



## **Socio-economic Analysis of Street Vending in Asmara city, Eritrea: Case Study Edaga-Hamus**

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### **ABSTRACT**

**Purpose:** The purpose of this research is to examine street vending activity in Asmara city, Eritrea, including driving factors, challenges and income generated from this activity.

**Methodology:** Data are obtained through interview and questionnaire survey from Edaga-Hamus area, and the data were processed using GeoDa software. Descriptive and inferential statistical methods are adopted to evaluate the results.

**Findings:** The results reveal that approximately 83.3% vendors work more than 8 hours per day and 50% work for the whole week except on Sunday. Unemployment (44.44%) and family problems (37.04%) are driving factors. Moreover, there is direct relationship between income generated and level of education, business skill, and working hours. The earnings of street vendors increases very significantly with adequate educational level and with increase working hours.

**Originality/Novelty:** Study on street vending economic activity is very limited in Eritrea. Thus, it might be the first academic contribution to review the economic situation of street vending activities in Eritrea.

**Implications:** This research work will be significant for decision and policy makers to eradicate and manage street vending activity in various cities and towns of the country. In addition it will be useful for further study.

**Keywords:** Eritrea, Asmara city, street vending, informal economy, Edaga-Hamus

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## INTRODUCTION

In most of African countries, especially in sub-Saharan countries, population is growing continuously through natural and rural-urban migration, leading to accelerate urbanization (Giroux et al., 2021; Kebede, 2023). Unsustainable urban growth is becoming a common factor in many African cities, resulting to upsurge urban poverty. In addition, most Africans are not satisfied with the economic conditions of the continent, high rate of unemployment, low income low social services and high market price pushed the people to engage informal business activities such as street vending (Roque et al., 2020). The price and activity of street vending fluctuates with time and some occasions (Zamora et al., 2021). The term informal business is very wide, describing large growing sector in world economy where poor people earn a quick (Recchi, 2020).

The interest of informal economic business is renewed worldwide as the permanent and protected jobs in the formal sector are unsecured, even those who have requisite skills are unable to find an appropriate employment. The only way to start a job for survival is to create self-employment that is to engage in informal business (Assan & Chambers, 2014). The informal economic activity is growing in different situations and appearing in new places, especially in developing countries, accounting large part of global workforce. For instance, approximately 85% of all new employment opportunities around the world are created in the informal economic business. According to international monetary fund 2004, estimate of the year 1988 to 2000, the informal economy accounted for 14.16% of the GDP in 21<sup>st</sup> century, for advanced economies in the world while the International labor organization 2002, reported that such activities are least in economically advanced parts of Africa such as northern and southern Africa (Ghebregabher et al., 2016). It is difficult to estimate such activities because of its nature i.e. unreported business. However, in Africa, a rapid growth of informal business activity is occupied by street vendors, which is a visible form of business sector and a vital share employment (Martínez & Short, 2022). Moreover, street vending activity is not only an option to tackle urban poverty, but it is also a way to minimize urban poverty and unemployment rate (Thanh & Duong, 2022). However, in most countries of Africa, such business activity is functioning illegally and creating several problems including denial of city and business codes such as zonal, labor and tax obligations.

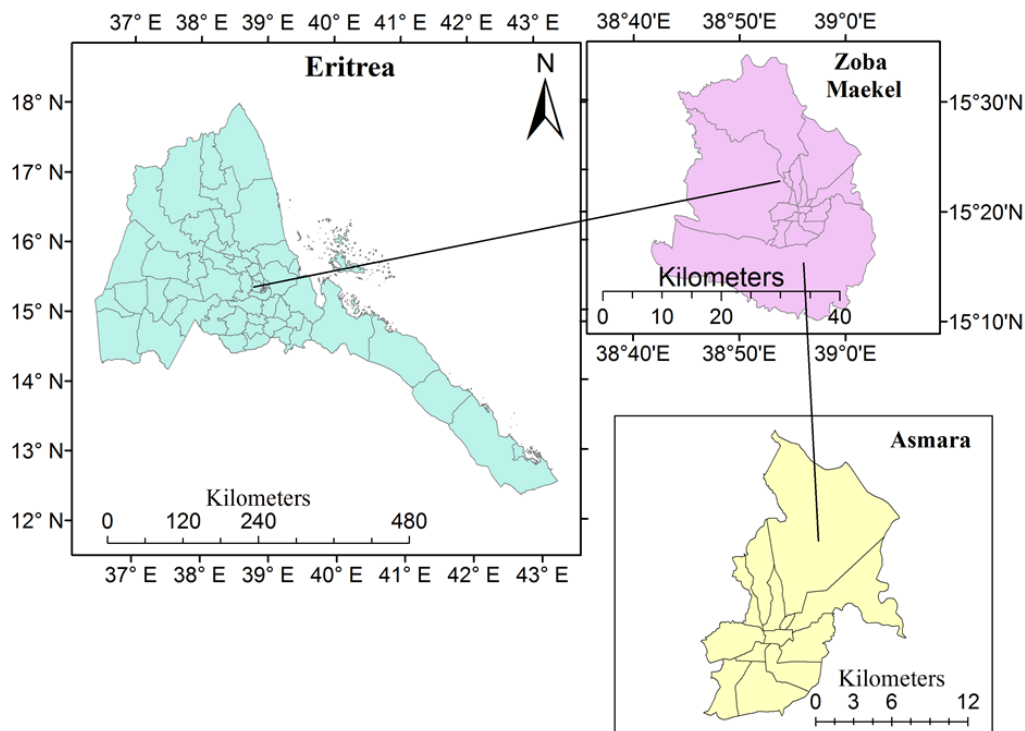
Although large number of people engages in street vending business, the income earn is very low. However, it is a simple business to start little amounts and self-employ, attracting many people to involve in such informal activities, particularly people with lack of means to earning income in urban area (Jongh, 2021). In addition, vendors who engaged in this business requires little skill or level of education (Mienur et al., 2022; Nkosi & Tabit, 2021). For these reasons; most of street vendor were either unemployed or they had unsecured employ. According Roever, (2016), the street traders in African cities accounted between 10 and 20% of the total employment, and 15 to 25% of the total informal employment. This sector is remains as major source of employment as well as changing socio-economic status for the poor (Verma et al., 2023). Most street vendors concentrate in densely populated areas such as transportation terminals, public services (Song, 2020). According to the Government of Eritrea 2004, about 33% of the country's poor live in urban areas, of these 11% in Asmara and the remaining 22% live in small towns, where most of them are directly or indirectly engaged in this informal economic activities.

However, in Eritrea, scientific research on informal business is so limited, and problematic to understand the situation. Therefore, this research work focuses in informal sector, mainly street vending activities in Asmara city, Eritrea. In Eritrea, most of the

participants in the informal sector are engaged in informal activities such as selling goods and/or services in streets. It also investigates the driving factors and operational effects of street trading. Moreover, it also tried to find out the challenges that street vendors experience in the course of running their activities within the Asmara city. An attempt also made to assess the socio-economic contributions of street vending in the study area. Since it is the first attempt in Eritrea to study street vending business in the capital city, it will be an input of knowledge for anyone who is interested in this area.

Figure 1 depicts the geographical location of the study area, where Asmara is located at the geographical central coordinates of 15°20' N latitude and 38° 56' E longitude (Berhane & Bu, 2021). It is the capital city of Eritrea, which is strategically established at the center of the Eritrean highland, at the edge of the eastern escarpment and it has an elevation about 2500 meters above sea level. It is also situated at about 115 kilometers from port of Massawa in the Red Sea coast. Its relatively rich soils, sufficient rainfall and comparatively flat land suitable for tillage have enabled it to support a large population for centuries. The temperate climatic situation ensured pleasant living conditions (Ghebrezgabher et al., 2016). Asmara is the most populated city in Eritrea with thirteen administration regions, where it is home to about 0.8 million people and one-third (about 0.3 million) is living in the immediate vicinity. Considering the existing trend of rural-urban migration, especially young adult migration in search of jobs, the city's demographics may increase in the future.

As the capital city and largest settlement of the country, most Eritrean businesses have their headquarters in Asmara. The city was once a factory town including textiles, clothing, footwear, processed meat, beer, soft drinks, and ceramics. This business communication can also be understood from some previous names of the places within the City relate to market activity, which indicates that, there are different items exchanged at different days of the week. The villages around Asmara city provide mainly agricultural products. Moreover, nationwide, from Massawa and Assab ports and other towns, commodities reach the city, making it not only the center of business domestically, but also internationally, engaging in import and export trade. The city is a marketplace for agricultural products and tanning hides. As a rapidly growing city, Asmara is the country's most important commercial center.



**Figure 1.** The geographical location of the study area

## **METHOD**

### ***Site selection***

This study was carried out in Asmara city targeting street vendors, who currently perform their business on the sidewalks and in the public space within the city. The study of street vending in this city is very interesting, which is a growing sector for the urban low income households in Eritrea, generally who depend largely on the street vending activities as a source of income for their livelihoods. People vending commodities included used clothes and shoes, equipment for household purpose, electronics-related items and cosmetics were chosen in this study (Ghebrezgabher et al., 2016). As part of the ethical considerations, the study was conducted after obtaining written informed consent was sought from each respondent prior to data collection. Moreover, the city of Asmara was selected because there is a high volume of street vendors compared to other towns in the country.

### ***Data collection***

In this study, a survey research was conducted using structured interview administered in questionnaire format and individual discussions with the operators, in the local language, Tigrinya in order to easily communicate. The questionnaire was prepared having 20 questions, which had close and open ended questions and the questionnaires were administered face-to-face. The questionnaire included bio-data of the respondents, their driving force to participate in the street vending activity, their current income and livelihood improvement situations. As there is no formally registered list of street vendors to refer the research was undertaken in the respondent's workplace and based on their willingness. Amazingly, it was not easy to find those who were willing to talk because they were afraid that the local government officials were trying to trick them and prosecute them for being in the streets (Ghebrezgabher et al., 2016). Moreover, the researcher assured the confidentiality

of information given to the street vendors. The confidentiality was gained by talking to a street vendor and explaining to him/her that the purpose of the study is only for academic use.

***Sampling design***

There is no accurate number of street vendors in Asmara city. It is difficult to know the exact total population engaged in street vending in the city, as they are part of the informal sector, that are not documented formally. Moreover, according to some officials from the municipality of Asmara, their number fluctuates, being higher during summer season where schools are closed and in the weekends, more students also participate in street vending. For instance, according to Ghebregabher et al., (2016), women street vendors were increasing in Eritrean. Bearing this in mind, in consultation with some officials from the municipality, estimation made for the total size of population of the street vendors in Asmara to be about 500, thus this number is adopted to generate the sample size. Moreover, the following formula is applied to determine the total minimum number of participants for inquiry (Adam, 2020). A minimum sample size is defined as:

$$S_m = \frac{X^2 np (1-p)}{\alpha^2 (n-1)+X^2p(1-p)} \dots\dots\dots (1)$$

Where ‘S<sub>m</sub>’ is minimum sample size, ‘X<sup>2</sup>’ refers to the value of chi-square for one degree of freedom at the desired confidence level (3.841); ‘n’ implies total number of estimated population, which is 500 in this study, ‘p’ represents population variability (0.04) and ‘α<sup>2</sup>’ is the significance level (0.05), which is the P-value.

Therefore, the minimum sample size for this study is 56 street vendors and for any contingency reason 5% is kept, making the total sample size to be 59 respondents. Purposively, one site of street vending that had high number of street vendors was selected, which is near the major bus terminal of Asmara city (Ghebregiorgis et al. 2016), locally named Edaga-Hamus.

***Method of analysis***

In this research both qualitative and quantitative methods were applied to analysis the street vendors in in Asmara city. Several statistical techniques such as simple statistical analysis, descriptive statistics, inferential statistics and regression methods were used to evaluate the relationship between independent variables and dependent variable. Graphs, tables and other diagrams were generated to evaluate the results. The independent variables were classified as either nominal or ratio data scales for the convenience of analysis. More importantly, before the input in the logistic regression model, nominal variables with more than two categories were coded in dummy variables, while ratio variables remained the same. Moreover, the interviews carried out were interpreted and analyzed qualitatively. Table 1.1 shows the coding of categorical variables. Based on the results of the univariate analysis and including variables with P-values < 0.05, a conditional multiple-logistic regression model was developed in a backward stepwise fashion. The compilation and analysis of quantitative data was done by using the GeoDa software.

**Table 1.** Coding of Categorical Variables

Factor	Variables in LRM	Description	Nature
Independent	y	Monthly income of the street	Ratio
Household Socio-Demographic	Age	Age of the research participant in years	Ratio
	Sex	Sex of the respondent (Male=1, Female=2)	Nominal
	Educ_level	Level of Education acquired by	Ratio
Attributes	HH_size	Number of Individuals per Household	Ratio
	Marital status	Married= 1, Single (including widowed, and	Nominal
	Work hrs*days	The average number of hours street vendors	Ratio

**RESULTS AND DISCUSSION**

**Characteristics of respondents**

In this study, generally, after data had been cleaned up procedure, a response rate of 91.5% was reported, where 54 questionnaires out of the total sample size of the street vendors determined to be interviewed were completed. According to this survey, described in Table 2, most of street vendors in Asmara city were males, which accounts about 68% and the rest were females (32%). This is probably associated with the absence of construction and construction related jobs in the last few years, forcing many male youths to employ in the street vending business. Besides, majority of street vendors in the city were youth and adults, who were breadwinners for their family livelihood. The average age of the street vendors was 26.4 years old, where 50% of the respondent’s age was between 21 and 35 years old, with the youngest and the oldest respondent was 16 and 42 years old, respectively. The age span between 18 and 30 years is a period when most individuals are detaching from their nuclear families (parents) and take greater responsibility towards supporting parents and younger siblings, while also establishing their own households.

The study also revealed that one fourth of the surveyed street vendors were married and the rest about 75% were unmarried, divorced or widowed. This could explain that why a high number of respondents were only one in their families. Moreover, very few (about 7%) were reported as single mothers. This revealed that when a woman has a child before getting married, they will be forced to take responsibility. This responsibility upon their shoulders might be a reason for some women to engage in informal business. In addition, the result demonstrated that the average household size of the street vendors in the Asmara was 5.3, where 30% and 48% of the respondents’ family size was ranged 1 – 4 and 5 – 6, respectively, and few of them (22%) were under 7 – 8 members, which revealed that each street vendor was responsible for at least one person. In other words, street vending operators tended to have responsibility for dependents, in terms of either immediate or extended family, which influences their decision to get involved in street vending livelihood activities as means of survival. Nevertheless, the results also described that the street vendors of the city had low level of education, where 43 and 57% was less than 2<sup>nd</sup> grade and between 3<sup>rd</sup> and 5<sup>th</sup> grade, respectively, and women were more educated than men counterparts (Table 2).

**Table 2.** Statistical description of respondents

Sex	%	Marital Status	%	Household Size	%	Educational Status	Frequency	Age	Frequency
Male	68	Married	25	2 - 4	30	Illiterate	3	16 - 20	27.8
Female	32	Single	75	5 - 6	48	1 - 2 grade	20	21 - 35	50
				7 - 8	22	3 - 5 grade	31	> 35	22.2



***Operational aspects of street vending***

Table 3 explains the operational aspects of the street vendors in Asmara city. Based on this survey, street vending was not a temporary occupation for most vendors in Asmara city. Experience is one of the most important factors to any type of activity. On average, respondents had been working for 4 to 7 years, where approximately 63%, 4% and 33% of the respondents had been engaged for 2 – 4 years, 4 – 5 years and below 2 years, respectively. The study revealed that approximately one third of the vendors were students and about 22.2% of respondents had participated in another informal trade earlier. Some significant amount of the respondents those who came from nearby villages were working in farming.

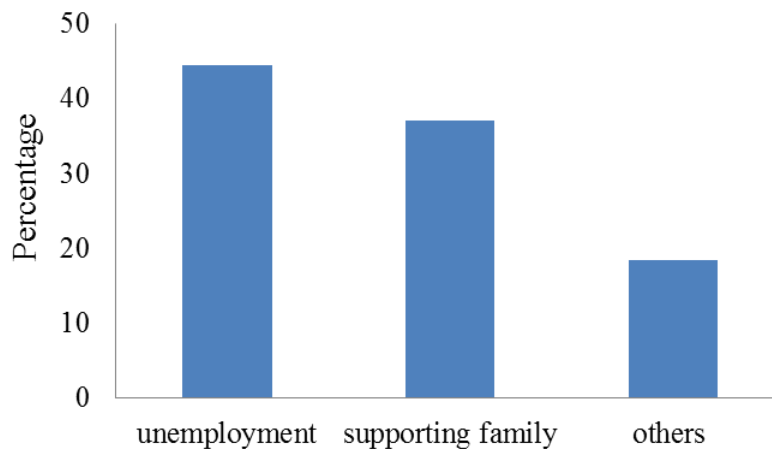
Street vending in samara city is a daily business activity where the results demonstrated that approximately 16.7% and 83.3% of the respondents worked for above 8 and between 6 and 7 hours per day, respectively. Moreover, about 50% of street vendors worked six days per week and they take rest on Sunday while 32.2% worked the whole week without any cessation. The results also showed that men (34.15%) were likely worked the whole week than women (30.61%). Majority street vendors started business with less than 2000 Nakfa, borrowed from friends or relatives. In addition, the study showed that the street vending was a growing sector, which needs to be planned to grow in a well-organized manner (Table 3).

**Table 3.** Operational aspects of street vending

<b>Experience (Year)</b>	<b>%</b>	<b>Working hours/day</b>	<b>%</b>	<b>Initial Capital</b>	<b>%</b>
< 2	33.3	6	60	< 2000	80
2 - 4	63	7	23.3	> 2000	20
4 - 5	3.7	8	16.7		

***Driving factors for street vending business***

There might be several factors that cause people to participate in street vending business. In this study, the most significant factors that force people into street vending business are lack of employment, need to support and care for their families, and others (self-reliance, unsatisfying previous employment, self-employment, and lack of education). Figure 2, explains the possible driving factors for street vending business in Asmara city where unemployment and to support and care for their families were the major factors for street vendors in Asmara city, ranked about 44.44% and 37.04%, respectively. Moreover, this survey revealed that most of street vendors in Asmara city had above one family size, which showed that most of them were responsible to take care of their family and to support them financially. According to this survey, some vendors were single and they came from poor families, and they partly helped their families from this business. Others were orphans and had to take care of their siblings or their families.



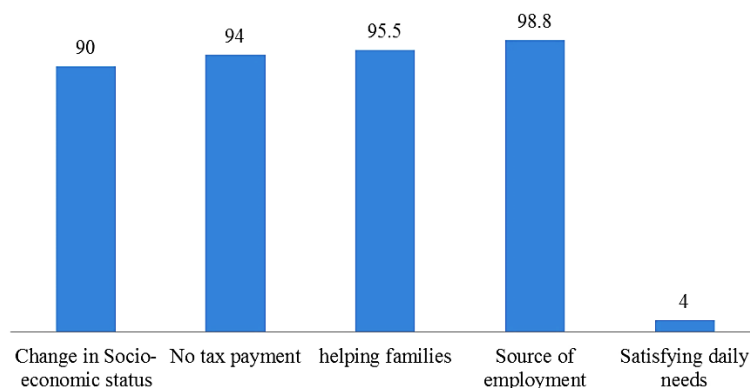
**Figure 2.** Street vending driving factors in Asmara city

***Economic benefits of street vending business***

Based on this study about 91% of the respondents were owners of their own business while the remaining were employed, who were selling the items for their employers, was either a street vendor or a wholesaler. In Asmara city, there are some informal market operators or street vendors who hire people into street vending as a way of increasing income. The income of street vendors depends on various factors, such as the type of merchandise sold, the place where they operate from, working hours etc. This survey revealed that the monthly average income of the respondents was 540 Nakfa where approximately 61.11% of the respondent’s income was between 400 and 500 Nakfa, and about 14.82% and 24.07% earned between 501 and 600 Nakfa, and between 601 and 800 Nakfa, respectively. In addition, the mean net income of the street vendors was 18 Nakfa per day and the average monthly expenditure and monthly mode of expenditure was 560 Nakfa where the lowest and the highest expenditure was 247 and 834 Nakfa per month. In Asmara city, majority of the street vendors sell their items on time and cover their daily expenses, for instance, approximately 74.3% of the respondents earned enough for their daily expenses while the rest earn less income to cover their daily outlays but they could solve such situation by borrowing money or forced to use their saved once.

Moreover, figure 3, reveals that the street vending business was the only source of income for approximately 89 % of the respondents to support their family and to cover their daily expenses, while the remaining about 11% were engaged in other activities to earn more income. According to this survey, all the street vendors in Asmara city were benefited from this informal business, where 90%, 94%, 95.5%, and 98.8% of respondents were able to improve their social status, unable to pay tax, helped their families, and source of employment and income, respectively. However, almost about 96% of the street vendors were not satisfied being a street vendor, and only 4% were contented.





**Figure 3.** Benefits of being street vendors by Respondents in percentage

### *Challenges of street vendors*

In Africa, the challenges of street vendors may vary from city to city, and the most common challenges are lack of skills, shortage of market place, and lack of infrastructure. In this study, since such activity is illegal in Eritrea, the street vendors have also several challenges such as lack of freedom in the time of vending and lack of vending sites. Accordingly, in Asmara city the vendors appear to move from place to place within the city to sell their items, and sometimes the commodities are seized by city authorities and cause big lose in their business, and they will be challenged to renew their business. The vendors also work with some psychological fears, where always looking for the city authorities while selling their items. Sometimes vending items might be stolen or forcedly taken by other people in the street and seldom, the daily income is interrupted by seasonal weather condition such as heavy rainfall in summer time, and wind storms and sunny days in winter season. Therefore, in this research, about 74% of respondents requested the city authorities that the street vending business to be considered as legal and to select a market place, and 26% of the street vendors suggested that to be provided with different services.

### *Assessment of revenue generated*

Table 4 shows the initial and the final steps of logistic regression analysis results for a list of variables, which is tested for their potential association with income and revenue acquired from street vending. The differences in earnings between age groups and sex groups are insignificant where the p-value is 0.511 and 0.46915, respectively. Family size also has an impact on the income of street vendors in Asmara city, where the earnings was significant with larger family size in the beginning and end steps as  $P=0.01201$  and  $0.00523$ , respectively. Interestingly enough, in Asmara city the earnings also varied with educational level and working hours, where uneducated street vendors are expected to have less-techniques to increase their income from street trade activities compared to those who are educated and skilled vendors. The earnings of street vendors increases very significantly with adequate educational level ( $P=0.00361$ ) and with increase working hours ( $P=0.00003$ ) in the initial step and the final step.

**Table 4.** The initial and final steps of logistic regression.

<b>The Initial Step of logistic Regression</b>		
<b>Variable</b>	<b>Coefficient</b>	<b>Probability</b>
Constant	-11.3712	0.71725
Sex	19.5088	0.46915
Marital Status	11.7471	0.71865
Household Size	22.2317	0.01201
Educational Level	30.1212	0.00361
Age	-1.21371	0.511
Working Hours	51.8853	0.00003
<b>Final Step of Logistic Regression</b>		
Constant	-10.0918	0.74146
Household Size	23.7387	0.00523
Educational Level	30.0873	0.00216
Working Hours	52.585	0

## Discussion

In this study, the street vendors are those who haven't regular jobs in the remunerative formal sector on an account of their low level of education and skills, which is consistent with previous studies (Bawono & Joyo, 2020; Ghebregabher et al., 2016; Pratiwi et al., 2018)(Bawono & Joyo, 2020; Ghebregabher et al., 2016; Pratiwi et al., 2018). However, in some countries skill or educational level is not a determinant factor or have not guarantee in the formal economy, which means there are no enough job opportunities for both skilled and unskilled people. For instance, according to Madziba, (2017) in Zimbabwe, and Kirumirah M. H. and Munishi, (2021) in Tanzania, street vending is informal economic activity for both educated and uneducated people, particularly in Tanzania even university or college graduates with certificate, diploma or degree are engaging in street vending activities. In addition, (Samsir et al., 2018) found that street vendors in Makassar city had low level of education and low business capital. However, skill and educational level do not have significant role in street vending activities, which is a simple business in economy, whatever profession they have, the amount of profit gain from such business is similar (Rahman, 2019). Street vendors also vary in their literacy also, in Asmara city, 72% of vendors have an ability to read and write while the remaining 28% are illiterate, which is study satisfactory. In contrast, the literacy rate of street vendors for some studies are very low, for instance, about 66.7% and 42% vendors were illiterate in Jigjiga and Khartoum, respectively.

There might be spatial and temporal gender variations in street vending business, where in some countries male vendors are dominant, and in other countries female vendors are foremost. In this research, most of the vendors are males, accounted 68% with low level of education and less capital that is corresponding with some previous studies (Madziba, 2017; Sekhani et al., 2019). Since street vending business is very simple to start traditionally women vendors were dominant in such activity, and usually men requires engaging in the formal business (Martínez & Short, 2022). For instance, Kirumirah and Munishi, (2021) found that the participation of women in street vending business was dominant than men vendors in Dares Salaam city, Tanzania. In addition, a study conducted by Amare et al., (2019), stated that women had largely engaged in street vending activities in Gonder, Addis Ababa and Jigjiga, Ethiopia. However, due to lack of formal employment and high rate of unemployment in major cities of Africa the number of men street vendors also increased in the recent time (Kirumirah and Munishi, 2021; Madziba, 2017).

In business activity, whether formal or informal has some benefits. Street vendors also work to get different benefits. In this study, street vendors have some basic profits from the informal and illegal economic activities. According to the study by Ghebregabher et al., (2016), informal street vending activities considered as source of employment, income generate, reduction poverty, particularly women vendors in the context of Eritrea. First of all, they consider it as source of employment and income with no tax payment, which is consistent with some previous studies (Singh, 2020), and this income may be used to solve some family problems, for instance they may buy food, cloths, and school items, and they may cover school fees and house rent (Martínez & Short, 2022). Street vendors in majority of African cities might be ensured food security (Giroux et al., 2021; Haysom, 2021). Overall, some vendors change their socio-economic status, which is corresponding with some studies (Giroux et al., 2021; Rahman, 2019; Verma et al., 2023). Although few street vendors work as hired under employers, most are independent; they do their business without pressure from others (Ojeda & Pino, 2019). However, street vendors also have some challenges.

The challenges of street vendors have spatial and temporal variations, depending on government restriction and freedom rights and lack of accessibilities and facilities. In this study, the street vendors in Asmara city are faced by lack of working spaces, confiscating goods by the local authority, lack of freedom and lack of business skills, which is consistent with some studies (Sekhani et al., 2019; Singh, 2020). In Eritrea, street vending activity is illegal, it is not officially allowed by government where their selling goods are taken by city securities and cause a big lose in their business. Similarly, street vending activities are illegal business in some countries (Kara, 2021; Sekhani et al., 2019), and sometimes they lend money or items from illegal lenders which very risk in their business (Martínez & Short, 2022). Street vendors are also challenged by seasonal weather condition such as continuous raining, skin burning of the sun, which is common in Eritrea, and other countries (Singh, 2020). Furthermore, according to Dhamodharan, (2019), reported that street vendors are challenged by lack of space and confiscation of their goods and commodities by the local authority, which are common problems in Asmara city. Although it is not included in this research, in some studies, vendors are exposed to sexual harassment (Sharma, 2021) and also stolen their items (Prasad, 2011), which is common in Asmara city. Adama, (2020), stressed challenges of street vendors and how difficult it is to live in Abuja, Nigeria for the poor people, where the renting system is very expensive.

## CONCLUSION

Informal economic activities such as street vending are common in major cities of Eritrea, which is considered illegal by the government. Street vending in Asmara city is also a daily economic activity. The reasons might be different why people are engaging in such unofficial business with a lot of risks, in this study, factors for street vendors may include lack of job opportunity, poor family status, and self-reliance, dissatisfaction with previous job, preferring self-employment, and lack of education and skill. In Asmara city, street vendors get some benefits such as source of employment, generating income with free tax, change their socio-economic status, and support their family, including covering school fee, house rent, buy food, clothes and other items. Accordingly, the income generated increased with higher educational level, good business skill and high number of working hours. However, they have also a lot of challenges, including lack of capital, business skill, market place, basic infrastructure, and sometimes conflict occurs with local securities, and selling

items might be taken by city authorities, and sometimes the selling items can be stolen. They have lack of freedom. The street vendors in Asmara city suggested that policy makers to provide an appropriate site and facilities. In Asmara, most of street vendors are self-employed but some are selling items for their employers or wholesalers.

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