Migration status:** migration status affects involvement of economic activity positively and which is significant at 1% of significant level. The marginal effect coefficient interpreted as,

being migrant increase the probability of involving in informal economic activity (street vending) by 0.24 (relative to defaulting). This implies that, those who migrate from their origin are more likely to involve in vending than those who are not.

The finding of this paper also corresponds with the work of Timalisina (2007). This study shows that as a result of rural to urban migration, the informal sector including street vending activities are increasing from time to time. In addition according to Hayat (2000), the result in higher rate of rural-urban migration particularly to most of them, lack skill and education coupled with the failure of the formal sector to generate additional employment, forced to participate informal activity which found to be the immediate source of livelihood.

**Sex:** Sex affects involvement of economic activity positively and which is significant at 1% of significant level. The marginal effect coefficient interpreted as, being male increase the probability of vending by 0.375 (relative to defaulting). This implies that, males are more likely to participate in vending than female.

**Age:** age has the expected sign and significant. The negative sign shows that being young increase the probability of vending. This implies that, youths are more likely to participate in vending than adults.

**Education level:** Education affects participation of economic activity negatively and which is significant at 1% of significant level. The marginal effect coefficient interpreted as, attending higher education decreases the probability of involving in informal economic activity by - 0.379 (relative to defaulting). This implies that, those who are less educated are more likely to involve in street vending. Different studies also found similar result that less or uneducated are more likely to involve in vending than educated households.

The finding of this paper also corresponds with the work of Amenya (2007), and he concludes that households with poor education level tends to be poor and have few chances of getting formal and well-paying job opportunities. In addition the work of Chen (2002), also found that workers who cannot find attractive jobs in the modern sector typically join the ranks of unemployed of the informally employed

**To avoid tax:** affects involvement of economic activity negatively and which is significant at 5% of significant level. The marginal effect coefficient interpreted as, seeking to avoid tax decrease the probability of vending by -0.238 (relative to defaulting). These imply that those who involve in street vending were not to avoid taxes and it is because not enough jobs are created for all those seeking work find employment in the informal economy in the study area.

**Excessive regulation:** affects involvement of economic activity positively and which is significant at 1% of significant level. The marginal effect coefficient interpreted as, unable to fulfill minimum entry requirement increases the probability of involvement in the informal sector by 0.342 (relative to defaulting). This implies that, those who are unable to fulfill minimum entry requirement are more likely to involve in vending.

Different studies also found similar result that excessive regulation increases the probability to involve in vending. The findings of the study by Etsubdink (2008), on Cause and Effect of Informal Sector: the case of Street vendors in Addis Ababa, Ethiopia shown that; the reason of informal operators to become in the informal sector is unable to fulfill criteria of formal sector and lack of job opportunity in the formal sector.

**Loan availability:** affects participation of economic activity negatively and which is significant at 1% of significant level. The marginal effect coefficient interpreted as, having credit access decreases the probability of involving in informal economic activity by -0.362 (relative to defaulting). This implies that, those who had no credit access are more likely to involve in street vending than those who had no credit access.

**Accessibility to buyers:** affects involvement of economic activity negatively and which is significant at 5% of significant level. The marginal effect coefficient interpreted as, being accessible to buyers decrease the probability of involving in informal economic activity (street vending) by -0.22% (relative to defaulting). This implies that, those who are not accessible to customers are more likely to involve in vending.

**Absence of Market linkage:** market linkage affects involvement of economic activity positively and which is significant at 5% of significant level. The marginal effect coefficient interpreted as,

absence of market linkage by the government increases the probability of involving in informal economic activity (street vending) by 0.18 (relative to defaulting).

**Shortage of Initial capital:** The variable initial capital has the expected sign and significant at 1% significance level. This shows that shortage of initial capital increases the probability of involving in informal economic activity. The marginal effect coefficient interpreted as, lack of initial capital increases the probability of involving in informal economic activity (street vending) by 0.36 (relative to defaulting). This implies that, those who had no enough initial capital are more likely to involve in street vending than those who had better capital.

The findings of the study by Etsubdink (2008), corresponds with this study that most of the street vendor's constraint was shortage of capital and problem faces from Government field and other incidents. Agnello and Moller (2004), also reported that "41 percent of the respondents chose the occupation because they did not have enough capital to start any other business and 26 percent said they did not have other choices".

**Seeking employment:** affects participation of economic activity positively and which is significant at 10% of significant level. The marginal effect coefficient interpreted as, being unemployed increases the probability of involvement in the informal sector by 0.17 (relative to defaulting). This implies that, those who are looking for employment are more likely to involve in informal economic activity (street vending).

Different studies (Chen, 2012, Hayat, 2000) also found similar result that the failure of the formal sector to generate additional employment, forced to participate informal activity which found to be the immediate and livelihood.

#### **4.2.2 Econometric Analysis for Determinants of business sector choice**

The purpose is to identify key variables that affect business sector choice at household level. People choice of business sector was dependent variables. The dummy variables are equal to 1 if the household has chooses normal shop, 2 if the household has chosen street vendors and 3 if the household has bought from small and micro enterprises.

The researcher specified, multinomial logit model to identify the factors behind choice of business sectors. A multinomial logit was fitted to estimate the hypothesized explanatory variables on the probability of being normal shop or street vendors or SMEs. These variables were entered in to the model by taking normal shop as base outcome variable.

#### 4.2.2.1 The normal shop-street vendor-SME model (normal shop as a base outcome)

A multinomial logistic model, as indicated above, estimated to identify the factors that affect the likelihood of the household choosing normal shop, vendors or SMEs. It was hypothesized that age, sex, education level, accessibility, safety, quality service, income, household size, marital status and price are determinant factors for people choice of business sectors.

However, the model result (Table 4.17) below showed that quality service and marital status influences both street vendor and small and micro enterprises in relative to normal shop. Moreover, multinomial log it result also showed that safety, accessibility, price and age are the major determinant factors for the choice of street vendor over normal shop, but not SMEs. Hence, below the marginal effect for each variable at their mean level is presented.

**Table 4; 15: Marginal Effect for street vending**

Marginal effects after mlogit

```
y = Pr(choice==2) (predict, p outcome(2))
= .28086024
```

| variable  | dy/dx     | Std. Err. | z     | P> z  | [ 95% C.I. ] |          | x    |
|-----------|-----------|-----------|-------|-------|--------------|----------|------|
| access~y* | .2736557  | .1225     | 2.23  | 0.025 | .033555      | .513756  | .51  |
| safety*   | -.7147161 | .10403    | -6.87 | 0.000 | -.918613     | -.510819 | .58  |
| qs*       | -.6458949 | .15303    | -4.22 | 0.000 | -.945824     | -.345965 | .71  |
| friend~e* | .2100476  | .15473    | 1.36  | 0.175 | -.093218     | .513313  | .45  |
| price*    | .343376   | .10334    | 3.32  | 0.001 | .140843      | .545909  | .73  |
| age       | .186271   | .11291    | 1.65  | 0.099 | -.035037     | .407579  | 2.52 |
| sex*      | -.0283192 | .14529    | -0.19 | 0.845 | -.313092     | .256453  | .44  |
| edu       | .0183972  | .06824    | 0.27  | 0.787 | -.11536      | .152154  | 3.24 |
| marsta~s* | -.4694918 | .22729    | -2.07 | 0.039 | -.914977     | -.024007 | .54  |
| econom~s  | -.0682517 | .14755    | -0.46 | 0.644 | -.357452     | .220948  | 1.54 |
| noofde~s  | .0579784  | .13548    | 0.43  | 0.669 | -.207558     | .323514  | 2.1  |

(\*) dy/dx is for discrete change of dummy variable from 0 to 1

**Source: Own computation**

**Table 4; 16: Marginal Effect for small and micro enterprise**

Marginal effects after mlogit

```
y = Pr(choice==3) (predict, p outcome(3))
= .32570953
```

| variable  | dy/dx     | Std. Err. | z     | P> z  | [        | 95% C.I. | ] | x    |
|-----------|-----------|-----------|-------|-------|----------|----------|---|------|
| access~y* | -.1056038 | .12177    | -0.87 | 0.386 | -.344275 | .133067  |   | .51  |
| safety*   | .1792607  | .10408    | 1.72  | 0.085 | -.024727 | .383248  |   | .58  |
| qs*       | .0947087  | .13153    | 0.72  | 0.471 | -.163076 | .352493  |   | .71  |
| friend~e* | -.031405  | .13675    | -0.23 | 0.818 | -.299432 | .236622  |   | .45  |
| price*    | .067158   | .1285     | 0.52  | 0.601 | -.184689 | .319005  |   | .73  |
| age       | .016695   | .10187    | 0.16  | 0.870 | -.182961 | .216351  |   | 2.52 |
| sex*      | -.2437027 | .13123    | -1.86 | 0.063 | -.500916 | .013511  |   | .44  |
| edu       | -.0138646 | .06659    | -0.21 | 0.835 | -.144384 | .116655  |   | 3.24 |
| marsta~s* | -.1943893 | .22674    | -0.86 | 0.391 | -.63879  | .250011  |   | .54  |
| econom~s  | -.078002  | .14043    | -0.56 | 0.579 | -.353245 | .197241  |   | 1.54 |
| noofde~s  | .0347899  | .11894    | 0.29  | 0.770 | -.198337 | .267917  |   | 2.1  |

(\*) dy/dx is for discrete change of dummy variable from 0 to 1

**Source: Own computation**

**Safety:** With regard to safety, it was hypothesized that people choose sectors that insure their safety. As expected, it was found to be significant on determining the choice for normal shop over street vendor at less than 1 % of the probability level. This is because street vendors once they sold their products, it was difficult to get them back for inconvenience and SMEs are not believed to be safe for long term market since they stop working after one or two years in the study area. This problem can be reduced if households buy from normal shop.

The marginal effect also indicates that, safety decreases the probability of buying from street vendors by 71% as compared to normal shop.

**Accessibility:** significantly influences people choice for street vendors over normal shop positively and it is significant at 10% significance level. Being accessible had a higher likelihood to be chosen by households. Therefore from this we can understand that accessibility of sectors lead households to prefer them.

The marginal effect of this variable indicates that, other things keep constant; being accessible increases people choice of street vendor by 27% as compared to normal shop. This may be because street vendors are accessible in road sides easily and they provide goods/services that are highly needed by people.

**Price:** As expected, the coefficient of price observed to be positively associated with street vendor and it is significant at 1% significance level. This means that people prefer to choose street vendors in favor of normal shop because the price is high in normal shop. The interpretation of marginal effect implies that, if other things keep constant, the probability of people choosing street vendor increased by 34 percent relative to normal shop as price increase by one birr.

**Quality service:** quality service was highly associated with normal shop than street vendor and MSE. The likelihood of choosing normal shop increases when there is high quality service in the market. This variable was found to be significant at 1 % and 5% probability level for street vendor and small and micro enterprise with negative sign respectively. This means that the higher the service quality is in the market, the higher the likelihood for the choice for normal shop over street vendor and SME.

Therefore from this we can understand that high service quality in the market leads the households to prefer normal shop to secure such service quality. The marginal effect of this variable indicates that, if there is high quality service in the market household's choice of street vendor decrease by 64.5% percent as compared to normal shop.

**Marital status:** this variable is statistically significant at less than 1 % and 5% probability level and showed a negative relationship with the choice of street vendor and SME respectively. The negative relationship tells us that being single increase the probability of choosing street vendor and SME as compared to normal shop.

The marginal effect indicates that when the household getting married, the probability of choosing street vendor decreases by 46.9% and SME by 19% as compared to normal shop.

**Table-4; 17: Results of the Multinomial Logit Analysis for business sector choice (normal shop as a base outcome)**

| <b>Dependent Variable: Dummy variable=1 if normal shop, 2, if street vendor and 3, if SME</b> |                      |          |             |        |
|-----------------------------------------------------------------------------------------------|----------------------|----------|-------------|--------|
| Explanatory                                                                                   | <b>Street vendor</b> |          | <b>SME</b>  |        |
| Variable                                                                                      | coefficient          | P >  z   | coefficient | P >  z |
| Age                                                                                           | 1.179104             | 0.063*   | .5671457    | 0.261  |
| Sex                                                                                           | -.7893626            | 0.347    | -1.484999   | 0.044* |
| Education level                                                                               | .0770238             | 0.843    | -.0310465   | 0.929  |
| No of dependents                                                                              | .4422248             | 0.535    | .3426063    | 0.542  |
| Marital status                                                                                | -4.013557            | 0.008*** | -2.923374   | 0.025* |
| Price                                                                                         | 2.715232             | 0.005*** | 1.152011    | 0.122  |
| Accessibility                                                                                 | 1.434107             | 0.054*   | .1051443    | 0.871  |
| Safety                                                                                        | -4.455015            | 0.000*** | -1.164302   | 0.132  |
| Quality service                                                                               | -4.305054            | 0.000*** | -2.051745   | 0.018* |
| _cons                                                                                         | 1.361055             | 0.74     | 2.005109    | 0.237  |
| Number of obs =100    LR chi2 (22) =79.25    Prob > chi2 = 0.0000                             |                      |          |             |        |
| Pseudo R2        =    0.3738            Log likelihood = -66.369984                           |                      |          |             |        |

Source: Own computation based on survey 2019

\*\*\*, \*\* and \* indicate significance at 1, 5 and 10 % respectively

### 4. 2. 3 Impact Analysis

Here the researcher devoted to the econometric analysis of the variables used for the impact analysis.

#### 4.2.3.1 Analysis for the effect of informality (street vending) on Household's Livelihood

In this part the researcher focuses on the third objectives of the paper which is the effect of informality on Household's Livelihood. To see the impact, the researcher used Propensity Score Matching (PSM). Analysis was all about the propensity score matching and average treatment effect on the treated (ATET) by focusing the most influential factors which affect for both the probability to participate and not to participate on informality(street vending).

#### 4.2.3.2 Propensity Score Matching Results

In order to address the third objective of this study the researcher intended to use an econometric technique which is the propensity score matching approach (PSM) commonly employed in the impact evaluation (Rosenbaum et al. 1983, 1985). Under this approach the researcher matched street vendors (treated groups) with small and micro enterprises (control groups) which share similar characteristics except participating in informal economic activity.

The dependent variable in the impact assessment analysis takes the value of 1 if a household participates in street vending and 0 otherwise. Logit model using STATA software version 14 was employed to construct the propensity scores used to match street vending participants with non-vending participants. In propensity score matching, it is important to match those variables that affect both the probability to participate and that are highly associated with the outcome variables, sex of household, age, marital status and place of origin.

Before discussing the estimation result of matching estimator, common support and sensitivity tests are presented to be sure the success of the matching for the exogenous variables. The study undertakes estimation of the Propensity Score and covariate tests.

**Common support:** The common support assumption implies that the probability of receiving treatment for each possible value of the vector  $X$  is strictly within the unit interval that fall outside the region of common support area would be dropped.

**Balancing tests:** can also be conducted to check whether the distributions of the treated group and control groups are similar or balanced. This implies that the propensity scores of the groups from vendor participant samples and non- vendor participants need to be similar since propensity scores are based on similar observed  $X$ .

To this end, the common support option has been selected and the balancing property is satisfied. See the STATA program output of the logit estimate below.

## STATA Program Output of the Estimation of the Propensity Score

\*\*\*\*\*

### Algorithm to estimate the propensity score

\*\*\*\*\*

The treatment is treat

| Treat        | Freq. | Percent | Cum.   |
|--------------|-------|---------|--------|
| Not vending' | 111   | 50.00   | 50.00  |
| Vending      | 111   | 50.00   | 100.00 |
| Total        | 222   | 100.00  |        |

\*\*\*\*\*

### Step 1: Identification of the optimal number of blocks

\*\*\*\*\*

The final number of blocks is 4

This number of blocks ensures that the mean propensity score is not different for treated and controls in each blocks

\*\*\*\*\*

### Step 2: Test of balancing property of the propensity score

\*\*\*\*\*

The balancing property is satisfied

This table shows the inferior bound, the number of treated and the number of controls for each block

| Inferior<br>of block<br>of pscore | treat     |         | Total |
|-----------------------------------|-----------|---------|-------|
|                                   | not vendi | vending |       |
| .2                                | 24        | 18      | 42    |
| .4                                | 76        | 59      | 135   |
| .6                                | 11        | 34      | 45    |
| Total                             | 111       | 111     | 222   |

Note: the common support option has been selected

\*\*\*\*\*

End of the algorithm to estimate the pscore

\*\*\*\*\*

**Table 4.18; Covariates test of exogenous variables**

| Variable      | Unmatched<br>Matched | Mean    |         | %reduct |      | t-test |       | V (T) /<br>V (C) |
|---------------|----------------------|---------|---------|---------|------|--------|-------|------------------|
|               |                      | Treated | Control | %bias   | bias | t      | p> t  |                  |
| sex           | U                    | .63964  | .57658  | 12.9    |      | 0.96   | 0.338 | .                |
|               | M                    | .63964  | .68468  | -9.2    | 28.6 | -0.71  | 0.480 | .                |
| age           | U                    | 2.3063  | 2.5586  | -34.3   |      | -2.56  | 0.011 | 1.07             |
|               | M                    | 2.3063  | 2.3694  | -8.6    | 75.0 | -0.64  | 0.521 | 1.10             |
| maritalstatus | U                    | .37838  | .5045   | -25.5   |      | -1.90  | 0.059 | .                |
|               | M                    | .37838  | .2973   | 16.4    | 35.7 | 1.28   | 0.203 | .                |
| placeoforigin | U                    | .58559  | .67568  | -18.7   |      | -1.39  | 0.166 | .                |
|               | M                    | .58559  | .63964  | -11.2   | 40.0 | -0.82  | 0.411 | .                |

\* if variance ratio outside [0.69; 1.46] for U and [0.69; 1.46] for M

**Source: Own computation based on survey 2019**

This test checks the success of the matching for the exogenous variables. The covariates test of exogenous variables result (table 4:16), evidenced the absence of matching problem.

**Table 4; 19: STATA Program Output of the sensitivity analysis test**

|                              |                             |                    |           |        |       |                        |
|------------------------------|-----------------------------|--------------------|-----------|--------|-------|------------------------|
| Treatment-effects estimation |                             | Number of obs      |           | =      | 222   |                        |
| Estimator                    | : propensity-score matching | Matches: requested |           | =      | 1     |                        |
| Outcome model                | : matching                  | min                |           | =      | 1     |                        |
| Treatment model:             | logit                       | max                |           | =      | 15    |                        |
|                              |                             |                    |           |        |       |                        |
|                              | SLI                         | AI Robust          |           |        |       |                        |
|                              |                             | Coef.              | Std. Err. | z      | P> z  | [95% Conf. Interval]   |
|                              |                             |                    |           |        |       |                        |
| ATE                          |                             |                    |           |        |       |                        |
|                              | treat                       |                    |           |        |       |                        |
| (vending vs not vending')    |                             | -.2293215          | .0211505  | -10.84 | 0.000 | -.2707758    -.1878673 |

This test checks the treatment effect for the exogenous variables. The treatment effect test result shows that the livelihood index of vendors on average was 22% less than the livelihood index of non-vendors.

#### 4.2.3.3 ATT Estimation Result

##### Livelihood Index Result

This section presents and discusses the estimation result of matching estimator of household livelihood index. The DFID (1999) sustainable livelihood framework approach is used for calculating the sustainable livelihood index (SLI) for each household. Values of each indicator obtained from the household questionnaire were first standardized and the total LI is calculated as the weighted average of all capitals. The result of each of the indicator is obtained using the same approaches as above and all estimations are bootstrapped standard errors. The researcher used “ATT and t- value” columns to evaluate the impact indicators. It was generally hypothesized that, participating in informal economic activity (street vending) decreases household wellbeing and asset ownership. Below are the ATT results for participation in informal economic activity based on different matching methods.

##### *1. ATT estimation With the Stratification Method, Bootstrapped standard errors*

| N. treat. | N. control | ATT     | Std. Err. | t       |
|-----------|------------|---------|-----------|---------|
| 111       | 107        | - 0.207 | 0.019     | -11.166 |

##### *2. ATT estimation With Nearest Neighbor Matching Method, Bootstrapped standard errors*

| N. treat. | N. control | ATT     | Std. Err. | t       |
|-----------|------------|---------|-----------|---------|
| 111       | 110        | - 0.232 | 0.017     | -13.566 |

##### *3. ATT estimation with the Radius Matching Method, Bootstrapped standard errors*

| N. treat. | N. control | ATT     | Std. Err. | t      |
|-----------|------------|---------|-----------|--------|
| 111       | 111        | - 0.220 | 0.022     | -9.971 |

##### *4. ATT estimation with the Kernel Matching Method, Bootstrapped standard errors*

| N. treat. | N. control | ATT     | Std. Err. | t       |
|-----------|------------|---------|-----------|---------|
| 111       | 111        | - 0.220 | 0.016     | -13.370 |

By and large, these results do support the hypothesis that participation in informal economic activity (street vending) has the power to decrease livelihood index of households. ATT based on nearest-neighbor, radius, stratification and Kernel estimators as shown above, were negative and significant (at 1% percent level of significance). Taking into account the significant estimators, the mean difference in livelihood index between street vendor participant and non-participant households ranges from - 20% to – 23%.

This result is a clear indication that people are not benefiting from being participant in street vending thereby decreasing their wellbeing and increasing their vulnerability. It is obvious that the informal sector has now become the largest employer. However, Street economic activities cannot improve poor urban dwellers' living standards nor develop a country.

Furthermore from the result it will be possible to say that, these activities provide little profit and are unable to lift participants out of chronic poverty and hinder the development of the country since almost all of the participants are not paying the necessary tax.

Once again, it is possible to deduce that participants are suffering from the participation in terms of decreased livelihood outcome. Research also has shown that workers in informal employment earn less, have more volatile incomes, lack access to basic public services and protections, and face higher risks of poverty compared to workers in formal employment (Chen et al. 2005).

### 4.3 Qualitative Analysis

Fernandez et al. (2016) theorize that individuals are employed in the informal labour market for three broad reasons: First, they do not possess the necessary skills in order to produce at the level required by the formal labour market. Second, their productivity is comparable to workers in the formal labour market but they are prevented from entering due to barriers to formality. Third, they choose to work in the informal labour market due to benefits of informality. They call these three types of informal workers ‘subsistence’, ‘induced’ and ‘voluntary’, respectively.

Though the literature outlined the presence of different reasons to join informal market, discussions with key informant interviewees show that people join informality due to their exclusion from formal employment opportunities. In this regard, asked about the causes of informality, interviewee1, street vendor, has said the following:

*I have been in the street business of selling clothes for the last 2 years. Before joining this business, I have tried other activities. I was engaged in daily labor in the construction sector. 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.*

From the above interview we can learn that people join informality due to the absence of other employment opportunities. This clearly characterizes exclusionary informality.

The second question to be addressed here is that why street vendors do not join microenterprise programs? In this regard, interviewee 2, city administration small and micro enterprises development officer 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 Bahir Dar and have to show the identity card of the Bahir Dar city administration. Those eligible candidates should form enterprise groups and have to choose among the growth oriented sectors chosen by the government.*

From the above interview, involvement in microenterprise development programs is not allowed on individual basis. 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. The mere lack of identity card and absence of people to form enterprise groups are among the challenges that hinder participation in microenterprise programs. Regarding the reasons why street vendors do not join microenterprise programs, interviewee 3, other street vendor, has also said the following:

*I asked the officials to allow us to engage in activities we used to work but they refused me. They advised me 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, i failed to participate in microenterprise programs. Consequently, I am vending on the streets.*

Street vendors' participation in microenterprise programs is also affected by the intervention 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 4, city administration trade and industry officer has said:

*Many institutions are involved in implementing the microenterprise programs. Bahir Dar city Trade and Industry Bureau involved in trade and investment licensing, the SME development bureau is responsible for organizing and screening beneficiaries and providing business development plans. The microfinance institution involved in providing microfinance services. The Technical and Vocational Education Training institutes (TVETs) provide business management training. 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. Street vendors, on the other hand, claim that there are many

problems related to the implementation of the program. The bureaucratic channels, the problem of getting identity card from the city administration, 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. Because of such problems, street vendors remain informal and still work on the streets. Consequently, harassment of street vendors has become a common practice in Bahir Dar.

Regarding to the actions taken by the government on street vendors, there are two opposite views. While some people claim that street vendors should be cleared from streets, others argue that street vendors should not be eliminated rather they have to be supported. The interview below show the two opposite views on street vending. Supporting the elimination of street vendors, interviewee 5, from Bahir Dar municipality 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 majorities of them prefer to stay on the streets. In the contrary, those legally registered entrepreneurs are unable to compete with street vendors for the street vendors sell products in cheap prices. 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 favor of the legal and formal entrepreneurs who are paying tax for the government. Street vendors, thus, need to be eliminated from the streets.*

Likewise, code enforcing police of the city administration claim that since street vendors are working out of the government order they have to be eradicated from streets. He has said the following:

*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. Thus, they should be eliminated from the streets.*

In spite of the fact that government officials agree on the idea that street vendors should be eradicated from streets, street vendors argue against the ideas of government bodies. When asked about an attempt of eradicating street vendors from streets, interviewee7, resident of Bahir Dar, has said the following:

*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, harassing them may double or triple the number of victims.*

The above interview analysis shows that while the government officials agree street vendors should be eradicated from the streets, street vendors 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.

## CHAPTER FIVE

### CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Conclusions

The overall objective of the study is to identify the factors influencing informal economy and what impact does informal economic activity (street vending) have on household's livelihood in Bahir Dar. From the analysis of the data, the following conclusions were identified.

From the findings of the study, majority of the people in the city who joined street vending are characterized by low level of education. Moreover, the average working age category of the street vendors was 18 to 30 years with average family size of 1.6. It is an age group when youths were either married or were preparing to marry to set up own family apart from parents stock. Thus, street vending would be an attractive alternative to these youths. It is also found that street vending was a particularly important source of employment and income for both sexes. Male's representation was higher than females, and it were dominated by single vendor. This implies that vending represent mainly survival strategies adopted in the face of growing unemployment and underemployment aiming at raising incomes for own support so as to alleviate hunger and poverty.

The study examined the causes of informal economic activity. Consequently, study finds that majority of street vendors join informal economic activity due to lack of employment opportunities. It was identified that people get involved in street vending activities due to unemployment, migration, limited education, lack of initial capital, being un-accessible to customers, absence of market linkage and excessive regulation. In general it was learnt by the findings of this study that, people join informality due to their exclusion from formal employment opportunities.

Furthermore, regarding the actions taken on 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 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 argue that street vending should not be eliminated but instead they have to be supported and proper mechanisms should be devised to make them legal.

In the second objective, the study examined the people choice of business sectors. Consequently, the results demonstrate that accessibility to buyers, more dependents and low price encouraged people to choose street vendors over normal shop and small and micro enterprises. Quality service and safety are highly correlated with the selection of normal shop as compared to street vendors and small and micro enterprises.

Lastly, the study investigated the effect of participation in formal and informal business sectors measured by household livelihood index. The hypothesis was that participating in informal economic activity (street vending) decreases household wellbeing and asset ownership. Matching econometrics modeling approach was used to analyze data.

In this regard, the study revealed that participation in informal economic activity (street vending) has the power to decrease livelihood index of households as measured by individual livelihood capitals. After matching, the mean difference in livelihood index between street vendor participant and non-participant households ranges from -0.191 to -0.220. These is because

## **5.2 Recommendations**

### **5.2.1 Recommendation for City Administration and policy makers**

In light of the above findings and in order to improve street vending sector, the study suggests that Bahir Dar city administration and policy makers considers legalizing street vending and planning for appropriate location in urban areas for street vending, register and licensing street vendors, build capacity of street vendors, formulate a street vending policy and strengthen stakeholder relationship.

Majority of street vendors around the world undertake the street vending business under threats of evictions and harassment because the law does not recognize their operation within the urban areas. But, in some countries like India, Tanzania, South Africa and Thailand, the governments have recognized street vending as an economic sector. For example, in the city of Dares salaam,

street vendors have been issued licenses and are allowed to operate formally since 1990s. As every street vendor would be registered, it would be easier to control the sector and to let it grow in an organized manner. Those with a license should have access to various advantages, including training, access to bank credit, microfinance and other advantages that are available.

To improve livelihoods of urban poor, formulating flexible and supportive policies and regulations that will take into account the practical reality and current challenges faced by street vendors were necessary. For instance the study reveals that the type of informality in bahir dar city was induced informality. Induced informality might be reduced by the removal of formal employment barriers. The policy should also address inclusion of street vending in urban planning regulations, and provide guidelines on harassment and confiscation of vendor's commodities. Such policy will ensure protection of street vending for livelihoods enhancement.

As the study found, street vendor's location depends on accessibility and number of customers. To this end, to assist street vendors in terms of business locations, the city administration should provide city specific designated and well planned restriction free street vending zones. Those business locations should take into account the interests of sellers and customers within the city. Consequently, this will help to incorporate street vending into the life of the city management.

### **5.2.2 Recommendation for Street Vendors**

Improvement of the working conditions on the side of street vendors heavily depends on their willingness to organize themselves into groups and organization. The street vendors should be encouraged to organize into associations which have rules and regulations in order to come up with an organized sector. The city authority should also assist and encourage street vendors in establishing a strong association/organization that will be helpful for ensuring livelihood and social security of street vendors.

### **5.2.3 Recommendation for Small and Micro Enterprise development office**

Eradicating street vendors will force the youth to be engaged in criminal activities. 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.

#### **5.2.4 Recommendation for NGOs**

The researcher has identified significant changes on those households who have been participating in formal economic activity than informal participants. In order for participants of street vending to gain better wellbeing, NGO and CBOs in partnership with the government should build capacity of the street vendors through training, advocacy and various programmes. Life skills and knowledge acquirement is a major tool for improving productivity and better working conditions. Trade skills in business are crucial to perform business activities such as business strategy, bookkeeping, and general business management.

#### **5.2.5 Recommendation for Financial Institutions**

Being able to get financial assistance from financial sectors seems to be an obstacle for many street vendors. This is due to the fact that street vendors do not meet the requirements set by financial institutions. Hence, it is impossible for vendors to get their loan application approved. Therefore, it is advised that financial institutions (private and government) to work with city administration and assist vendors to gain financial service.

### **5.3 Implication for Future Research**

The determinants of informal economic activity and its impact were studied only on Bahir Dar city of Amhara Region. However, the situation may be different in other areas of the country. So, to conclude to the whole parts of the country, it will be worth enough if a research which considers the remaining part of the country. The study recommends further research also on impacts of informal economic activity on livelihoods of urban poor by focusing not only on street vendors but also on urban poor in general.

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## Appendixes

### Annex A: Multicollinearity test

| Variable     | VIF  | 1/VIF    |
|--------------|------|----------|
| age          | 9.63 | 0.103802 |
| educ         | 7.70 | 0.129786 |
| lackofinit~l | 4.36 | 0.229588 |
| loanavaila~y | 3.88 | 0.257526 |
| seekingemp~t | 3.71 | 0.269720 |
| accessibil~s | 3.43 | 0.291914 |
| sex          | 2.99 | 0.334337 |
| excessiver~n | 2.72 | 0.367802 |
| migrations~s | 2.49 | 0.401008 |
| marketlink~e | 2.32 | 0.430903 |
| toavoidtax   | 1.33 | 0.750394 |
| Mean VIF     | 4.05 |          |

### Annex B: Model specification test

|                             |               |   |        |
|-----------------------------|---------------|---|--------|
| Logistic regression         | Number of obs | = | 222    |
|                             | LR chi2(2)    | = | 112.82 |
|                             | Prob > chi2   | = | 0.0000 |
| Log likelihood = -97.469076 | Pseudo R2     | = | 0.3666 |

| involment | Coef.     | Std. Err. | z     | P> z  | [95% Conf. Interval] |
|-----------|-----------|-----------|-------|-------|----------------------|
| _hat      | 1.013098  | .1393572  | 7.27  | 0.000 | .7399626 1.286233    |
| _hatsq    | .0358569  | .0633766  | 0.57  | 0.572 | -.088359 .1600728    |
| _cons     | -.0621721 | .2092239  | -0.30 | 0.766 | -.4722434 .3478992   |

### Annex C: Logistic regression for determinants of informal economic activity

|                             |               |   |        |
|-----------------------------|---------------|---|--------|
| Logistic regression         | Number of obs | = | 222    |
|                             | LR chi2(11)   | = | 112.51 |
|                             | Prob > chi2   | = | 0.0000 |
| Log likelihood = -97.625074 | Pseudo R2     | = | 0.3656 |

| involment             | Coef.     | Std. Err. | z     | P> z  | [95% Conf. Interval] |
|-----------------------|-----------|-----------|-------|-------|----------------------|
| sex                   | 1.688859  | .43958    | 3.84  | 0.000 | .8272985 2.55042     |
| age                   | -.4750249 | .2587061  | -1.84 | 0.066 | -.9820796 .0320298   |
| educ                  | -1.412558 | .2576196  | -5.48 | 0.000 | -1.917483 -.9076329  |
| migrationstatus       | 1.02738   | .374598   | 2.74  | 0.006 | .2931817 1.761579    |
| toavoidtax            | -.8085792 | .4653052  | -1.74 | 0.082 | -1.720561 .1034023   |
| excessivereregulation | 1.509179  | .3916247  | 3.85  | 0.000 | .7416085 2.276749    |
| loanavailability      | -1.540635 | .4858895  | -3.17 | 0.002 | -2.492961 -.5883091  |
| accessibilitytobuyers | -.9053576 | .4137345  | -2.19 | 0.029 | -1.716262 -.0944529  |
| marketlinkage         | .7493998  | .3722665  | 2.01  | 0.044 | .0197708 1.479029    |
| lackofinitialcapital  | 1.634395  | .4800569  | 3.40  | 0.001 | .6935005 2.575289    |
| seekingemployment     | .7321015  | .416236   | 1.76  | 0.079 | -.083706 1.547909    |
| _cons                 | 1.8332    | 1.182969  | 1.55  | 0.121 | -.485376 4.151777    |

**Annex D: Multinomial logistic regression for people choice of sectors (normal shop as a Base outcome)**

|                                 |               |   |        |
|---------------------------------|---------------|---|--------|
| Multinomial logistic regression | Number of obs | = | 100    |
|                                 | LR chi2(22)   | = | 79.25  |
|                                 | Prob > chi2   | = | 0.0000 |
| Log likelihood = -66.369984     | Pseudo R2     | = | 0.3738 |

| choice        | Coef.          | Std. Err. | z     | P> z  | [95% Conf. Interval] |           |
|---------------|----------------|-----------|-------|-------|----------------------|-----------|
| normal_shop   | (base outcome) |           |       |       |                      |           |
| street_vendor |                |           |       |       |                      |           |
| accessibility | 1.434107       | .7444463  | 1.93  | 0.054 | -.0249814            | 2.893195  |
| safety        | -4.455015      | 1.04041   | -4.28 | 0.000 | -6.494181            | -2.415848 |
| qs            | -4.305054      | 1.181902  | -3.64 | 0.000 | -6.62154             | -1.988569 |
| friendpress~e | 1.201475       | .8589556  | 1.40  | 0.162 | -.4820473            | 2.884997  |
| price         | 2.715232       | .9763466  | 2.78  | 0.005 | .8016278             | 4.628836  |
| age           | 1.179104       | .6336782  | 1.86  | 0.063 | -.0628824            | 2.421091  |
| sex           | -.7893626      | .8388952  | -0.94 | 0.347 | -2.433567            | .8548417  |
| edu           | .0770238       | .390056   | 0.20  | 0.843 | -.6874718            | .8415194  |
| marstatus     | -4.013557      | 1.519708  | -2.64 | 0.008 | -6.99213             | -1.034984 |
| economicsta~s | -.614749       | .8194731  | -0.75 | 0.453 | -2.220887            | .9913887  |
| noofdependa~s | .4422248       | .7122279  | 0.62  | 0.535 | -.9537163            | 1.838166  |
| _cons         | 1.361055       | 1.851281  | 0.74  | 0.462 | -2.267388            | 4.989499  |
| small_and_m~e |                |           |       |       |                      |           |
| accessibility | .1051443       | .6473     | 0.16  | 0.871 | -1.16354             | 1.373829  |
| safety        | -1.164302      | .7731329  | -1.51 | 0.132 | -2.679615            | .3510103  |
| qs            | -2.051745      | .8702863  | -2.36 | 0.018 | -3.757475            | -.3460149 |
| friendpress~e | .3747813       | .7164886  | 0.52  | 0.601 | -1.02951             | 1.779073  |
| price         | 1.152011       | .7455908  | 1.55  | 0.122 | -.3093199            | 2.613342  |
| age           | .5671457       | .5050299  | 1.12  | 0.261 | -.4226947            | 1.556986  |
| sex           | -1.484999      | .737568   | -2.01 | 0.044 | -2.930606            | -.0393925 |
| edu           | -.0310465      | .3503212  | -0.09 | 0.929 | -.7176634            | .6555703  |
| marstatus     | -2.923374      | 1.301847  | -2.25 | 0.025 | -5.474947            | -.3718011 |
| economicsta~s | -.611223       | .7160887  | -0.85 | 0.393 | -2.014731            | .7922851  |
| noofdependa~s | .3426063       | .5614821  | 0.61  | 0.542 | -.7578785            | 1.443091  |
| _cons         | 2.005109       | 1.694467  | 1.18  | 0.237 | -1.315986            | 5.326203  |

## Annex E: Marginal Effect for normal shop

Marginal effects after mlogit

```
y = Pr(choice==1) (predict, p outcome(1))
= .39343023
```

| variable  | dy/dx     | Std. Err. | z     | P> z  | [ 95% C.I. ]      | x    |
|-----------|-----------|-----------|-------|-------|-------------------|------|
| access~y* | -.1680519 | .13247    | -1.27 | 0.205 | -.427695 .091591  | .51  |
| safety*   | .5354553  | .09813    | 5.46  | 0.000 | .34312 .727791    | .58  |
| qs*       | .5511861  | .09557    | 5.77  | 0.000 | .363873 .7385     | .71  |
| friend~e* | -.1786426 | .15053    | -1.19 | 0.235 | -.473673 .116388  | .45  |
| price*    | -.410534  | .1469     | -2.79 | 0.005 | -.698455 -.122613 | .73  |
| age       | -.202966  | .11272    | -1.80 | 0.072 | -.423901 .017969  | 2.52 |
| sex*      | .2720219  | .14915    | 1.82  | 0.068 | -.020302 .564346  | .44  |
| edu       | -.0045326 | .07628    | -0.06 | 0.953 | -.154037 .144972  | 3.24 |
| marsta~s* | .6638811  | .15158    | 4.38  | 0.000 | .366782 .96098    | .54  |
| econom~s  | .1462536  | .15495    | 0.94  | 0.345 | -.157443 .44995   | 1.54 |
| noofde~s  | -.0927683 | .12326    | -0.75 | 0.452 | -.334346 .148809  | 2.1  |

(\*) dy/dx is for discrete change of dummy variable from 0 to 1

## Annex F: correlation of important variables for factors that attract people to street vending

|              | involv~t | sex     | age     | educ    | migrat~s | toavoi~x | excess~n | loanav~y | access~s | market~e | lackof~l | seekin~t |
|--------------|----------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|
| involvement  | 1.0000   |         |         |         |          |          |          |          |          |          |          |          |
| sex          | 0.0646   | 1.0000  |         |         |          |          |          |          |          |          |          |          |
| age          | -0.1698  | 0.1071  | 1.0000  |         |          |          |          |          |          |          |          |          |
| educ         | -0.3880  | 0.2130  | 0.1993  | 1.0000  |          |          |          |          |          |          |          |          |
| migrations~s | 0.2569   | -0.0615 | -0.1739 | -0.1287 | 1.0000   |          |          |          |          |          |          |          |
| toavoidtax   | -0.2064  | -0.0622 | 0.0411  | 0.0938  | -0.1357  | 1.0000   |          |          |          |          |          |          |
| excessiver~n | 0.3105   | 0.0201  | -0.0486 | -0.1188 | 0.0761   | -0.1262  | 1.0000   |          |          |          |          |          |
| loanavaila~y | -0.0205  | 0.1947  | -0.1231 | -0.2312 | 0.0728   | -0.0296  | 0.0077   | 1.0000   |          |          |          |          |
| accessibil~s | -0.1472  | 0.1556  | 0.1185  | -0.0056 | -0.1032  | -0.0050  | -0.0173  | 0.1227   | 1.0000   |          |          |          |
| marketlink~e | 0.0453   | 0.0223  | 0.0221  | 0.0814  | -0.0394  | 0.0405   | 0.0714   | 0.0853   | 0.1011   | 1.0000   |          |          |
| lackofinit~l | 0.2316   | -0.0998 | -0.0100 | -0.0976 | 0.0662   | -0.0432  | 0.0294   | 0.0432   | -0.0525  | 0.0009   | 1.0000   |          |
| seekingemp~t | 0.1753   | -0.0283 | -0.0465 | -0.0592 | 0.1447   | -0.1347  | 0.0370   | -0.0209  | -0.0270  | -0.0502  | 0.0488   | 1.0000   |

## ***Annex G: Probit regression for the impact of informality on livelihood***

```

Probit regression                                Number of obs   =           222
                                                LR chi2(4)      =           11.33
                                                Prob > chi2     =           0.0231
Log likelihood = -148.21492                    Pseudo R2      =           0.0368

```

| treat        | Coef.     | Std. Err. | z     | P> z  | [95% Conf. Interval] |           |
|--------------|-----------|-----------|-------|-------|----------------------|-----------|
| sex          | .1898929  | .1861281  | 1.02  | 0.308 | -.1749115            | .5546973  |
| age          | -.275838  | .1239601  | -2.23 | 0.026 | -.5187953            | -.0328807 |
| placeofori~n | -.2812383 | .1788366  | -1.57 | 0.116 | -.6317516            | .0692749  |
| martalstatus | -.1807052 | .1886044  | -0.96 | 0.338 | -.550363             | .1889527  |
| _cons        | .8151533  | .3275416  | 2.49  | 0.013 | .1731835             | 1.457123  |

## **Annex J: Questionnaires**

### **Addis Ababa University**

#### **RLDS**

#### **Survey questionnaire**

#### **Dear respondents;**

This questionnaire is prepared to *formal/ SME/* and *informal sector operators*. The objective of this questionnaire is to gather data relating to street vending. The information will be used as primary data in my case study I am conducting as a partial fulfillment of MA degree in RLDS. The information you provide will be valuable for the successes of the research project. Please be honest and objective while filling the questionnaire. The information you give is used only for academic purpose and will be kept confidential.

**“Thanks in advance”**

#### **Part I: Instruction**

- ✓ **Write on the blank spaces for open ended questionnaires.**

#### **Part II. Personal Information**

1. What is your age?

- A. Below 18      B. 18-30      C. 31-45      D. Above 45

2. What is your gender?

- A. Female      B. Male

3. Marital status:

- A. Single      B. Married

4. Education level

- A. Illiterate      B. Up to 8 grade      C. from 8 - 12      D. Degree and above

5. Where is your Place of birth?

- A. Bahir Dar      B. Outside Bahir Dar

6. If place of birth is outside Bahir Dar, what is your origin?

- A. Rural      B. Urban

7. Ethnicity\_\_\_\_\_

8. What is your Religion? \_\_\_\_\_

9. Family size\_\_\_\_\_

## II. Questions Related to Research objectives

10. What kind of business sector do you choose to operate?

A. SMEs              B. Street Vendor              C. Normal Shop

11. If your answer for question no.10 is 'street vendor', have you ever been engaged in other activity before joining street vending?

A. Yes              B. No

12. What are the main reasons that forced people to start street vending?

| Reasons to be street vendor                         | Yes | No |
|-----------------------------------------------------|-----|----|
| It is the only source of income/to be self employed |     |    |
| To avoid taxation and registration fee              |     |    |
| It is highly profitable                             |     |    |
| Excessive regulation                                |     |    |
| Lack /minimum/ of education                         |     |    |
| Accessibility of buyers                             |     |    |
| Absence of Market linkage created by government     |     |    |
| Unavailability of Initial capital                   |     |    |

Other, specify.....

13. What were the serious difficulties faced street vendors during vending?

| Challenges                         | Yes | No |
|------------------------------------|-----|----|
| Lack of capital                    |     |    |
| Lack of credit                     |     |    |
| Harassment by police               |     |    |
| Eviction by private shop guardians |     |    |
| Lack of working place              |     |    |
| High price of commodities          |     |    |

Other, specify.....

14. How much was your monthly income (Birr)? \_\_\_\_\_

15. How much is your monthly saving (Birr)? \_\_\_\_\_

16. What type of support do you get from government and non-government organization?

| Type of support                       | Yes | No |
|---------------------------------------|-----|----|
| No support                            |     |    |
| Training on entrepreneurship          |     |    |
| Market premise                        |     |    |
| Advice on how to improve the business |     |    |
| Credit                                |     |    |

17. What do you think is your economic status in the community?

A. Poor /Low income

B. Non-poor/Middle income

C. Rich/High income

18. Do you think that there is a change in your livelihood after joining the business?

A. Yes

B. No

19. If your answer for question number 18 is ‘yes’ what do you think are the changes?

| Changes                                            | Yes | No |
|----------------------------------------------------|-----|----|
| Being able to support family                       |     |    |
| Able to generate income                            |     |    |
| Self-sufficiency and leading independent life      |     |    |
| Having saving and considering expansion            |     |    |
| Having more children to school (afford school fee) |     |    |

Other please specify\_\_\_\_\_

**Asset ownership**

| <b>Livelihood capital</b> | <b>Indicator</b>                              | <b>Yes I have</b> | <b>No I haven't</b> | <b>Total Cost</b> |
|---------------------------|-----------------------------------------------|-------------------|---------------------|-------------------|
| <b>Physical capital</b>   | Television                                    |                   |                     |                   |
|                           | Radio/Tape                                    |                   |                     |                   |
|                           | Electricity service                           |                   |                     |                   |
|                           | Sofa set                                      |                   |                     |                   |
|                           | Refrigerator                                  |                   |                     |                   |
|                           | Telephone service                             |                   |                     |                   |
|                           | Commodity set                                 |                   |                     |                   |
|                           | Bed                                           |                   |                     |                   |
|                           | Rent/ residential house                       |                   |                     |                   |
|                           | Television                                    |                   |                     |                   |
|                           | Radio/Tape                                    |                   |                     |                   |
|                           | Electricity service                           |                   |                     |                   |
|                           | Sofa set                                      |                   |                     |                   |
|                           | Refrigerator                                  |                   |                     |                   |
|                           | Telephone service                             |                   |                     |                   |
|                           | Commodity set                                 |                   |                     |                   |
|                           | Bed                                           |                   |                     |                   |
| <b>Financial Capital</b>  | Income (average monthly income)               |                   |                     |                   |
|                           | Saving (average monthly saving)               |                   |                     |                   |
| <b>Human capital</b>      | % of adult household who can read and write   |                   |                     |                   |
|                           | Number of days unable to work due to sickness |                   |                     |                   |
|                           | Food frequency per day                        |                   |                     |                   |
| <b>Social Capital</b>     | Relationship with neighborhoods               |                   |                     |                   |
|                           | Participation in formal group                 |                   |                     |                   |
|                           | Participation in informal group               |                   |                     |                   |

20. If you have anything you want to say please state here.

**Addis Ababa University**

**RLDS**

**Survey questionnaire**

This questionnaire is prepared for the *people of Bahir Dar city*. The objective of this questionnaire is to gather data relating to street vending. The information will be used as primary data in my case study I am conducting as a partial fulfillment of MA degree in RLDS. The information you provide will be valuable for the successes of the research project. Please be honest and objective while filling the questionnaire. The information you give is used only for academic purpose and will be kept confidential.

**“Thanks in advance”**

**I. Personal Information**

1. Gender:

- A. Male      B. Female

2. What is your age?

- A. Below 18      B. 18-30      C. 31-45      D. Above 45

3. How long do you live in Bahir Dar?

- A. < 5      B. 5-10      C. 11-15      D. > 15

4. Marital status:

- A) Single      B) Married

5. What is your highest educational level?

- A. Illiterate    B. Up to 8 grade    C. from 8 - 12    D. Degree and above

6. What do you think is your economic status in the community?

- A. Poor /Low income. B. Non-poor/Middle income C. Rich/High income

7. How many individuals deepen on your income? -----

8. How much birr do you earn per month? \_\_\_\_\_

9. What kind of business sector do you choose to buy?

- A. SMEs      B. Street Vendor      C. Normal Shop

10. What are the major reasons that forced you to choose that specific business sector?

- A. accessibility
- B. Safety
- C. Quality service
- D. Price
- E. friends pressure
- F. If you have other reasons please write them.....

11. Can you rank different business sector based on the following criterion one to five.

| Business sector  | SMEs | Street Vendor | Normal Shop |
|------------------|------|---------------|-------------|
| Accessibility    |      |               |             |
| Safety           |      |               |             |
| quality service  |      |               |             |
| Price            |      |               |             |
| friends pressure |      |               |             |

12. When selecting your business sector, which one of the following had the most influence in your decision? (Select only one.)

- A. Location
- B. Quality of the service
- C. Price
- D. Safety

13. What are the benefits of street vending for others?

- A. The people can buy in small quantity
- B. The people can buy in small prices
- C. It creates employment opportunities for the poor people
- D. Available to the people everywhere at any time
- E. Other, specify

14. Do you encourage anyone to sell on street?

- A. Yes
- B. No

If Yes, why\_\_\_\_\_

If No, why\_\_\_\_\_

15. What is your suggestion about the policy makers instead of measure take against street Vendors? \_\_\_\_\_

16. If you have anything you want to say please state her. \_\_\_\_\_

**Thank you for your time and keen response!!**

**Addis Ababa University**  
**RLDS**  
**Survey questionnaire**

This is an interview questionnaire prepared to undertake a study entitled Economic Informality in Bahir dar, north western Ethiopia. The research conducted is purely for academic purpose and all the information given are confidential.

**Dear Respondents:**

I am a graduate student in the department of RLDS. Currently, I am undertaking this research in partial fulfillment for MA in RLDS given by Addis Ababa University. You are selected to be one of the participants in this study and I request you to give your genuine answer voluntarily. I assure you that no personal identity will be published or transferred to third party.

**Part I. Interviewer's Information**

Interviewer Name \_\_\_\_\_ Date interviewed \_\_\_\_\_

**Part II: Interview Questionnaires**

1. What are the factors that lead peoples to street vending? \_\_\_\_\_
2. What are the problems associated with street vending in Bahir dar (Social, economic and environment)? \_\_\_\_\_
3. What are the opportunities that street vending has to the national economy? \_\_\_\_\_
4. What are the opportunities that street vending has to the urban poor communities in the city?  
\_\_\_\_\_
5. To solve the problems faced by the street vendors what is to be done by the government?  
\_\_\_\_\_

6. What are the government policies toward street vending in Bahir dar or in Ethiopia as whole?

---

7. If there is any, do you think the policy is appropriate? \_\_\_\_\_

8. Currently what are the measures taken by the government to control street vending?

---

9. Do you have any general comments you would like to add?

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