

**LIVABILITY OF INFORMAL STREET VENDORS  
IN AIZAWL CITY**

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**LALNGHAKMAWIA THANGLUAH**

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RESOURCE MANAGEMENT**

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**LIVABILITY OF INFORMAL STREET VENDORS IN AIZAWL CITY**

**BY**

**LALNGHAKMAWIA THANGLUAH**

**DEPARTMENT OF GEOGRAPHY AND RESOURCE MANAGEMENT**

Under the Supervision of

**Dr. Benjamin L.Saitluanga**

Submitted

In partial fulfilment of the requirements of the Degree of Doctor of Philosophy in  
Geography and Resource Management of Mizoram University, Aizawl.



DEPARTMENT OF GEOGRAPHY AND RESOURCE MANAGEMENT  
MIZORAM UNIVERSITY, AIZAWL - 796004

Post Box No. 190  
Gram : MZU

Phone : 0389-2331604(O)  
: 0389-2331613(O)  
Mobile : 9856537375  
Email : bena.sailo@gmail.com

---

**CERTIFICATE**

This is to certify that Lalnghakmawia Thangluah, registered under MZU/Ph.D./1088 of 27.04.2018 is a research scholar working under my supervision on a thesis entitled 'Livability of Informal Street Vendors in Aizawl City'.

All through his research pursuance, I found Lalnghakmawia Thangluah very serious, hardworking and dedicated. He could challenge his tasks with quality of scholarship and was able to carry out his assignment successfully.

I further certified that the thesis in this form is the report of the research scholar's original work. Certain extracts and quotes are duly referred to in an appropriate manner.

I recommend the thesis for due evaluation and recommendation.

Dated:

(Dr. Benjamin L.Saitluanga)

Supervisor

**DEPARTMENT OF GEOGRAPHY & RESOURCE MANAGEMENT**

**MIZORAM UNIVERSITY, AIZAWL**

**February, 2022**

**DECLARATION**

I, Lalinghakmawia Thangluah, hereby declare that the subject matter of this thesis entitled '*Livability of Informal Street Vendors in Aizawl City*' is the record of the work done by me, and that the contents of this thesis did not form basis for the award of any previous degree to me or, to the best of my knowledge, to anybody else, and that the thesis has not been submitted by me for any research degree in any other University/Institute.

The thesis is being submitted to Mizoram University for the degree of Doctor of Philosophy in Geography.

(LANGHAKMAWIA THANGLUAH)

(Prof. P. RINAWMA)

(Dr. BENJAMIN L. SAITLUANGA)

Head

Supervisor

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## CHAPTER 1

### INTRODUCTION

#### 1.1 Introduction

Urbanisation in developing countries is mostly induced by rampant rural-urban migration (Lall *et al.*, 2006). A large chunk of rural-urban migrants ended up in the informal sector due to lack of employment in organised sector. The informal sector provides jobs to the urban poor to earn their livelihood as it suited the less educated rural-urban migrants to enter into the unorganised sector which does not require technical skills and high educational level. Moreover, many educated migrants are also unable to find jobs in cities due to lack of employment opportunities (Sengupta, 2013). Informal sector is the only means of livelihood for the urban poor and, rapid urbanisation due to poverty is one of the main reasons behind increasing growth of informal sector in urban areas.

Informal economy is formed by all types of informal employment comprising of small-scale economic activities which are unrecognized, unrecorded and unregulated (Chen, 2012). It includes workers like street vendors, domestic workers, casual workers in restaurants and hotels, janitors and security guards, casual workers in construction, agriculture and other sectors (Jhabvala, 2005). Hart (1970) stated that informal workers are rural-urban migrants who seek employment in the formal sector first but found themselves in informal sector due to lack of skills and experiences.

According to International Labour Organization (1993:6), informal activities are characterised by “(a) ease of entry; (b) reliance on indigenous resources; (c) family ownership of enterprises; (d) small scale of operation; (e) labour-intensive and adapted technology; (f) skilled acquired outside the formal school system; and (g) unregulated and competitive markets”. Cross (1999: 580) defined informal economic activity as “the production and exchange of legal goods and services that involves the lack of appropriate business permits, violation of zoning codes, failure to report tax liability, non-compliance with labour regulations governing contracts and work conditions and/or lack of legal guarantees in relations with suppliers and clients.” Thus, Informal

sector can be defined in terms of absence of administrative regulation. It is an economic activity in which individuals and a group of people or families are working without protection. In India, the terms ‘unorganized sector’ and ‘informal sectors’ are used interchangeably (NCEUS, 2007; 2008). As the informal sector is diversified in nature, different criteria were used to classify informal sectors but none of them was universally accepted. Many scholars have defined informal economy in different terms like bazaar economy (Geertz, 1978), shadow economy (Frey et al., 1982; Cassel & Cichy, 1986), underground economy (Simon & Witte, 1982; Houston, 1987, Feige, 1997), irregular economy (Ferman & Ferman, 1973), or subterranean economy (Gutmann, 1977). Papola (1981) argued that the term informal sector has an advantage comparing with the earlier dichotomous classification of activities like unorganized, traditional, unregulated and others as it is more inclusive and more flexible.

In the Global South, informal economy has significant contributions to the growth of economy by playing a major role in employment, production and income generation (Onwe, 2013). Contrary to the earlier view that maintained informality as temporary that would diminish soon, the sector is growing with increasing number of self-employment activities (Rakowski, 1994). In India, a study of street vendors in seven cities found that 30 per cent of street vendors in Mumbai and 50 per cent in Kolkata were earlier employed in formal sector (Bhowmik, 2000). The sector contributes for the growth of the economy and supports the livelihoods of the urban poor in developing countries by providing production, employment and income. (CUTS, 2009). In India, the informal sector has been growing rapidly in recent years (Agarwal *et al.*, 2013). Bhowmik (2005) has estimated the share of informal sector to total trade employment forms 96 per cent in India and, they constituted for more than 93 per cent of the total work force. The growth of informal sector has positive impacts on the socio-economic status of the urban poor. As a result, the informal sector is gradually recognised as a segment of the labour market in many countries, especially developing and transition countries and thus plays a major role in employment creation, production and income generation (Sassen, 1997). Thus, the informal sector is given or about to give legal status in many developing countries.

Street vending is one of the most visible informal economic activities (Recchi, 2021). It is an important source of livelihood for the urban poor in both developed and developing countries (Lyon and Snoxell, 2005). McGee and Yeung (1977:25) simply defined hawkers as “those people who offer goods or services for sale from public spaces, primarily streets and pavements.” This definition excluded truly itinerant hawkers who move from house to house selling goods or offering services. In India, the National Policy on Urban Street Vendors defined a street vendor as “a person who offers goods or services for sale to the public without having a permanent built-up structure but with a temporary static structure or mobile stall (or head load)” (NPUSV, 2004:12). The National Policy on Urban Street Vendors, 2009 classified vendors in India on the basis of their mobility and working duration as

- i) Those street vendors who used to carry out vending on a regular basis with a specific location or a permanent place.
- ii) Those street vendors who used to carry out vending not on a regular basis and without any specific location or a temporary basis.
- iii) The mobile street vendors or the vendor who used to walk around to sale.

Due to the poor working environment of street vendors, street vending is recognised as the one of the most ‘marginalised’ and ‘insecure’ economic activities (Tucker & Devlin, 2019). It is even ‘criminalised’ by authorities in many cities of India (Sales, 2018). Street vendors do not pay taxes and are treated as illegal traders by the authorities. Sometimes, they even faced confiscation and destruction of goods and paid heavy fines to recovery their goods. At the same time, street vending plays an important role for the growth of urban economy as it provides services and employment to unskilled, uneducated and poor people (Timalsina, 2011). In recognition of the important role of street vending, it is now legalised in many countries and the government of India has also passed ‘The Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act in 2014 to protect the livelihood rights and social security of urban street vendors in the country.



## **1.2 Significance of the study**

Cities throughout the world are trying to enhancing the livability and quality of life of their residents. Terms like ‘liveable city’, ‘inclusive city’ and ‘smart city’ are becoming the catch phrases of urban development projects. While countries, states and urban local governments are competing to enhance their cities more livable to induce economic growth, it is unfortunate that discussions on urban livability tended to obscure the “wider diversity of people who live and work in any given city” by excluding the “the lives of more socio-economically marginal members of urban populations” (Bunnell & Kathiravelu, 2016:203). Street vendors have been excluded in the development process for a long time. With the introduction of The Street Vendors Act, 2014 which has paved the way for proper regulation of street vending in India, it is crucial to understand the nature and characteristics of street vending which may vary from one place to another.

Enhancing the livability of marginalised workers like street vendors is crucial for more inclusive growth of cities. In the Sustainable Development Goals (SDGs), the United Nations has also included provisions to “ensure healthy lives and promote well-being for all at all ages” and to “make cities inclusive, safe, resilient, and sustainable” (United Nations, 2015: 24). One of the most important objectives of The Street Vendors Act, 2014 was to foster a congenial environment of the urban street vendors to obtain their livelihood activities without insecurity. Moreover, the act also includes the power of the state government to delegate provisions of welfare schemes for the street vendors to the local authorities. In this way, it tries to correct the historical injustice by protecting the livelihood rights of the street vendors in order to enhance their livability in vending spaces. Thus, it is important to understand the role of the state in enhancing the livability of street vendors.

Street vending is not only an economic activity but also a geographical phenomenon as it takes place in a geographic space. However, geographical studies on street vending have been rather scanty in comparison to other disciplines like anthropology, economics and sociology (Recchi, 2021). The socio-economic condition and livability of street vendors may vary from one place to another within a

particular city. Comparison of the socio-economic conditions of street vendors at multiple locations is essential to understand the problems of street vendors. Moreover, the level of quality of life of street vendors and their livability in different locations is hardly studied.

Aizawl is the largest city in Mizoram. Many people migrated to Aizawl from rural areas and neighbouring states in search of jobs and better living condition. Due to limited employment opportunities in the public sector, the less educated and unskilled labourers have to create their own employment in order to earn their daily needs. Street vending provides an easy avenue for the urban poor to eke out their living as it does not require education, skills and capital. It is therefore crucial to understand the socio-economic characteristics and livelihood practices of the street vendors as well as their livability and quality of life in the streets of Aizawl City. An in-depth examination of the livability and subjective quality of life of street vendors in Aizawl City will not only expand the scope of geographical studies on livability and quality of life but also contribute to better understanding of the geographies of street vending in the Global South.

### **1.3 Aims and objectives**

The main objectives of the study are

1. To examine the socio-demographic and livelihood characteristics of street vendors in Aizawl City.
2. To study the social and physical environment of street vendors in Aizawl City.
3. To examine the spatial pattern of livability of street vendors in vending markets of Aizawl City.
4. To analyse the factors determining quality of life of street vendors in Aizawl City.
5. To measure the composite index of subjective quality of life of street vendors in Aizawl City.
6. To suggest suitable measures to improve the livability and quality of life of street vendors in Aizawl City.

#### **1.4 Hypotheses**

1. There is no significant difference in income levels of street vendors in Aizawl City on the basis of gender, marital status, educational level, type of vendors, vending items and duration of vending.
2. There is no significant difference among locations of vending in terms of dimensions of livability including workplace environment, safety and security and, economic dimensions.
3. Pattern of livability of street vendors will vary from one vending market to another due to unequal management of vending sites.
4. The satisfaction level of street vendors towards their quality of life do not vary among the vending markets.
5. Municipal service and locational attributes are the most important factors that affect quality of life of street vendors in Aizawl City.

#### **1.5 The study area:**

Aizawl is the capital city of Mizoram. According to Census 2011, the city has a population of 293,416 that constitute 26.89 per cent of the entire Mizoram population. The sex ratio of the city is 1029 females per 1000 males which is relatively high in comparison to other Indian cities. The city is administered by the Aizawl Municipal Corporation (AMC) which consists of 19 Municipal Wards and 83 Local Councils.

In 1941, the population of Aizawl was 4780 only and massive rural-urban migration to Aizawl took place after the Independence of India. The large-scale migration took place with the end of strict migration control policy imposed during the British rule and, more importantly, during and after the *Rambuai* or the 20 years of armed struggle carried out by the Mizo National Front (MNF) to attain Independence during 1966-1986. During the colonial period, the British administration has levied a tax called Personal Residence Surcharge (PRS) to the residents of Aizawl (then Aijal) and restricted in-migration by earmarking a fixed number of permissible residents in all the localities of the city. Moreover, Aizawl,

being the capital of the state, was relatively safer during the *Rambuai* period from economic hardships as well as the atrocities of the warring parties. Another significant factor of rural-urban migration was the increase in job opportunities in the government sector with the attainment of Union territory in 1972 (Saitluanga, 2017).

With recent stagnation in the growth of government jobs and limited avenues in other employment sectors, urban poverty has risen considerably in Aizawl. It is estimated that 6.5 per cent of the city's urban households belong to Below Poverty Line (BPL) (Zothanmawia, 2017). Many of the poor households were absorbed in the informal sector. Street vending is one of the popular types of informal activity in Aizawl City. According to Socio-Economic and Caste Census 2011, the total number of street vendors in Aizawl City was 3609 which constituted 1.29 per cent of the city's population. The percentage composition of street vendors in Aizawl City is much higher than the average figures for Mizoram (0.92%) and India (0.65%) (SECC, 2011). Besides the permanent vendors, there are also non-resident, unaccounted street vendors most of which belongs to cultivators from neighbouring villages who came to the city to sell their agricultural products on Saturday market. Acknowledging the significant role of street vending in their urban economy, the state of Mizoram has notified the Mizoram Street Vendors (Protection of Livelihood and Regulation of Street Vending) Rules, 2017.

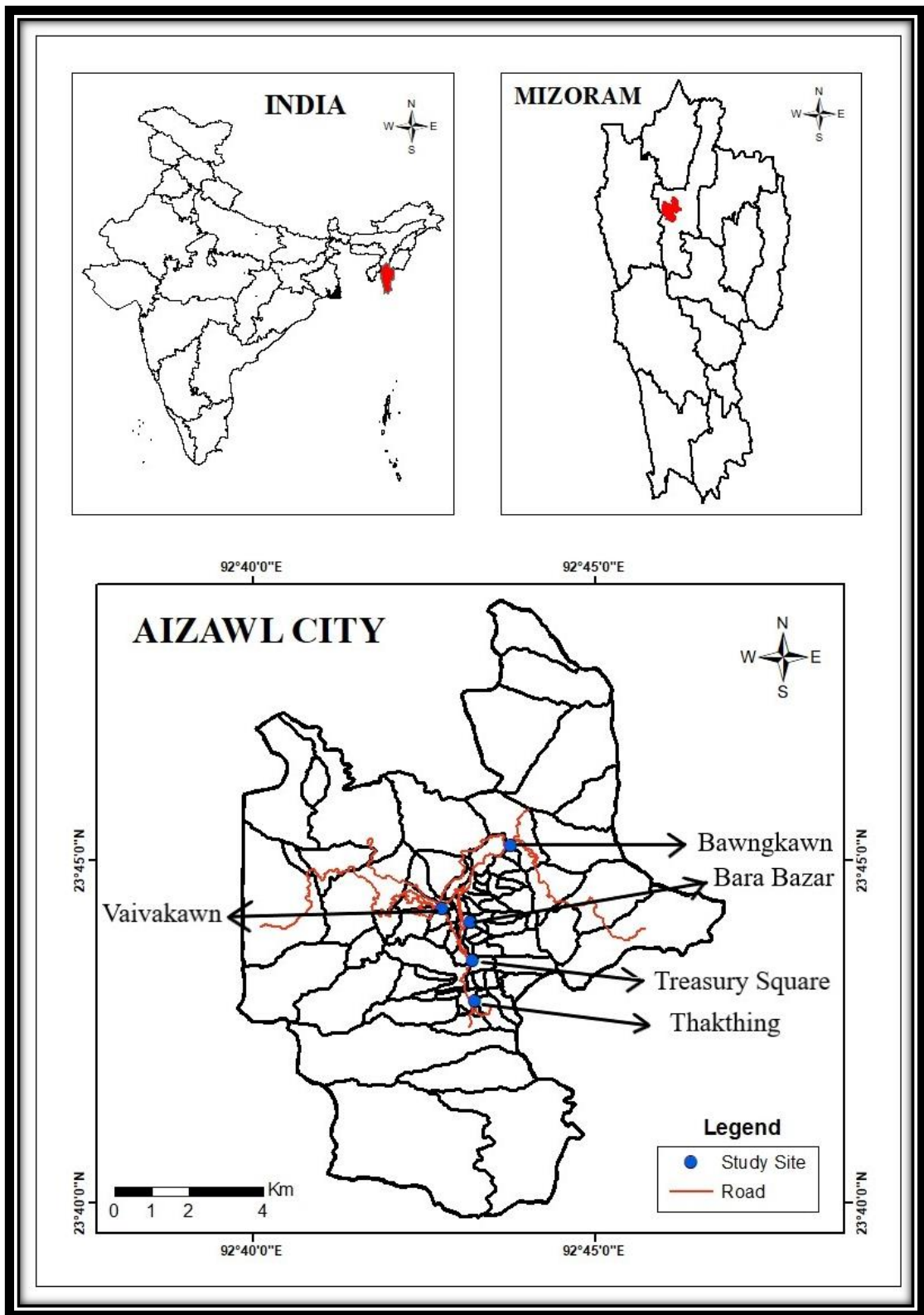


Figure 1.1 Location map of Aizawl City

## 1.6 Methodology

### 1.6.1 Selection of vending markets

Five major vending markets of Aizawl city viz. Bara Bazar, Bawngkawn, Treasury Square, Thakthing and Vaivakawn were selected for the present study (see Figure 1.1). The process of selection of markets was done mainly on the basis of their size and geographical location. The selected markets were located at various traffic intersections of the city. Bara Bazar is a central business district located at the central part of the city. Bawngkawn market is located in the northern part of the city. It is an important traffic junction which has grown into a variety market. Treasury Square is also found in the central part of the city located at a walking distance from Bara Bazar. It is not essentially a traditional *bazaar* type market but a specially designated street vending market especially designated street vending markets to serve the needs of the nearby government offices including Assembly secretariat, old secretariat and Aizawl District Commissioner's office. Thakthing market is an old market located in the southern part of the city while Vaivakawn market is the biggest market in the western side of Aizawl. There is no proper market in the eastern part of the city to be included in the study.

Table 1.1 Location details of the study sites

Sl. No	Name of Market	Latitude	Longitude	Altitude (in Meter)
1	Bawngkawn	23°45'12.7" N	92°43'43.6" E	1091
2	Bara Bazar	23°43'58.62"N	92°43'1.82"E	1063
3	Treasury Square	23°43'32.78"N	92°43'8.18"E	1055
4	Thakthing	23°42'51.55"N	92°43'10.84"E	1053
5	Vaivakawn	23°44'20.04"N	92°42'36.69"E	1007

Source: Google Earth

### 1.6.2 Sampling method and collection of data

A stratified random sampling method was adopted to select street vendors from each selected market. Each market was stratified into five sectors – eastern, western, central, northern and southern and, vendors were picked from each sector proportionately. Before taking actual survey, a pilot survey was conducted first to determine variables to be included in the study. Those variables which were found irrelevant and difficult to interpret were excluded from the schedule. Then, a final schedule was developed and face-to-face interviews were conducted to the selected respondents. The schedule consists of two parts - the first part contains objective information pertaining to the profile of the street vendors and their livability. The second part contains subjective questions related to quality of life of the street vendors. The first part provides data which could be available to analyse with any statistics. The second part, on the other hand contains subjective questions, the responses of which were measured on Likert-type scale. In these subjective questions, the respondents were asked to tick in any one of the five boxes to indicate their level of satisfaction with each item on a five-point Likert scale. The strong level of dissatisfaction or ‘Highly dissatisfied’ was shown by ‘1’ and ‘5’ represent a strong level of satisfaction or ‘Highly satisfied’. The interview was usually conducted at the respondent’s workplace. The response rate was 84 per cent only as a number of vendors have declined to give interview due to their busy schedule. Altogether, a total of 400 were interviewed through scheduled questionnaire.

Table 1.2 Sample site and sample size

Sl. No	Name of Market	Samples		
		Female	Male	Total
1	Bawngkawn	54	6	60
2	Bara Bazar	117	31	148
3	Treasury Square	54	6	60
4	Thakthing	74	6	80
5	Vaivakawn	40	12	52
<b>Total</b>		339	61	400

Source: Author’s field survey, 2019

### 1.6.3 Techniques of analysis

The main techniques employed in the study include Chi-square test, Vendors' Livability Index (VLI) and Principal Components Analysis (PCA). Graphical methods like Bar graph, Pie-chart and Radar chart are also employed in the analysis of the study. Choropleth maps were prepared.

#### 1) Chi-Square Test

Chi-square is a statistical method for assessing the goodness of fit between a set of observed and expected values. It is used to test the relationship between categorical variables. It is most appropriate to compare the incidence of a characteristic in one group to the incidence of a characteristic in another group. The Chi-square test is expressed as

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

where, O is the observed frequency and the E is expected frequency.

#### 2) Vendors' Livability Index (VLI)

Vendors' Livability Index (VVI) is a composite index used to measure the livability of street vendors. In this technique, the selected indicators of a particular dimensions were first normalize or standardize using the following equation:

$$Index_{shi} = \frac{S_h - S_{min}}{S_{max} - S_{min}}$$

Where  $S_h$  is an individual indicator of a particular dimension and  $S_{max}$  and  $S_{min}$  are maximum and minimum values of each indicator respectively.

After all the indicators were standardized, the standardized values were used to obtain the index of dimension by using the following equation:

$$M_h = \frac{\sum_{i=1}^n Index_{shi}}{n}$$

Where,  $M_h$  represents a particular dimension and  $Index_{shi}$  represents the indicators of the dimension and,  $n$  is the number of indicators in each dimension.



Once the values of dimensions of indicators are obtained for each market, they were averaged by using the following formula to obtain the livability index of each vending market.

$$VLI_l = \frac{\sum_{i=1}^2 w_{mi} M_{di}}{\sum_{i=1}^2 w_{mi}}$$

Where,  $VLI_l$  is the Vendors' Livability Index for a particular market and,  $\sum_{i=1}^2 w_{mi} M_{di}$  are the weighted averages of three dimensions.

### 3) Principal Component Analysis (PCA)

Principal Component Analysis (PCA) is employed in the study to extract important factors determining subjective quality of life of street vendors as well as to construct a composite index of quality of life. In PCA, an original set of variables is transformed into a smaller new set of orthogonal (uncorrelated) variable called principal components. The components are linear combinations of variables with weights in terms of their eigenvectors. These eigenvectors are derived from the correlation matrix of the variables. Thus, each principal component is a linear combination of  $Z$ 's obtained as

$$\begin{aligned} Z_1 &= \alpha_{11} \kappa_1 + \alpha_{12} \kappa_2 + \dots + \alpha_{1q} \kappa_q \\ Z_2 &= \alpha_{21} \kappa_1 + \alpha_{22} \kappa_2 + \dots + \alpha_{2q} \kappa_q \\ &\dots \\ Z_q &= \alpha_{q1} \kappa_1 + \alpha_{q2} \kappa_2 + \dots + \alpha_{2qq} \kappa_{qm} \end{aligned}$$

Where  $\kappa_1, \kappa_2, \dots, \kappa_q$  are the variables or indicators,  $q$  the number of variables and  $Z_i$  ( $i=1, \dots, q$ ) represents the principal components.  $a_{ij}$  are the component loadings which are chosen as weights applied to the variables  $x_j$  in the above equation so that the principal component  $Z_i$  satisfies the following conditions:

- i) they are uncorrelated (orthogonal);
- ii) The first component is accounting for the maximum possible proportion of the variance of the set of  $x_s$ , while the second principal component accounts for the maximum of the remaining variance, and

so on until the last of the principal components absorbs all the remaining variance not accounted for by the preceding components, as:-

$$a^2_{i1} + a^2_{i2} \dots + a^2_{iq} = 1$$

where  $i = 1, 2, \dots, q$ .

## Steps in PCA

### 1) Computation of correlation matrix:

PCA is based on correlation between measured variables. Extreme multicollinearity is not allowed to conduct PCA because this would create complications in determining the unique contribution of the variables to a factor (Field, 2000:444). Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is a statistic for comparing the magnitudes of the observed correlation coefficients (Hutcheson and Sofroniou, 1999). The KMO statistic is computed for every individual indicator, and their total is the KMO overall statistic. In PCA, to continue calculation the range of KMO value differs from 0 to 1 and overall should be 0.60 or higher (Kaiser and Rice, 1974). Multicollinearity can also be recognized through the determinant of the correlation matrix. If the determinant is larger than 0.00001, then there is no multicollinearity (Field, 2000).

$$KMO = \frac{\sum \sum_{i=j}^n r_{ij}^2}{\sum \sum_{i=j}^n r_{ij}^2 + s_{ij}^2}$$

Where,  $r_{ij}$  is the correlation coefficient of variable  $i$  and variable  $j$ , and  $s_{ij}$  is the partial correlation coefficient.

When the individual indicators in a correlation matrix are uncorrelated Barlett's Test of Sphericity is employed to test the null hypothesis i.e., that the correlation matrix is an identity matrix. The statistic is based on a chi-squared transformation of the determinant of the correlation matrix.

## **2) Extraction of factors**

The next step is to extract factors which are simply aggregates of correlated variables. Tabachnick and Fidell (2014) stated that to be labelled something as a factor should have as a minimum of 3 variables. According to Young and Pearce (2013), a factor with 2 variables is only weighed reliable when the variables are highly correlated with each another ( $r > 0.70$ ) but fairly uncorrelated with other variables.

## **3) Number of factors**

There are two conventional criteria for determining the number of initial unrotated factors to be extracted such as the eigenvalues criterion and the scree test criterion. The eigenvalue criterion, also called Kaiser's criterion is employed here. This criterion suggests retaining of all factors which are above the eigenvalue of 1 (Kaiser, 1970).

## **4) Rotation methods**

For better interpretation, factors are rotated as unrotated factors are ambiguous. The main purpose of rotation is to attain an ideal simple structure which attempts to have each variable load on as few factors as possible, but maximizes the number of high loadings on each variable (Rummel, 1970). Following (Ho, 2014), an orthogonal method of rotation called 'Varimax' is used in this study.

## **5) Weighting method**

PCA is widely used to weight variables in order to develop a composite index. The method is useful as it requires no *a priori* assumptions on the weights of the different dimensions. In this study, a novel method developed by Nicoletti *et al.*, (2000) has been applied as a weighting technique (see OCED, 2008; Greyling, 2013; Saitluanga, 2013). This method uses PCA to weight the index objectively based on the explained variance in the data and, all the factor loadings of the entire extracted components are used to weight a composite index. The advantage of this method is that higher proportion of the variance in the data set is explained (Greyling, 2013).

Nicoletti *et al.* (2000) discuss the approach as follows:

- (1) Arranging the individual indicators with the highest factors loadings into intermediate composite indicators.
- (2) The weight of each of the variables in the intermediate composite is derived by squaring the factor loadings of the variables and scaling it to unity sum within each intermediate composite index. The squared factor loadings represent the proportion of the total variance of the indicator which is explained by the component.
- (3) Once the intermediate composite indices have been constructed, they are aggregated by assigning a weight to each of them equal to the proportion of the explained variance of the component in the dataset. Then, weight score ( $W_i$ ) is obtained by multiplying the variable weight and weight of respective factor. The final weight obtained is rescaled again summed up to one to preserve comparability.
- (4) After the final weights were obtained, the rank of each vending market was obtained by as the product of normalized variable and the final weight.

## **1.7 Organisation of the thesis**

The present study is organised into seven chapters.

### **Chapter 1: Introduction**

The first chapter is an introduction of the study. It contains significance of the study, aims and objectives, hypotheses and methodology of the study.

### **Chapter 2: Review of literatures**

The second chapter comprises review of the previous literatures on informal economy and street vending. The first section is an introduction which is followed by a review of literatures on informal economy and approaches to the study of informal economy. The third section is review of literatures on street vending which is subdivided into studies at international, national and regional levels.

### **Chapter 3: Geographical background of the study area**

The third chapter deals with the physical and cultural aspects of the study area. The first section starts with an introduction with physical characteristics including Geology and topography, drainage, climate and natural hazard in Aizawl City. The second section describes population growth, ethnic and religious composition. The third section discusses socio-economic characteristics such as literacy rates and occupational characteristics. The fourth and fifth sections deal with land use and transportation respectively. The last section describes the selected vending markets in Aizawl City.

### **Chapter 4: Profile of street vendors in Aizawl City**

The fourth chapter presents the profile of the street vendors in Aizawl City. This chapter begins with a prelude of introduction. The first section describes socio-demographic characteristics including sex and age composition, marital status, ethnicity and religion, educational level, and place of origin. In this section a Chi-square tests were employed to examine the relationship between different variables including income and gender, income and marital status and others. The second section describes about the occupational characteristics of the street vendors in Aizawl City such as types of vendors, types of vending items, reasons to enter in vending, duration of vending, rent of vending place, holding of license, sources of capital on initial stage. A Chi-square tests were employed to find out the relationship between income and types of vendors, type of vending items and duration of vending. The third section deals with household characteristics of the street vendors which includes ownership and type of house and household amenities such as sources of water supply, type of cooking fuel used, sources of water, electricity and type of toilet at home.

### **Chapter 5: Livability of street vendors in Aizawl city**

The fifth chapter deals with the livability of the street vendors in their workplace. It starts with an introduction on the concept of livability. The second section discussed various indicators and dimensions taken to analyse vendors' livability index were discussed. In this section, Chi-square test is also employed to test

the significance of various variables on the basis on location. The third section is analysis of vendors' livability index.

### **Chapter 6: Quality of life of street vendors in Aizawl City**

The sixth chapter is a study on subjective quality of life (QoL) of street vendors in Aizawl City. The first section starts with an introduction on the concept and meaning of quality of life. The second section discussed the selected indicators of subjective quality of life. The third section is analysis of quality of life with the help of Principal Component Analysis (PCA). This includes determination of principal factors affecting subjective quality of life and measurement of composite index of quality of life.

### **Chapter 7: Summary and Conclusion**

The last chapter is summary of major findings and conclusion of the study.

## CHAPTER 2

### REVIEW OF LITERATURES

#### 2.1 Introduction

The origin of the term ‘informal economy’ is often attributed to the ‘bazaar economy’ of Clifford Geertz who published a book entitled “Agricultural involution: The processes of ecological change in Indonesia” in 1963. In this book, Geertz (1963) introduced ‘firm centred economy’ and ‘bazaar type of economy’ to differentiate what is now termed formal and informal sectors of economy. The term ‘informal sector’ was, however, used for the first time by Keith Hart in his study of urban Ghana in 1970. Hart (1970) identified that self-employment was an important feature of urban economy in Ghana and he used different terms like informal sector, unorganized sector, un-enumerated sector, self-employed, urban proletariat as alternative and interchangeable. Later, the concept of informal economy was refined by the International Labour Organization (ILO) in its study on unemployment problem in Kenya. The study stated that informal sector has prominent characteristics like ease of entry, reliance on indigenous resources, ownership, small scale operation, unregulated, intensive labour technology and lack of skills (ILO, 1972). Majority of the previous works on informal sector were carried out in the countries of Africa, Latin America and Asia due to predominance of informality in developing countries.

A large number of studies have focussed on the poor working environment of informal workers. Nelson (1979) stated that informal sector is characterised by small size of unit, labour intensive, easy to enter and unregulated service that provides low and unsteady income. He maintained that informal workers are low educated unemployed who were unable to get formal jobs. Due to poverty, they are unable to get business premises legally but enter the illegal business and they have to move in different places to survive in the business. Panda (1999) maintained that informal workers have no social security provision and they have to work for day and night for their survival.

Previous literatures on informal economy have indicated that majority of informal workers are rural-urban migrants. Mishra (1999) argued that rural poverty and exploitation in work environment have compelled rural workers to migrate in urban areas and many of them have landed in informal sector. Similarly, Bhowmik (2000) found that people from rural areas migrated from rural to cities in search of job due to poverty and unemployment. The earning is less but, they possess low education and skills which obstruct them for getting better paid employment in formal sector. Therefore, working in the informal sector is their only option and their means of employment, survival and livelihood as it does not require high educational qualification and skills, low capital and infrastructure. Nandal (2006) argued that workers migrated from their state to other states there were no opportunity. Sarala (2007) pointed out that increasing pressure on employment opportunities due to increasing rural-urban migration has forced many to work in informal sector Due to lack of education, training and experience urge them to work in low income occupation. Shrivastava (2013) stated that the urban poor and rural migrants found difficult to find employment in the unorganized sector. The economic condition of the urban poor helped the unorganized sector workers to expand and develop. The workers in unorganized sector labours provide important services to the city.

Women are found to be the dominant force of informal sector in many countries. In her study on India, Sujatha (2005) observed that Informal sectors are typically low paying jobs for long hours without any benefit and women labour usually faces sexually harassment. For women, there are many problems to work in informal sector. They have to work for long hours and on the other hand domestic work is still there. Deribie (2013) studied the status of women in informal sector in Ethiopia. The study found that there was significant difference between religion, education, ethnicity and type of activities. As they were not able to find jobs in formal sector, informal sector is their only hope for the women in Ethiopia. Geetha & Malarvizhi (2014) also studied the socio-economic condition of women. The study mentioned that large numbers of the employment opportunity is given by the informal sector especially for women. Due to lack of employment in formal sector, lack of skill and poverty, women are forced to work in informal sector. The study revealed that empowering of women



is needed to improve the socio-economic condition of the women working in informal sector. In his book review on *The Informal Economy: The Growing Challenge for Labour Administration*, Rawal (2006) highlighted gender discrimination based on wages or working hours and any other forms. Women who are working in informal sectors have to perform both domestic work and their informal works. Geetika and Anvita (2011) also studied women working in informal sector in India. They stated that the informal sector has been growing due to population explosion; skilled workers are unable to get job in formal sector, digital divide. Parveen (2009) stated that informal activities in agriculture, construction, and business are dominated by women unorganized informal sector contributed the majority shares in developing countries. People engaged in unorganized sector are still under developed especially in their livelihood, education and other aspects.

A number of studies have discussed the changing government policies and effect of globalization on informal sector. Deshingkar (2012) discussed about the contribution of informal sector in the growth of the nation and analysed the policies and laws about informal sector. The study found that the policies and laws were not so effective and the people were found it difficult to cooperate with it in the informal region. There is no policy where the workers can demand right or fixed salary per hours. Chen (2007) argued that globalization is a risk to informal sector especially to women in informal sector as they are slow to adapt with the changes and development. Globalization make the competition more tough for the street vendors especially fashion items vendors as company increased their production in a high rate and branded items can also be purchased at the same rate or cheaper. On the other hand, Milgram (2009) stated that the introduction of liberalization policy in Philippines boost the economic growth of the country. It has effects on the formal sector as well as informal sector. With the introduction of liberalization, the informal sector, especially women street vendors benefit most.

## **2.2 Approaches to the study of informal sector**

A number of approaches have been propounded by scholars to understand the nature of informal activities in urban areas. The most prominent approaches include dualist approach, structuralist approach, legalist approach and livelihood approach.

### **2.2.1 Dualist approach**

The dualist approach considers informal sector as the outcome of mismatch between employment opportunities provided by the formal sector and the inability of workers to meet the required skills. Hart (1973) stated that unskilled, illiterate and rural poor failed to find jobs in the formal sector but choose a particular place to sell their goods and gets income without having much profits. He argued that the severity of informality in developing countries was due to inflation, low wages and deficit in the number of labour requirement in the urban market. Hart (1970) and the ILO (1972) were also convinced that informal activities arise due to lack of job opportunities in formal sector. They maintained that the informal sector would disappear when the formal sector expanded to meet the needs of the workers (Hart, 1970; ILO, 1972).

### **2.2.2 Structuralist approach**

The structuralists argue that informality is the off-shoot of capitalism through the tendency of formal firms to maximise profits by reducing labour cost and increase in competitiveness (Chen, 2012). Firms and companies try to reduce input and labour expenditure to increase competition and profits which lead to reduction of labours. Thus, they maintain that informal sector is functionally dependent upon and subordinated to the formal sector. Unlike dualist perspective that sees the rise of informal sector as the result of the inability of the formal economy to absorb workers, the structuralists hold the view that informality is a stage in the transition from a traditional to a modern society (Chen, 2012). From Marxian perspective, Moser (1978) argued the relationship between formal and informal sector as essentially 'dependency'. Other prominent advocates of structuralist approach include Bromley (1979, Castells and Portes (1989).

### **2.2.3 Legalist or Neoliberal approach**

The legalist approach is propounded by De Soto (1989). According to this perspective, informal workers knowingly avoid registration and tax in order to bypass the costs, time and efforts of formal registration (De Soto, 1989). Maloney (2004) also maintained that informal entrepreneurs established their units illegally and consequently, produces black or underground economy in order to avoid tax and other fees. Legalists argued for dismantling of regulatory barriers by maintaining that informal activities are equally important to formal sector for the growth of national economy. They followed neo-liberal perspective and successfully argued for the support of small enterprises and informal activities by multi-national development agencies like the World Bank and the Inter-American Development Bank which have “implemented numerous initiatives to promote micro-entrepreneurship and micro-finance, streamline government regulations for the start-up of small and micro-enterprises, and formalize the informal sector” (Biles, 2009:223).

Table 2.1 Approaches to the study of informal economy

	<b>Dualistic</b>	<b>Structuralist</b>	<b>Legalist/ Neo-liberal</b>
<b>Proponents</b>	Hart (1970), ILO (1972,1973), Santos (1975), Sethuraman (1976, 1981), Tokman (1978)	Moser (1978), Bromley (1979), Gerry & Birkbeck (1981), Castells and Portes (1989)	De Soto (1989), Thomas (1992, 1995)
<b>Key Issues</b>	Poverty, rural-urban migration	Poverty, relations of production, formal-informal sector linkages, capitalist-non capitalist nexus	Marginality, rural-urban migration, legal-illegal interface
<b>Basic assumptions</b>	1. The informal sector is the result of mismatch between workers' skills and employment opportunities as well as the inability of industrial sector to provide formal job opportunities 2. The informal and the formal sectors are separate entities	1. The informal sector evolved as a result of capitalist development 2. The relationship between formal and informal sector is integrative	1. The informal sector is the result of discriminatory and hostile bureaucracy 2. The informal sector is equally important to formal economy

Source: After Rakosky, 1994; Biles, 2009; Chen, 2012

## 2.3 Literature review on street vendors

### 2.3.1 International studies

Lund (1998) studied women street vendors in Johannesburg and Durban – two important cities of South Africa. The study found that educational level of the street vendors in both of the cities was very low. In comparison to male vendors, more numbers of women street vendors have lower educational level. The study also mentioned lack of access to infrastructures like shelter, water and sanitation, and storage facilities were the main causes of most of the problems faced by street vendors in South Africa.

Alila and Mitullah (2000) examined street vendors in Kenya. They found that street vending is the main source of income and the only economic opportunities of the urban poor women. Street vendors operated without any shelter and storage facilities for their items. Furthermore, they were constantly harassed by the police and the municipal authorities. The study also recommended inclusion of street vendors in decision making through participatory partnership between street vendors' associations and the government.

Jimu (2004) studied the contribution of street vendors in the livelihood of the urban poor in Botswana. The study advocated that street vending could be used as the main sources of livelihood but not for transforming the socio-economic condition of the urban poor. The author argued that the street vendors should not be controlled and regulated from their creativity to attain prosperity by promoting large scale and private economic sectors.

In his study on street vendors in Bangkok, Thailand, Nirathon (2006) investigated the socio-economic condition of 744 street vendors. The study found that 88% of the vendors were migrants from outside Bangkok and the highest percentage of vendors came from the northeast the region of Thailand and they have lowest per capita income. The study also found that the percentage of male and female proportion was equal and women no longer dominate street vending in Bangkok. The majority of the street vendors did not receive proper education. More than half of the sampled respondents were between 30-50 years.

Kusakabe (2006) examined the government policies towards street vendors in the Southeast Asian countries of Thailand, Cambodia and Mongolia. The study found that street vending is an important occupation for the urban poor. However, the status of the street vendors was varied in different countries. In Mongolia, street vendor were mainly those who were excluded from informal activities; while in Thailand, it was an important activity for women and men but it is the only available employment for the poor women in Cambodia. The street vendors in these countries faced similar problems of lack of access to infrastructures in their workplaces.

Jaffe (2007) studied the role of social capital among street vendors and illegal private financiers in Caracas, Venezuela. The author examined the demand of finance credit by street vendors and the role of private financiers. The study found that the main source of capital of the street vendors were the private financiers but the interest of the credit was high which resulted in cycle of poverty among the street vendors.

Kamunyori (2007) investigated the relationship between street vendors and the government in Nairobi, Kenya. The study found that tension existed between the street vendors and the government due to the modernization of the city. The study mentioned that various informal sector activities should be provided subsistence livelihood to the people and consequently, contribute to the economy. The study also revealed that some trade unions and the national tax payers association and the street vendors association were engaged in forming policies to protect the interests of the stakeholders. The development of new policies shows a positive change in solving the problems of the street vendors.

Dimas (2008) studied Street vendors in Indonesia. The study mentioned that the main reason of entering into vending was due to economic. The study found that street vendors were the unending problems for the street and sidewalks users in most of Indonesian cities and they were the main reason of road traffic congestion as their waste spill over on the road ways and due to this the street vendors were usually face harassment and conviction from the authorities.

Ascendu and Agyei-Mensah (2008) examined geographical dimension of street vending activities in Accra, Ghana by interviewing street vendors and other stakeholders including consumers, shop owners and metropolitan authorities. The study found that there were no differences in socio-economic conditions of the street vendors in the study areas. The study also revealed that most of the street vendors were originated from different regions of the country. One of the significant findings of the study was that street vendors continuously changed their place of vending due to harassment, assault and confiscation of items by the authorities. The study suggested that the authorities should adopt consultation approach instead of confrontation method.

Ikechebelu *et al.* (2008) examined sexual abuse among juvenile female street hawkers in Anambra State, Nigeria. They interviewed 186 juvenile female hawkers and found out that 69.9% of the female hawkers had experiences sexual abuse while working in which more than 90% and 81.5% of the female juvenile hawker faced verbal abuses and indecorous touches.

Donovan (2008) studied the contestation of space between street vendors and public officials in Bogota, Columbia during 1988 to 2003. Using cohort panel analysis, he analyzed the working conditions and risk faced by the vendors both before and after shifting to Government built market. After relocation of vending area, the income levels of street vendors have declined but the working condition has improved. In other words, the informal system was changed into formal after relocation of vending area to government spaces, the income level became less while their working condition became better.

In his paper entitled “Resisting the Entrepreneurial City – Street vendors Struggle in Mexico City’s Historic Center”, Crossa (2009) focused on the government policy or strategy for reviving and decoration of city and interests of the vendors. She found that the government or the policy seeks a development in the quality of life of the local people; however, it eliminated the street vendors who depend on the public space and roadside for their livelihood.

Boakye (2009) studied the goals and survival strategies of 400 street vendors in various towns of Ghana. The study linked the economic hardships faced by the rural youth resulted in found it did not needs skill for entering in street vending and it was only occupation available for them. It also revealed that vending did not required large involvement of capital for starting the occupation. The street vendors were found to suffer different health related problems like fatigue, tiredness and sore throat.

Tanga (2009) examined the satisfaction level of street vendors of Lesotho by using questionnaires and focus group discussion. The study found that more than half of the street vendors perceived their quality of life has improved after joining street vending. They reported that they were satisfied with improvement in their children’s

educational status and household amenities. At the same time, some vendors have reported dissatisfaction with their current socio-economic status.

Muiruri (2010) examined socio-economic characteristics, challenges, and effects of regulatory frameworks on women street vendors in Nairobi, Kenya. She found that due to inappropriate legal framework, street trading has failed to obtain legal recognition. Street vendors faced lots of problems including constant harassment with respect to trading space which affected their business. The study suggested legalization of street vending to protect the livelihood of street vendors. The study also suggested that policies and regulations dealing with the street vendors should be based on the international laws of human rights.

Companion (2010) investigated the challenges that female street vendors face in the changing labour landscape of northern Mozambique. The author interviewed forty-two female and twenty three male food vendors in urban and peri-urban areas in northern Mozambique. The study indicated that female street food vendors employed gossip as a tool to reduce competition in contested vending areas. The study also found that the increasing entry of younger men into street vending have increased women's economic and social marginalization.

Adhikari (2011) maintained that street vending is important for alleviating urban poverty in developing countries from his case study in Kathmandu, Nepal. The study found that more than 40 per cent of the sampled vendors were illiterate. The study also found that highly educated respondents were found to have earned around double than illiterate respondents in this activity. He also mentioned that less educated and unskilled rural migrants found employment in the street as a simple way to generate income.

Ayeh *et al.* (2011) examined the use of public space by street vendors in Kumasi, Ghana. The study classified street vendors of Kumasi into sedentary and footloose vendors. The sedentary vendors sold goods like foodstuffs, fruits, vegetables, and other manufactured goods while footloose vendors sold newspaper, water, ice cream, clothing and other goods. The majority of street vendors of Kumasi



belonged to the age group of 18-45 years. Regarding the educational level, 53 per cent of the street vendors obtained education up to basic school only. With regards to location, 58 per cent of the vendors were located along the roads and sidewalks and the remaining vendors were found in open spaces like train station and market area. The main reason for choosing the location based on their study was the availability of the customers. In their study, as there was no reserved space for the street vendors, they located in the public spaces. As a result of this, there are some conflicts between the street vendors and the local authorities.

In his study on street vending in Gabarone city of Bostwana, Joseph (2011) found that almost half of the street vendors (49.4%) have migrated to street vending from other works had involved or engaged in others works while 23.6 per cent were unemployed before working as street vendors. Among the total street vendors, 50.6 per cent of the street vendors selected street vending as it was the main accessible substitute while 41.3 per cent of the vendors reported that they choose street vending as it was exceptionally simple to get into vending without any savings.

Roever (2011) examined the socio-economic and livelihood profiles of street vendors in Asia, Africa and Latin America. The study showed that the working place of the street vendors were characterised by improper infrastructure as there was no proper toilet, no drainage and no waste disposal. Government authorities coercively eliminated street vendors from the street in policy matters. At the same time, the study reported that a few numbers of street vendors got protection from the state.

Muyanja *et al.* (2011) investigated street vendors in Kampala, Jinja and Masaka in Uganda. The study revealed that 87 per cent of the street vendors were female with low level of education. It was also found that the vending structures and sanitation facilities were poor and undeveloped. The vendors wanted to improve their vending structure and used of more hygienic amenities.

Walsh (2012) examined the condition of street vendors in the aftermath of financial crisis of 1997 in Bangkok. He found that the traditional vendors who sell cook food were more attached to specific spaces and more active in fighting their right

to use public spaces with the government officials and municipal authorities. On the other hand, the new generation vendors were more versatile to their vending location as well as in their business system to avoid confrontation with government officials.

Roever (2014) studied street vendors in five cities in developing countries viz. Accra in Ghana, Ahmedabad in India, Durban in South Africa, Lima in Peru and Nakuru in Kenya. The author interviewed 502 street vendors in these cities. Street vendors were sampled along two variables in each city, sex and location, where location was dichotomized into centre-city and non-central areas. The study found that licensing and regulatory restrictions affect working conditions for street vendors. Vendors faced different problems like confiscation of vending items, demand for bribes, physical and verbal harassments from the police. Another significant problem was poor access to urban infrastructure including water, electricity, toilets, shelter and storage. Due to competition among the street vendors, the prices become more expensive and higher and cannot be fixed and controlled.

Husain *et al.* (2015) studied socio-economic aspects of street vendors in Dhaka. They revealed that there are 86% of tea vendors were full time vendors. While 84.09% of the vegetable vendors are also a full time worker and only 15.91% are working as a part time and also among fruit vendor, 86.11% and 1389% are the full time and part time workers respectively. The average working hours of tea, vegetable and fruit vendors are 12-16 hours and their income is normally 300-800 per day.

Widjajanti (2016) studied the utilization of space by street vendors in Tembalang, Semarang in Indonesia and he found out that Street vendor utilize space based on the location, accessibility, main activity, and space comfort. The study also found that the main activity of the study area was education and there were also residential activities which support activities such as trades, services and office. These various activities help the street vendors to start their business in the study area. Most of the street vendors were comfortable as the space is large enough and they were safe from accident especially from vehicles.

Handayani et al. (2017) studied the street vendors in Surabaya, Indonesia. They interviewed 140 street vendors and out of which 44% of total street vendors are 25-35 age group followed by 36-45 age group. Another status of the street vendors is 24.60% rented a house, 9.53% rented a room and 65.87% have a simple house. The study found that street vending is the main livelihood and most of the street vendors were a productive age. The education level is low. The study also found that the street vendors were trading for a long hour. Some vendors work from morning to after noon or day to night but the profit was less. Although, the earning is less but they also have to pay tax and bribe the official.

Widjajanti and Wahyono (2018) studied the livability of street vendors in Simpang Lima, Semarang in Indonesia. They found that street vendors occupied the public space as it is convenient and easy to access by the customers or the people. Among the street vendors, 52.2 per cent have no permanent barrier while 47 per cent of the street vendors have a permanent barrier. The opening and closing time of the street vendors are different depending upon the necessity of the community and the type of goods sold. The street vendors choose the public space due to comfortability. During day time shade of a tree is comfortable for the street vendors as well as customers and during night time, the light is quite bright for the vending purpose.

Kiaka *et al.* (2021) argued that street vending remains a structural feature of cities contrary to what is projected in urban planning models. They maintained that supermarkets and shopping malls cannot fully replace the street as a provider of food security. In their case study on Harare, Zimbabwe and Kisumu, Kenya, they observed that the struggle for public space has intensified during and after lockdowns imposed due to Covid-19 pandemic. Street vendors were harassed by the municipal authorities and the police which is approved by the government and bribes were charge randomly to the street vendors.

Brata (2010) studied street vendors in Indonesia. The study focussed on vulnerability index of street vendor in Java from the economic crisis in 1997 and 1998 which had effect on the trend of economic in Indonesia. The study covered 122 street vendors consisting of food seller, non-food seller, and services providers. The study

used Darbir-Alai's vulnerability index developed based on a method applied on street vendors in Delhi, India. The study found that there were less than 2 percent of street vendors that experience high vulnerability in their vending activity while there is no vendor experience acutely vulnerable. The study also found that food vendors are more vulnerable than non-food vendor or street vendors who provide services.

Esayas and Mulugeta (2020) studied on the vulnerability of street vendors in Dire Dawa city, Ethiopia. They examined street vendors' activities and livelihoods, mainly their socio-spatial position making them vulnerable. The study employed Darbir-Alai's (2004) and Brata's (2010) method of analysis with a little modification. Their analysis has revealed that street vendors of Dire Dawa are highly vulnerable. Among the street vendors, 32 per cent of the street vendors were strongly vulnerable, 24 per cent were vulnerable, 22 per cent were extremely vulnerable and 4 per cent were acutely vulnerable. The study suggested that street vendors should be provided on-site and off-site vending site. The study found that in Dire Dawa city, street vendors incline to gather on the road junctions to take the advantage of passing pedestrians. The study suggested that a regulation and provision for street vendors should be carved by the authorities

Lauer mann (2013) argued that street vending is one of the most visible significant livelihood strategies in the Global South. In his case study on Qat market which is an open air market of psychotropic drug in Sana'a, Yemen, he observed that the micro-politics over allocation and use of space regulates inter-class interactions between vendors, builds a sometimes-antagonistic relationship between vendors and city government.

Martinez *et al.* (2017) studied street vendors in Cali, Columbia. The study collected data regarding issues of street vending activity. The study found that the street vendors were less educated and work long hours but they were reportedly had high income and had a high level of satisfaction on their work. Majority of the street vendors used vending as their main source of income. The studied found that the income of the street vendors was higher than the average income of the Cali's formal economy and men also earn more than women. The study also revealed that informal

economy in Cali is not isolated but it has an important connection with formal sector and government sector. There was a good circulation of money between formal and informal economy as vendors procured goods and services from formal economy. The study mentioned that vendors have spatial freedom in dealing with relocation. Many street vendors also enjoy free health benefits and subsidy from the state to the informal sector.

Martinez *et al.* (2018) studied street vendors in Cali, Columbia. The study compared between Downtown and Santa Helena. The study found that Downtown have better working condition but in Santa Helena, due to civil war a large number of people are marginalized in the urban economy due to difficult working condition and irregular income. The study also found that the street vendors from Downtown had higher educational levels than vendors from Santa Helena. The study mentioned that Santa Helena market is the entry sector and migrant people used street as source of income but at a cost of violence, crime and difficult work conditions such as schedule, safety and poor sanitary conditions. Downtown had better working condition comparing with Santa Helena due to more established sector. Downtown is more prosperous all week long and all day whereas Santa Helena is also prosperous, but it depends of the day and the hour. Downtown had more advantages than Santa Helena due to availability of banks, government institutions, commerce with a population that have low income while Santa Helena is more homogenous in terms of low income habitants and workers.

Ojeda and Pino (2019) investigated the spatiality of appropriation of public space by street vendors in the city of Valparaíso, Chile. Street vendors in Valparaiso consisted of those who have worked from a very young age to pursue their family traditions, those who lost their job in formal sector and those who prefer street trading to low paid formal jobs. The authors observed that the socio-spatial disputes over the use of public space in the city were mainly associated with the size and form of vending stalls and the location of vending units. The study highlighted the necessity of creating an ordering plan for street vending which provides specific locations for each and every street vendor.

Turner and Schoenberger (2011) argued from their studies on Hanoi that in a socialist state like Vietnam, the survival strategy of street vendors in no-vending streets of the city is highly individual effort to evade the municipal authorities from eviction and banishment as there was no formal association or networks among the vendors. The vendors consisted of long-term city residents operating fixed stalls and migrant itinerant traders who the earlier considered and viewed as 'outsiders'. They pointed out that the itinerant vendors have shifted their locations frequently to evade the police while fixed-stall operators performed different tactics to avoid or convince the police too. They argued that the vendors' way of pursuing well-being in Hanoi is based on their understanding of the understandings of the local political, social, economic and historical contexts.

Austin (1994) studied the role and the treatment of Black street vendor in Pennsylvania, she found that in order to survive economically, the black vendors have to break the law. She also states that legislators and municipal authorities of different states try to solve their problems by implementing rules and regulation but these efforts have been unfavourable to vendors.

Drummond (2000) examined the practices and use public and private space in Vietnam. She stated that using of public spaces for commercial activities is flourishing in the cities and the roads or path of a public spaces are used by the vendor for operating a small business during 1990s has been deteriorating but due to economic downfall and Western influence, construction of private leisure facilities. Although, these are limited, however, the most commonly used spaces for leisure is still in public space such as street and sidewalks.

Brown (2006) studied the uses of urban public space and she mentioned the concept and importance of public space for the poor. She opined that urban public space is a common property resource and a dynamic resource which can change its boundary over a time due to social negotiation.

Estrada (2011) studied on street vendors of immigrant Latino in Los Angeles. She observed that street vendors in Los Angeles were mainly Latino immigrants to

support their living through vending. However, the authorities and members of the community think that vending is low and illegal and due to these the people who involve in vending have been faced harassment, taunt and also charged by the police and authorities. The street vendors have to encounter their experiences of shame, stigma and humiliation with street vending.

### **2.3.2 National studies**

Chakravarty and Canet (1996) found out that among the street vendors in Kolkata, 21% were illiterate and most of them were commuter who travels a distance of 2-3 km in a day by train along with their goods. The average income of street vendors ranges between Rs 600-1600 per month. The income of a female is lower than male. The study also revealed that 33% of the interviewed consumers purchased foods from street vendors every day.

Tiwari (2000) opined that street vendors are normally the urban poor people and they played an important role in the urban economy by selling the finish products which are produced by the small scale industries and help to flourish small scale industries. They help in sustaining the urban economy as it generate employment and services and income to other.

Anjaria (2006) examined the use of public space by street vendors in Mumbai and found that rural-urban poorer migrants were forced to vending due to these causes. He also mention that street vendors are used to refer as annoy and create problems and cause congestion in the city by the activists, officials and journalists and even they were removed from the public spaces.

Harpreet and Sanpreet (2007) studied quality of work life of street vendors of Khanna, Punjab. They found that only 13.33% of the street vendor have graduate degree and above. Among the vendors, 86.66% earned around Rs 500 in a day and only one person earned above Rs 1000 in a day. They also found that there were 14.66% who were free access of their vending place while there were 53.33% of the street vendors who do not have a fix place among the respondents.

Bhowmik (2007) maintained that informal economy helps in the growth of the economy of the country. According to him, the needs of the urban population are fulfilled by the contribution of the street vendors. He claimed that the contribution of street vendors in Mumbai was greater than Hindustan Levers Limited - one of the biggest corporations in Mumbai and, 50% of the Gross Domestic Product in New Delhi was contributed by the street vendors.

Dabir-Alai (2004) studied on street vendors in Delhi, India. He introduced a new composite index to predict the rate of vulnerability of the street vendors. In this index, there were two groups of vulnerability such as elements which cannot be controlled by the street vendors such as dependents and another is the element which can be controlled by the street vendors like working hours. In his study, Dabir-Alai found that bullying is the most vulnerability elements of vendors and it constitutes for about 73% of the respondents.

Jhabvala (2000) maintained that street vending is the source of employment and livelihood for poorer rural-migrant population. With low capital, they create their employment from street vending and provide goods and services for the urban poor. In this way, he argued that street vending helps the economic system to reduce unemployment and poverty in the country by giving employment to the urban poor. From the research study, the lower-income groups have spent a high level of their income in buying or purchasing their goods from the street vendors as their goods are cheap and affordable.

Saha (2008) studied the working life of street vendors in Mumbai and opined that street vendors were the most deprived section among the self-employed workers. He described the working life of street vendors that they have to pay bribes in order to get vending space and more working time in the market area. The study found that the street vendors have to borrow money from the money lenders for their economic activities as well as their social security like health care and their children education, which usually let them to enter in a debt trap situation. Further, the study found that the working hours of the street vendors have increased to sustain their life in every year. They usually faced harassment from the local authorities as well and they did not



have safety and security at their working place which resulted in decline of their working environment.

Sundaram (2008) examined the National Policy for Street Vendors and argued that legalisation of street vending is required to provide vending space to the street vendors and to eliminate all forms of harassment to enhance the quality of life of street vendors. He mentioned that urban areas in India have relatively large number of street vendors comparing with rural areas due to better and easy economic condition in urban areas but these vendors do not have any substitute methods for living as vending is the only sources of income.

Dinda (2010) studied 28 towns of Bihar and reported that majority of the street vendors have attained up to primary level of education only. Majority of the street vendors belong to 21-50 years. Other Backward Classes (OBC) category both from Hindu and Muslim communities constituted for 66 per cent and 46.35 per cent of vendors were registered in Below Poverty Line (BPL). The average daily income of street vendors was Rs 50-100. Most of the street vendors were lack of entrepreneurial skills.

Ray and Mishra (2011) examined the socio-economic profile of street vendors in Surat, Gujarat. They found that the profile of vendors in Surat was highly comparable to those in other Indian. The demographic profile of vendors revealed that more than half of the street vendors were migrants from outside Surat. Most of the vendors belonged to the age group of 33-59 years and, most of them came from nuclear family. Majority of street vendors were either illiterate or educated at primary level with low skill and poor economic condition. The study recommended that since street vending provides livelihood to the urban poor, the state government should allocate hawking space as suggested in the national policy.

Williams and Gurtoo (2012) examined the competing theories of street vending namely modernisation, structuralist, neo-liberal and post-modern theories through their study on street vendors in Bangalore, India. They interviewed 871 street entrepreneurs and found that no theory is sufficed to explain the reason of street

vending. The finding revealed that 56 per cent of the vendors explained their participation due to poor financial condition, 17 per cent attributed social or lifestyle reasons, 15 per cent inherited from family while the remaining 12 per cent chose street entrepreneurship due to necessity driven.

Karthikeyan and Mangaleswaran (2013) conducted a study on quality of life of street vendors in Tiruchirappalli, Tamil Nadu. The sample size of the study was 56 street vendors. They measured four dimensions of quality of life, namely, physical health, psychological health, social relations and environment factors. The result indicated that 55.4 per cent of the respondents have low level of physical health and 51.8 per cent have low psychological health. The social relation dimension showed that 73.2 per cent of the respondents have developed low social relationship with other people while 55.4 per cent have reported low level of their working environment.

Bhatt and Nengroo (2013) examined street vending in Srinagar, Jammu & Kashmir by collecting information from 200 street vendors in four main markets of Srinagar City. The study found that the street vendors sold variety of goods including fruits and vegetables, clothing, toys, books, household amenities and newspaper. The study also revealed that most of the street vendors were in the age group of 25-45 years old. They were generally illiterate and choose street vending due to different reasons. The working hours were generally long, mostly 7-10 hours in a day and without any holiday. However, the street vendors were satisfied in their occupation as they found means of livelihood to satisfy their family needs.

Panwar and Garg (2015) studied street vendors in Sonipat city and found that male vendors dominated the street of Sonipat. Majority of the street vendors were less than 40 years of age. Uneducated vendors comprised of 39 per cent and only 22 per cent studied high school and above. The study also found that most of the street vendors were the residents of slums. Vendors reported that their business has suffered due to increasing numbers of malls and shops. They have also reported that urban infrastructure development projects have caused frequent relocation of vending space. Furthermore, the street vendors reported that they were in constant fear of eviction from their vending place.

McKay *et al.* (2016) studied the socio-economic, livelihood and hygienic practices of street vendors in Patna, India. They found that the most of the street vendors stayed in a renting house. Most of the street vendors were sole earners of their families. Many of them felt insecure due to harassment from the Municipal authorities or police in the form of physical and verbal techniques. Sometimes, they even faced destruction or confiscation of their cart and vending items and they were compelled to pay bribe or fines to retrieve their belongings. They were working approximately 11 hours and saved around Rs. 3000 per month. Most of the street vendors were forced to borrow money from the money lenders when they ran out of money.

Jaishankar and Sujatha (2016) studied problems faced by the street vendors in Tiruchirappalli City. The study showed that street vendors are normally people who migrated from rural to urban areas and they do not have regular jobs due to low educational level and skill. They distribute a large variety of products of daily consumption like fruits, vegetables, readymade garments, shoes, household gadgets, toys, stationery, newspapers, and magazines and so on. The study revealed that around half of the respondents faced problems like low capital, social security, marketing competition. The study also found that 50 per cent of the respondent faced the problems of bribes of the authority and 41.1 per cent faced the problem of price fluctuation

Nerurkar and Vyas (2019) studied quality of life of tea vendors in Mumbai. The study revealed that 85% of the respondents settled in their work places. The respondents most desire in their working place was to decrease their workload and to change their platform based on their height. The study also reveals that 90% were satisfied with their work environment and 51% were also satisfied with the quality of their life. The finding also revealed that in the health domain, low back and calf pains along with gastrointestinal complaints were found to be predominant.

Doibale *et al.* (2019) studied the socio-demographic profile of street vendors and causes of street vending in Aurangabad, Maharashtra. They found that street vending was dominated by male from the age group of 30-39 years. Majority of the street vendors belonged to Muslim communities. Regarding the educational

qualification of the street vendors, 28.8 per cent of the street vendors were illiterate and only 4 per cent of the street vendors completed graduate degree. The study also reported the main reasons of entering into street vending include ineligibility to get formal job, no other source of income as well as to avoid government tax. Among the total sampled respondents, 36 per cent were non-sheltered street vendors, 41.6 per cent were temporary sheltered vendors while 22.4 per cent of the street vendors were sheltered vendors.

### **2.3.3 Regional studies**

Lyngskor (2006) studied street vendors in Shillong, Meghalaya and found that majority of vendors were migrants workers who originated from outside the state. The author maintained that street vendors in Shillong were mainly those poor migrants who were unable to get regular job in their home states , street vending is the only job which can be easily get and the ways to live their life with less capital.

Bhuyan and Mahapatra (2012) examined the occupational patterns of in-migrant women and non-migrant women workers in urban informal sector in the city of Guwahati, Assam. The analysis of the information obtained from 500 respondents showed that more than 90 per cent of the respondents have migrated from neighbouring and distant areas and most of them have migrated recently. Majority of the migrant women workers have migrated to the city in search of better work opportunities. Other reported reasons of migration include marriage, poverty, education, and natural calamity. The study found that the women from low socio-economic status were more prone to enter in informal sector and it was discovered that the women were those who are already in the informal sector have found that their socio-economic status has been increased.

Mahadevia *et al.* (2016) studied street vendors in Guwahati and observed intense competition and struggle among street vendors for vending place. The state government rules and regulation did not specify allocation of vending space thereby causing conflict among them. Vendors occupied footpath illegally but paid tax to

conduct their business and have been facing lots of problems in occupying space in the market.

Dutta and Das (2020) studied street vending by interviewing 101 vendors in Silchar, Assam. The study revealed that male vendors dominated street vending in Silchar. The average earning of vendors was Rs. 6000 per month only. The study also revealed that among the street vendors only 11 per cent were entitled to enjoy social security schemes and about 11 per cent were able to get loans from banks for the improvement of their business.

Zingkhai and Annand (2019) investigated the socio-economic condition of women food vendors in Manipur. The study found that women food vendors started their own business to earn their livelihood. Many of the vendors choose street vending due to lack of opportunities, lack of space and basic facilities and others to start their business formally. The study suggested that the government and municipality should provide better facilities and training to the women street vendors to run their business.

Bhowmik and Saha (2012) studied street vending in Imphal, Manipur. The study found that street vending in Imphal was dominated by female vendors with an age-group of 35-54 years. The study found that income data shows that a majority of the vendors earned less than Rs. 100 a day. Most of the vendors were stationary vendors selling perishable goods such as vegetables, fish and fruits. Only 5.5 per cent were mobile vendors. Among the street vendors, 46 per cent were illiterate and 23 per cent of the respondents were High school dropouts. The study also found that bribery and eviction were prevalent among the street vendors.

Dey (2021) studied women street vendors in Kokrajhar town in Assam. The study found that the majority age group of the respondents was 41-50 years. Most of the street vendors were High school dropouts and 18 per cent of the total respondents were illiterate. The study also found that majority of the street vendors are married who were housewives before becoming entrepreneurs. The study also revealed that the average income of more than half of the respondents was Rs. 10001- Rs 15000 per month.

Lalremruati (2013) conducted a study on vegetables vendors in Aizawl city. She found that the majority of the street vendors were female. Among the respondents, 50 per cent have attended up to primary school only while 9 per cent have attended college. Regarding the place of vending, more than half of the vegetable vendors were itinerant vendors who did not have any fixed place to sell their vegetables. She suggested that the government should recognize and support the street vendors keeping in mind the crucial role played by street vending as a source of livelihood for the urban poor. Moreover, the study found the need of provision of transportation and larger vending space as well as toilets and cold storage.

Lalchhanhimi (2016) studied women vegetable vendors in Aizawl city. She found that most of the vegetable vendors were older women who studied below high school. The monthly income of the street vendors was quite low to support their families. The women vegetable street vendors paid rent or fee to the urban local body by paying Rs 10 per day. Most of the vegetables were imported from outside Mizoram.

Saitluanga *et al.* (2019) studied the socio-economic condition of women vegetable street vendors in two border towns of Northeast India – Moreh in Manipur and Tlabung in Mizoram. The study found that 50 per cent of the vending items in Moreh were imported from Myanmar but only 7 per cent of the vending items in Tlabung were imported from Bangladesh. The educational profile of vendors showed that none of the vendors have completed High school and majority of them were Middle school dropouts. The study also reported that more than 75 per cent in Moreh and 85 per cent in Tlabung Street Vendors in Tlabung have taken up street vending to earn a living for the family.

Renthlei (2019) maintained that street vending has increasingly popular in Aizawl city with limited employment opportunities in formal sector. From her study on the socio-economic status of 130 street vendors in Aizawl City, the author reported that most of the street vendors lacked proper water and sanitation infrastructure within their vending premises. Majority of the vegetable vendors were middleman or agent who bought vegetables from others while only 7 per cent were actual vegetable growers.

Malsawmtluanga and Lalnunthara (2020) conducted a study to analyse financial inclusion of women vegetable vendors in Lunglei, Mizoram. The study found that most of the street vendors in Lunglei have insufficient income and only one-fifth of the street vendors saved money into the bank. The study also pointed out that none of the respondents have subscribed either life insurance or health insurance due to their ignorance towards the importance of life insurances.

## **CHAPTER 3**

### **GEOGRAPHICAL BACKGROUND OF THE STUDY AREA**

#### **3.1 Introduction**

Aizawl is the capital of one of the least populated states of India - Mizoram. Geographically, the city lies between 23°39'52"-23°48'43"N latitudes and 92°39'49"-92°46'39"E longitude in the northern part of Mizoram. It is the administrative, political, commercial, and educational centre. The British Indian Company founded and occupied Aizawl to become their administrative headquarters in the year 1890. 'Fort Aijal' was constructed to accommodate 200 military personnel. A few barracks and bungalows were constructed. The outpost was gradually surrounded by settlements of local migrants. In 1901 census, the population of Aizawl was 325 only which has increased to a little less than 7000 in 1951.

The total geographical area of Aizawl city is 97 sq. km only. According to Census 2011, the population of Aizawl city was 293,416. It comprises 26.89 per cent of the entire population of Mizoram. The density of the population is 1708 persons per sq. km (ADA, 2012). The city is administered by the Aizawl Municipal Corporation (AMC) under which the city is divided into 19 municipal wards. Each municipal ward is formed by a group Local Council (LC) - the lowest tier of urban local body. Presently, there are 82 Local Councils (LC) within the Aizawl municipal area.

#### **3.2. Physical characteristics**

##### **3.2.1 Geology and topography**

Mizoram falls under the Assam-Arakan and Assam shelf of sedimentary basin complex. Mizoram shares a geosynclinal shelf with the Naga Schuppen belt and the Cachar, Tripura and Manipur fold belts. The entire Aizawl City falls under the arenaceous and argillaceous rocks of Palaeogene and Neogene ages which consist mainly of sandstone, silty-sandstone, siltstone, shale, mudstone including pockets of calcareous and intraformational conglomerates (Lawmkima, 2010).



The topographic features of Aizawl are characterized by rolling hills and rugged landform. Due to its undulating landforms, Aizawl City is prone to natural hazard such as landslide. The underlying faults and structural patterns have resulted in the formation of deep valleys, ravines and spurs which are highly susceptible to erosion and landslide particularly during the Monsoon season. Moreover, Aizawl City experiences high cases of land subsidence and soil fissuring which are mainly attributed to the extraction of groundwater and consolidation of strata in sedimentary basins. Major cases of land subsidence in Aizawl City occurs during and after Monsoon mainly due to the forces of fluvial action (SIPMIU & ADB, 2011).

### **3.2.2 Drainage**

Due to its hilly terrain, most of the rain water received in Aizawl City flows down as a surface run-off. The natural drainage system of the city can be divided into eastern drainage and western drainage systems. The eastern part of Aizawl is drained by Chite stream and Tuirial River and the western part of the city is drained by the Tlawng River. The rain water and waste water from the city get drained in these rivers. The Chite stream covers more than two third of the western portion. The Tlawng River which flows from South to North is the main source of domestic water for the residents of Aizawl City.

### **3.2.3 Climate**

Aizawl City receives heavy rainfall during Monsoon season. The average annual rainfall received in the city is around 230 cm. There is a huge seasonal variation in rainfall. As shown in Table 3.1, heavy rainfall occurred during April-October. Rainfall abruptly declined in the month of November and started declining until the month of January. Huge seasonal variation in rainfall affects the availability of domestic water. The city almost entirely depends upon the Tlawng (Dhaleswari) river from which water is obtained for domestic use. The volume of the river declines considerably at the end of dry season and the city residents usually face acute water insecurity due to inadequate quantity of water for household distribution. As a result, many households have to depend upon private water suppliers.

Table 3.1 Mean Monthly Temperature and Rainfall, Aizawl City, 1986-2020.

Month	Mean Temperature (°C)		Mean Rainfall
	Max	Min	
January	11	23.3	13.4
February	13.3	25.4	23.4
March	16.2	27.9	73.4
April	17.3	29.1	167.7
May	18.3	28.2	289
June	19.4	27.5	406.1
July	19.5	27	320.4
August	19.6	27.5	320.6
September	19.5	27.5	305.2
October	18.8	27.3	183.7
November	16	25.7	43.2
December	12.8	23.2	15.3

Source: Indian Meteorological Department, 1986-2020

Aizawl City enjoys moderate temperature throughout the year. However, temperature varies from one place to another depending on their location. The low-lying areas are more humid and warmer in comparison to higher altitudes. Low lying areas are considered less healthy due to occurrence of Malaria and others. The whole state falls under the direct influence of the South-west Monsoon and receives an ample amount of rainfall. The highest temperature is observed during May to July which decrease with the onset of the Monsoon. The lowest temperature is observed during December - January. In summer the mean temperature ranges between 18° C and 32°C. During winter, the minimum and maximum mean temperature ranges between 11.4°C and 26.8°C (SIPMIU & ADB, 2011; Saitluanga, 2017; Pachuau, 2009; Lalchhandama, *et. al.* 2021).

### 3.2.4 Natural hazard

Aizawl falls under Seismic Zone-V. It is denoted as a Very High Damage Risk Zone. Some Indian states are fall under this zone such as Kashmir, Punjab, the western and central Himalayas, the Northeast Indian region, and the Rann of Kutch. Generally, the areas having trap or basaltic rock are prone to earthquakes. The present valleys and ravines are the result of the underlying faults and structural patterns, giving rise to

different types of drainage patterns. Faulting has resulted in steep curves, highly dissected ranges with deep ravines, and spurs, all vulnerable to comprehensive erosion. The rocks are fractured and hence susceptible to failure during monsoon, resulting in landslides (SIPMIU & ADB, 2011).

### **3.3 Demographic characteristics**

#### **3.3.1 Population growth**

Before Independence, the growth of Aizawl population was restricted by the imperial policy to make their settlements an 'enclave' with minimal presence of local population (Saitluanga, 2017). The colonial administrators have introduced laws and regulations all of which have significant effects on migration. Firstly, they introduced Bengal Eastern Frontier Regulation of 1873 which restricted the non-local population to enter and trade freely in Mizoram (then Lushai Hills) without Inner Line Permit (ILP). Secondly, the introduction of Personal Residence Surcharge (PRS) which was levied to all residents of Aizawl (then Aijal) and, thirdly, the allocation of maximum possible number of residents in every locality of Aizawl. These administrative provisions have greatly reduced the scope of migration into Aizawl from both within and outside the state.

After Independence, Aizawl has witnessed rapid growth of population. The colonial policies except the Inner Line Regulation were abolished which resulted into uncontrolled in-migration of local population who were searching for better livelihood. Another important migration inducing factor was the Mizo National Front (MNF) led insurgency which occurred during 1966-1986. Aizawl received large number of refugees from rural areas as shown by the unprecedented increase in the population growth rates during 1961-1971 and 1971-1981 (Table 3.2). Moreover, the attainment of Union Territory in 1972 has also induced large-scale migration due to increase in government jobs (Lalnithanga, 1999; Saitluanga and Pachuau, 2015). During these periods, the decadal growth rates were relatively high. The highest growth rate was attained during 1971-1981.

Table 3.2 Growth of population, Aizawl City, 1901-2011

Census year	Population	Decadal Growth Rate (%)
1901	325	-
1911	2890	789.23
1921	3034	4.98
1931	3250	7.12
1941	4780	47.08
1951	6950	45.40
1961	14,275	105.40
1971	31,740	122.35
1981	74,493	134.70
1991	1,55,240	108.40
2001	2,28,280	47.05
2011	2,93,416	28.53

Source: Census of India, 2011

Mizoram attained statehood in 1986 in accordance to the Peace Accord of Memorandum of Settlement between the MNF and the government of India. Having more than 1 lakh population, Aizawl became a city in 1991 as per Census of India classification. The post-statehood period, however, has witnessed rapid decline in population growth rate. The decadal growth rate has declined from 108.39 per cent to 47.05 per cent during 1991-2001 which further down to 28.56 during 2001-2011.

### 3.3.2 Ethnic and religious composition

Aizawl is a highly homogenous city. More than 90 per cent of the total residents speak Mizo or Lushai language as mother tongue (Table 3.3). The Nepali speakers who formed the second largest communities are the descendents of the 'Nepali' original settlers who helped the British to govern the state in their capacity as soldiers and *coolies*. A number of localities in Aizawl were first inhabited by the Nepali migrants. The Bengali speakers are mostly originated from Bangladesh and the neighbouring state of Assam. Among the linguistic communities listed in Table 3.3, Paite, Hmar and Pawi (also called Lai) are ethnically sister communities who are

covered under the umbrella term ‘Mizo’. Although they have separate dialects, they have lots of common words with Lushai/Mizo language which they normally speak without difficulty. Manipuri and Assamese speakers from the neighbouring states of Manipur and Assam were mostly migrant workers who have either stayed permanently or temporarily. Santali speakers are mainly labour migrants from Bihar who works in construction sector. Many of them have stayed behind permanently. It may be mentioned that significant number of non-Mizo families particularly Nepali and Santali have used Lushai/Mizo language in their homes and they may have reported the language as their mother tongue.

Table 3.3 Linguistic composition, Aizawl City

Sl.No	Mother Tongue	Percentage
1	Lushai/Mizo	91.9
2	Nepali	2.0
3	Bengali	1.8
4	Hindi	1.3
5	Paite	0.7
6	Manipuri	0.4
7	Hmar	0.3
8	Assamese	0.2
9	Santali	0.1
10	Pawi	0.1
11	Others	1.2

Source: Census of India 2011

Linguistic communities like Lushai/Mizo, Paite, Hmar, Santali and Pawi are tribal communities who have formed more than 90 per cent of the total population of Aizawl City. The percentage composition of Scheduled Tribe (ST) population has increased from 88.68 per cent in 1981 to 91.83 per cent in 2011. On the other hand, the non-scheduled or general population has declined from 11.3 per cent to 7.9 per cent during the same period. One of the main reasons of abrupt decline in the general population during 1981-1991 was the mass pull out of Indian military personnel after the end of Insurgency in 1988 (Table 3.4). The high concentration of tribal population is due to the strict enforcement of legislative provisions like ‘Inner Line Regulation’ that prohibits the non-tribals from residing permanently, and land laws that barred non-local people to obtain or purchase land within the state. Apart from these, the

remoteness of the state and absence of industries could also be considered as the reasons behind relative absence of non-local population.

Table 3.4 Population composition, Aizawl City, 1981-2011

Year	Scheduled Tribe Population (%)	Scheduled Caste Population (%)	Non-scheduled Population (%)
1981	88.68	-	11.32
1991	91.42	-	8.58
2001	91.95	0.06	7.98
2011	91.83	0.18	7.99

Source: District Census Handbook, Aizawl District, 1981-2011

Christianity is the major religion of the state. More than 90 per cent of Aizawl population were Christian as per Census 2011. Hinduism is followed by linguistic communities like Nepali, Hindi, Manipuri, Assamese and Santali speakers. However, a number of Nepali and Santali families have converted into Christianity. Muslim communities are formed mainly by Bengali speakers (Table 3.5).

Table 3.5 Religious composition, Aizawl City

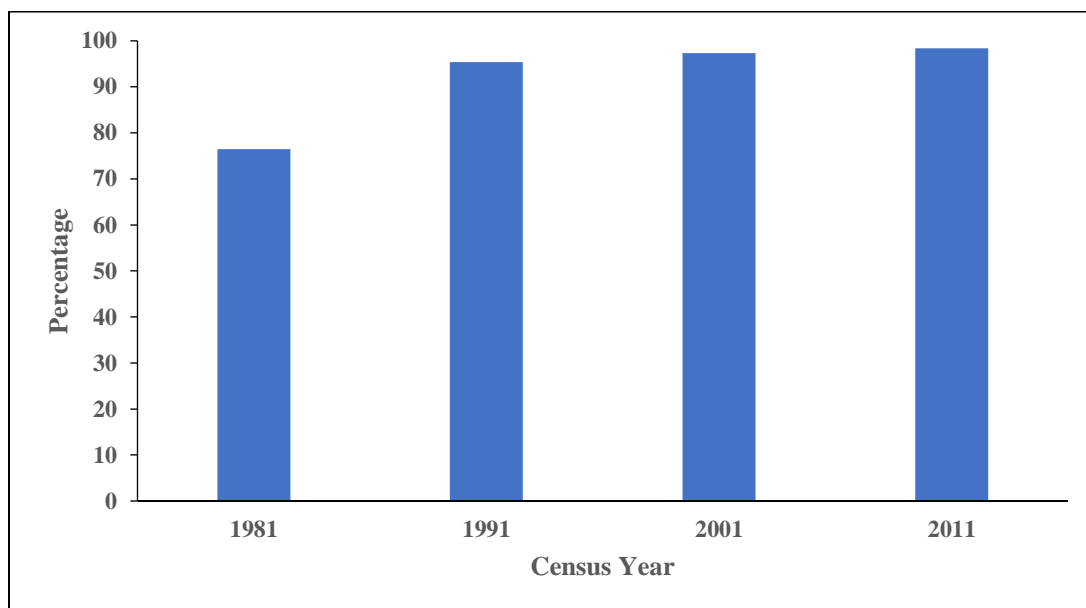
Religion	Percentage	Sex Ratio
Christian	93.63	939
Hindu	4.14	635
Muslim	1.52	3347
Others	0.71	884

Source: Census of India 2011

### 3.4 Socio-Economic characteristics

#### 3.4.1 Literacy rate

Mizoram is the second most literate states in India after Kerala. As per 2011 Census, the literacy rate of Aizawl city was 98.4 per cent which was higher than the rate of Mizoram (91.6%). The rate has increased substantially from 76.5 per cent in 1981 (Figure 3.1).



Source: District Census Handbook, Aizawl District, 1961-2011, Directorate of Census Operation, Mizoram

Figure 3.1 Literacy rate, Aizawl City 1981-2011

Interestingly, the Socio Economic and Caste Census 2011 conducted by the Ministry of Housing and Urban Poverty Alleviation in urban areas of the country has given a slightly lower figure of literacy rate of Aizawl. According to SECC 2011, the illiteracy rate was 9.6 per cent against the figure of 1.6 per cent given by the Census 2011. In spite of this, the SECC data has provided information on the educational attainment level which is not available in the Census data. In Aizawl, the percentage of residents who were illiterate but below primary and resident who studied up to primary school are lesser than Mizoram and all India percentage. The percentage of resident of Aizawl City having education up to Middle and Secondary schools are also higher than the percentage of Mizoram and All India. Regarding the percentage of above graduate, Aizawl residents have more above graduate more than the total per cent of Mizoram but less than India (Table 3.6)

### 3.4.2 Occupational characteristics

Change in the occupational structure is considered as one of the most reliable measures of development. The most reliable measurement of development is considered as the change in the occupational structure. Aizawl has been witnessing

the declining of the both the percentage of cultivators and Agricultural labourer during 1981-2011. On the other hand, the proportion of ‘other workers’ comprising of workers engaged in trade and commerce, government jobs, teaching, transport, factory, plantation and mining and construction etc has been increasing from 80.97 per cent to 91.79 per cent during 1981-2011.

Table 3.6 Highest educational level completed, Aizawl City

Name	Illiterate	Illiterate But Below Primary	Primary	Middle	Secondary	Higher Secondary	Above Graduate	Others
Aizawl	9.6	6.7	14.4	24.6	2.1	11.8	10.2	0.7
Mizoram	10.4	7.7	17.7	25.8	0.4	9.7	7.8	0.4
All India	17.9	9.4	16.1	15.9	5.4	10.5	13.1	1.9

Source: SECC, 2011

From Table 3.7, it can be seen that the Work Participation Rate (WPR) has increased from 32.91 per cent to 45.40 per cent in 1991 but declined afterwards. The declining WPR may be due to unemployment. The increase in literacy rate leads to unemployment rate high as the educated people seek only the governmental job.

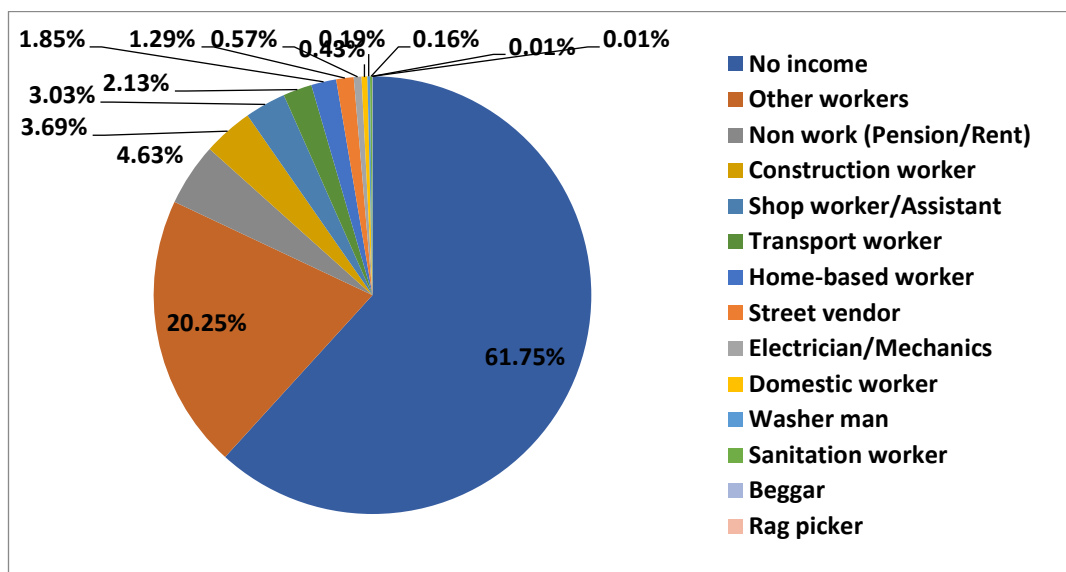
Table 3.7 Sectoral distribution of workers, Aizawl City, 1981-2011.

Year	Main Worker (%)	Cultivators (%)	Agricultural Labourer (%)	Household Industry Worker (%)	Other Worker (%)	WPR (%)
<b>1981</b>	32.03	9.52	6.2	3.29	80.97	32.91
<b>1991</b>	36.94	9.02	4.26	1.02	83.57	45.4
<b>2001</b>	33.77	3.57	2.16	1.89	92.53	44.15
<b>2011</b>	34.8	2.96	2.2	1.83	91.79	40.78

Source: District Census Handbook, Aizawl District, 1961-2011, Directorate of Census

Operation, Mizoram





Source: SECC, 2011

Figure 3.2 Main source of income of Aizawl population, 2011

As shown in Figure 3.2, it can be seen that people having no income was the highest followed by other workers among the people in Aizawl. Income from Non work which includes pensions, rent interest account for 4.63 per cent. In Aizawl, construction workers consist of 3.69 per cent and shop worker or assistant also consist of 3.03 per cent. There were 2.13 per cent in Aizawl who are working transport. Among the total population of Aizawl City, street vendors consist of 1.29 per cent. Electrician and mechanics also composed of 0.57 per cent on the total population of Aizawl. Domestic workers, washer man, beggar and rag picker consist of less than 1 per cent in Aizawl total main workers.

### 3.5 Land-use and Land cover

Aizawl is a densely populated city. It spreads outward from the encampment site of the British administrators which is presently located in and around Raj Bhavan – the residence of the Governor of Mizoram. The earliest sites of settlements were found on hill tops and moderate hill slopes. The horizontal growth of the city is largely obscured by the presence of steep slopes and deep valleys at certain sectors of the city. As a result, certain localities are isolated and separated from other localities by steep slopes or forest areas. While urban sprawl is observed as in the case of other cities, an

intense vertical growth is observed within the populated areas of Aizawl City. The hillslopes foster the construction of multi-storey buildings which are rented out by apartment or floor-wise to migrant tenants. Due to increasing vertical growth of the city, built-up area is relatively small and it covers only 12.38 per cent of the total geographical area of the city (Table 3.8).

Forest covers around 68 per cent of the total geographical area of Aizawl municipality. Dense forest areas are found mostly in the peripheral areas of the city. Open forest usually occupies the abandoned cultivated lands within the city limits. Scrub lands are usually found in barren hill slopes which are unsuitable for either settlement or cultivation. Forest cover has been decreasing gradually with increasing deforestation to accommodate the needs of the increasing population. With more than half of the city residents being renters who lived in other people's house, the demand for housing has been spiralled up and construction sector is booming in recent years. In certain localities like Bawngkawn, even a steeply sloping area which was considered unsuitable for human settlement but reserved for forest has been cleared up and used for construction of houses. At the same time, a few patches of forest areas are found within the built-up area. These are mainly reserved forests initiated and maintained by certain peripheral localities and educational institutions.

Table 3.8 Distribution of Land-use/Land cover in Aizawl City

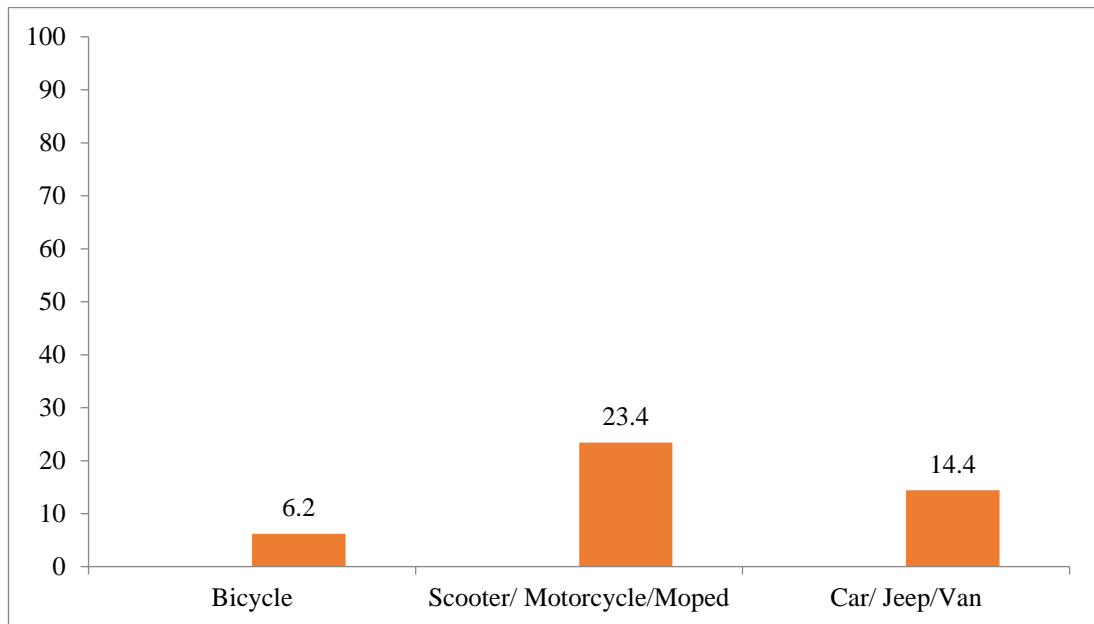
<b>Land-use/Land Cover</b>	<b>Area covered (km<sup>2</sup>)</b>	<b>Percentage</b>
Dense Forest	27.22	28.06
Open Forest	39.25	40.46
Cropping Area	6.15	6.34
Scrub	10.69	11.03
Built-up	12.38	12.76
Others	1.31	1.35
<b>Total</b>	<b>97</b>	<b>100</b>

Source: Computed from LISS-III, IRS-1C, 2008

### **3.6 Transport**

Transport problem is one of the most challenging issues in Aizawl City. Due to lack of urban planning and limitations imposed by topography, roads are usually narrow and congested. With increasing number of vehicles, the city has been facing huge transport problem that affect the well-being of the residents. In an effort to minimise the traffic problem, the government has banned entry of heavy vehicles except Bus service during daytime. Recently, the government has also introduced 'Two-wheeler Taxi' service and road rationing scheme like 'No vehicle day' to ease the movement of traffic. In spite of these, the unfeasibility of widening of major transport routes as well as the impracticability of developing alternative means of transport due to fragile terrain have greatly reduced the scope of future improvement of transport system.

Figure 3.3 provides information on the household having vehicles in Aizawl City. The Table shows the percentage of household having Bicycle comprise of 6.2 per cent from the total population. Out of the total household in Aizawl City, 23.4 per cent were owned motorcycles including Scooter and moped. From the total household, the percentage of Medium Motor Vehicles (MMV) including car, jeep and van owned by households comprise of 14.4 per cent.



Source: Census of India, 2011

Figure 3.3 Percentage of household having vehicles

Topography is the most important factor that determines transport network in the hill city of Aizawl. The most important route in the city is the Bawngkawn-Kulikawn (B-K) route that runs along the main ridge of the city in North-South direction. This route is the spine of the city and majority of the important offices, markets and other landmarks are found along this route. All other important routes are connected to this route from different sides. The most important routes in the western side of the city include 1) Mizoram University-Temple Square via Vaivakawn route; and 2) Mizoram University-Chanmari via Vaivakawn route. From the eastern side of the city, B-K route is connected by College Veng-Republic Road at Sikulpuikawn and Electric-Dawrpui road at Bazar Bungkawn. From the south, Maubawk-Khatla road joins B-K route at Khatla and, in the eastern part of the city, Durtlang-Bawngkawn and Zemabawk-Bawngkawn join B-K route at Bawngkawn traffic intersection.

It may be mentioned that three of the vending markets selected for this study are found along the B-K route while the other two, namely, Vaivakawn and Bawngkawn markets are important traffic intersections in the western and northern parts of the city respectively.

### **3.7 Selected Vending markets in Aizawl City**

#### **3.7.1 Bawngkawn**

Bawngkawn market is located in the northern part of Aizawl city. The first settlers of Bawngkawn were the non-local Gurkha cattle rearers who started occupying the area in the year 1917. The name 'Bawngkawn' is a combination of two words, '*Bawng*' meaning Cattle and '*Kawn*' meaning junction (Thanhlira, 1983).

Street vendors are found along the main road, in between traffic junction of Sairang, Chaltlang and Ramhlun roads and the traffic junction of Durtlang and Thuampui roads (Figure 3.4). This area is one of busiest traffic intersections in Aizawl city. In this area, different type of street vendors such as cooked food vendors, dresses and clothes vendors are found. The street vendors are also found in and around Bawngkawn Chhim veng Community Hall to the Bawngkawn traffic point. These vendors are mostly the vegetable vendors. The customers of Bawngkawn bazar are mainly from in and around Bawngkawn locality. This includes Durtlang, Sihphir, Thuampui, Zemabawk localities. Street vendors are also mainly from these localities.

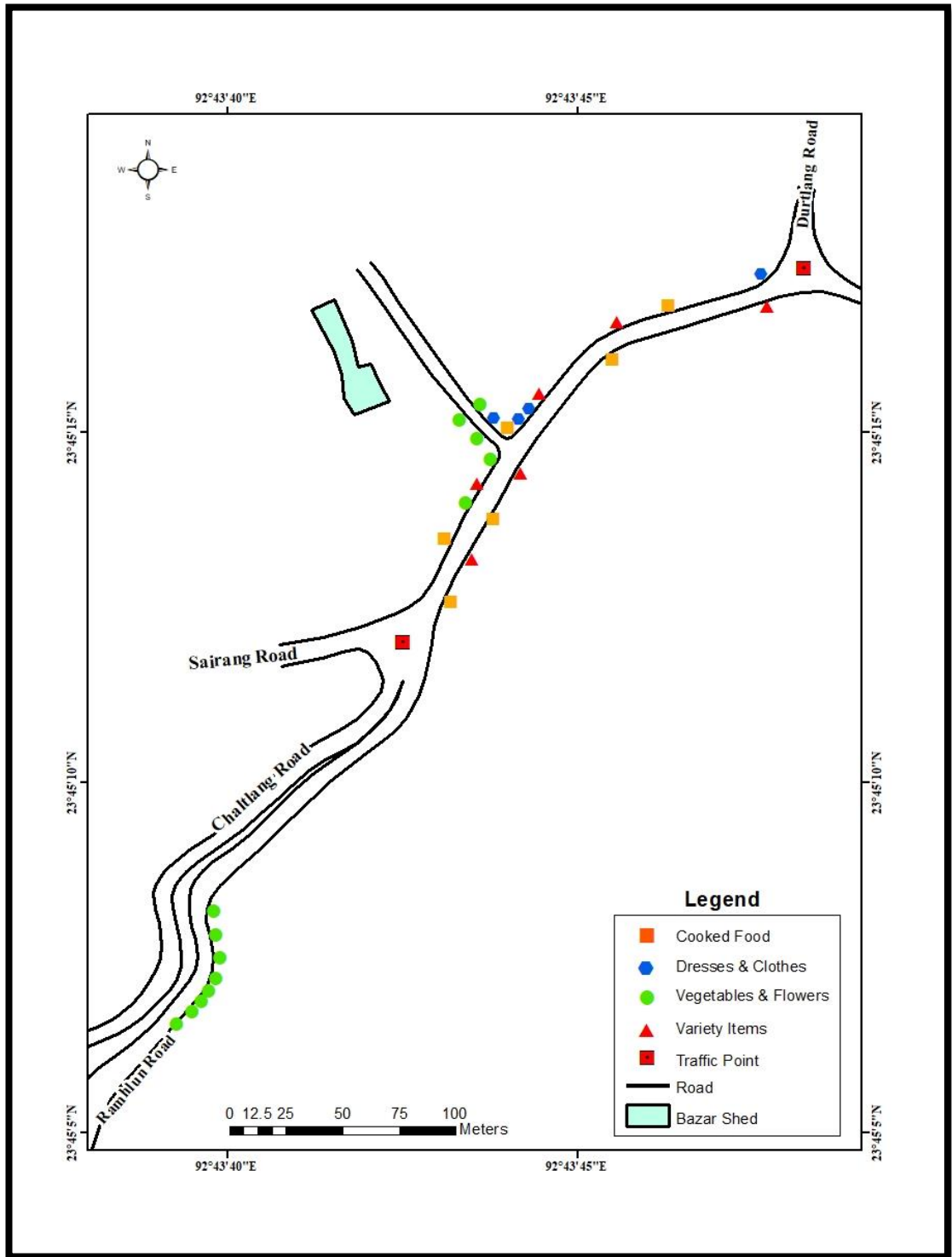


Figure 3.4 Location map of street vendors in Bawngkawn, Aizawl City

### **3.7.2 Bara Bazar**

Bara Bazar or 'Big market' is the biggest market in Aizawl city. It is also one of the oldest markets in the entire Mizoram. The market was established in 1910 by the then Lushai Hills District Commissioner. The original market is situated at the locality of Dawrpui which has the same meaning with Bara Bazar. In recent times, the area of Bara Bazar has been expanding and now includes neighbouring localities like Zarkawt, Electric, Saron and Chhingaveng.

Most of the street vendors are found in and around the New Market Building. They are also found along 'Civil Hospital road' which is the segment of B-K route and Electric-Dawrpui-Bazar Bungkawn road. The most common types of street vendors found in this area are cooked food vendors, garment vendors, variety items vendors and vegetable vendors. Machinery items vendors are also available in Bara Bazar. Street vendors in this market are mostly from Chhingaveng, Sihphir, Dawrpui Vengthar, Dinthar, Durtlang and vendors from rural areas such as Lungdai, Chhingchhip, Khawruhlian and others.

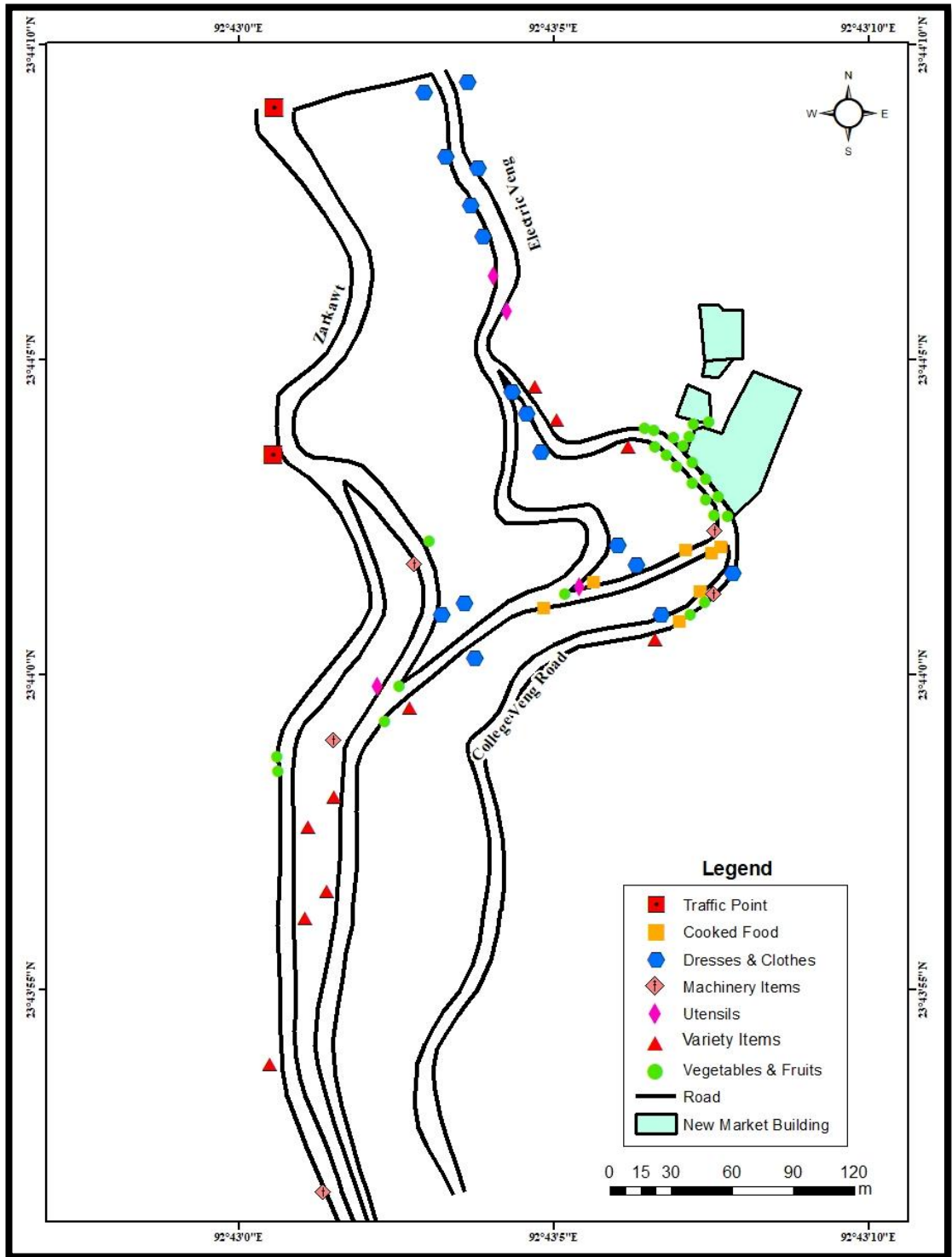


Figure 3.5 Location map of street vendors in Bara Bazar, Aizawl City



### **3.7.3 Treasury Square**

Also known as Sobji or Sabji market, Treasury Square market started as a vegetable and meat market. Later, the state government has reserved vending space to ‘licensed hawkers’ to sell Paan, Cigarettes and packed eatables in certain roadsides of the area. This oval shaped market is located in the middle part of Aizawl city. It covers the Assam Rifles junction to Old Secretariat junction of the B-K route in the upper side and in the lower side, it covers Aizawl Tennis Court junction to Assam Rifles junction. Within this small area, important offices and landmarks like Vanapa Hall – the iconic community hall, the Mizoram Assembly house, the old central secretariat, the office of the Aizawl District Commissioner and the main Treasury office are found. The most common types of street vendors found in this area are garment vendors and vegetable vendors. Street vendors in this market are mainly from Khatla and its neighbouring localities like Nursey Veng, Bungkawn, Dinthar, Tuikual, Venghlui, Republic veng and others.

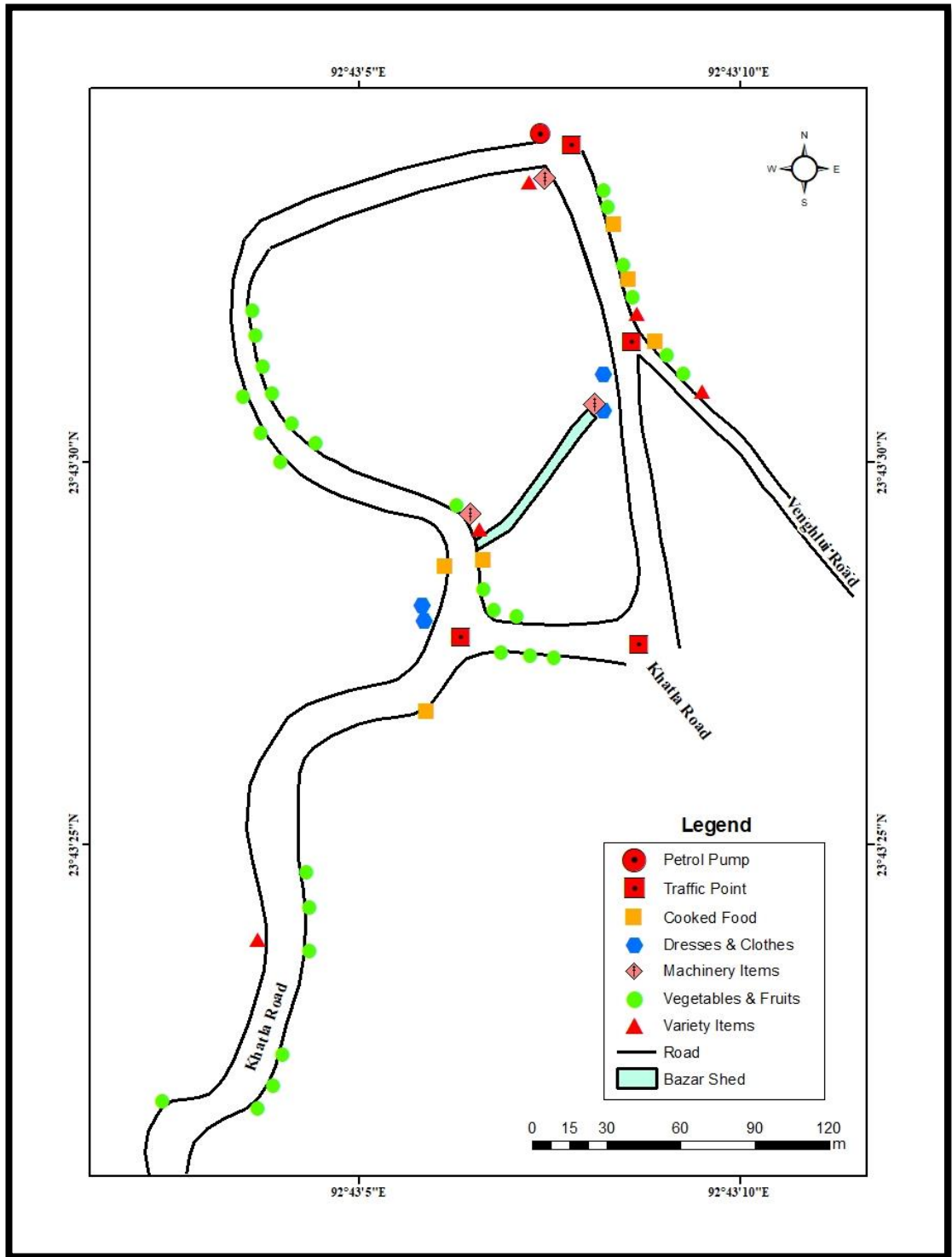


Figure 3.6 Location map of street vendors in Treasury Square, Aizawl City

#### **3.7.4 Thakthing Bazar**

Thakthing locality is one of the oldest localities in Aizawl. The name Thakthing refers to a local name for Cinnamon trees which were abundant in this area. The locality was first occupied in 1905 when the British administrators allotted lands for residential quarters to the government servants (Thanhlira, 1983). Before 1932, all the shop owners in this locality were the Khasi and non-tribal merchants (Thanhlira, 1983). In the early 1980s, around 20 vendors sold their vegetables on the pavement of the road from Sikulpuikawn to Thakthing on Saturday morning and the market was known as *Zing bazar* or Morning market. As the market is the most prominent market in the southern part of Aizawl city, most of the vendors were coming from the southern part of the city and the nearby villages.

In this market, all kinds of items including cooked food, vegetables and flowers, electrical appliances, garments and others are sold on the pavement or sidewalks by street vendors. On Saturday morning, local streets are closed for entry of vehicular traffic to give more vending space. Usually, around 300 vendors sell their items on Saturdays. Vendors from rural areas arrive in the market on Friday night and stay on the pavement to claim their vending spot. The most common types of street vendors found in this area are vegetable vendors, Garment and flower vendors, cooked food vendors. Street vendors in this market are mainly from Thakthing and its neighbouring localities like Kulikawn, Model veng, Dam veng, Mission veng, Mossion vengthlang and others.

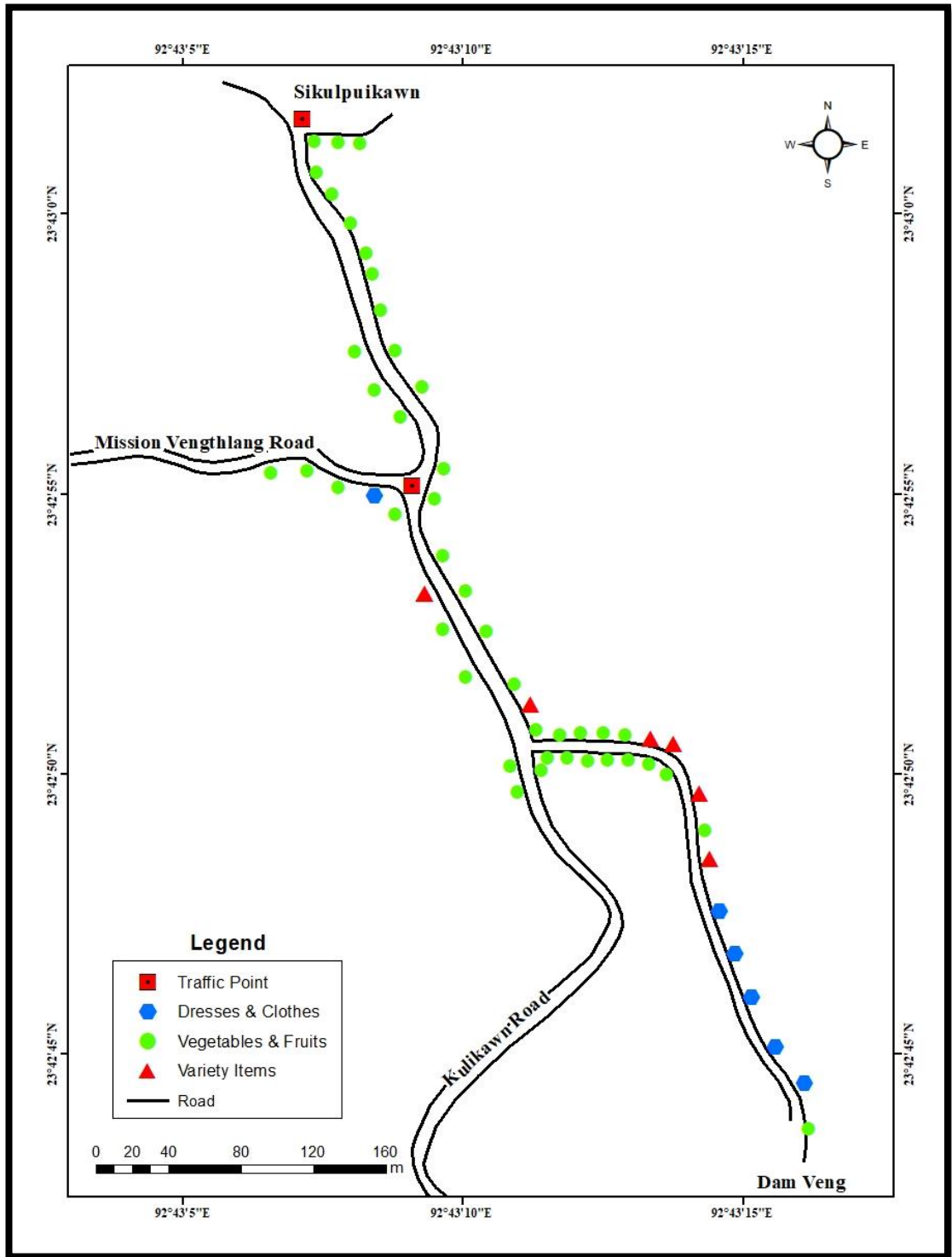


Figure 3.7 Location map of street vendors in Thakthing, Aizawl City

### **3.7.5 Vaivakawn**

Vaivakawn bazar is located on the western part of Aizawl. Before 1966, few hut occupied by Mizo and Gurkhali were found in this area. But after 1966, the people from different rural areas migrated and it is now one of the biggest localities in Aizawl (Thanhlira, 1983). As the market is near to the Bara Bazar, the market itself is not big. This market area is useful for the localities from western most part of Aizawl such as Sakawrtuichhun, Tanhril, Chawlhhmun, Tuivamit and others. In this market area, different type of items such as cooked food, clothes and dresses, vegetables and flowers, machinery items are sold by the street vendors.

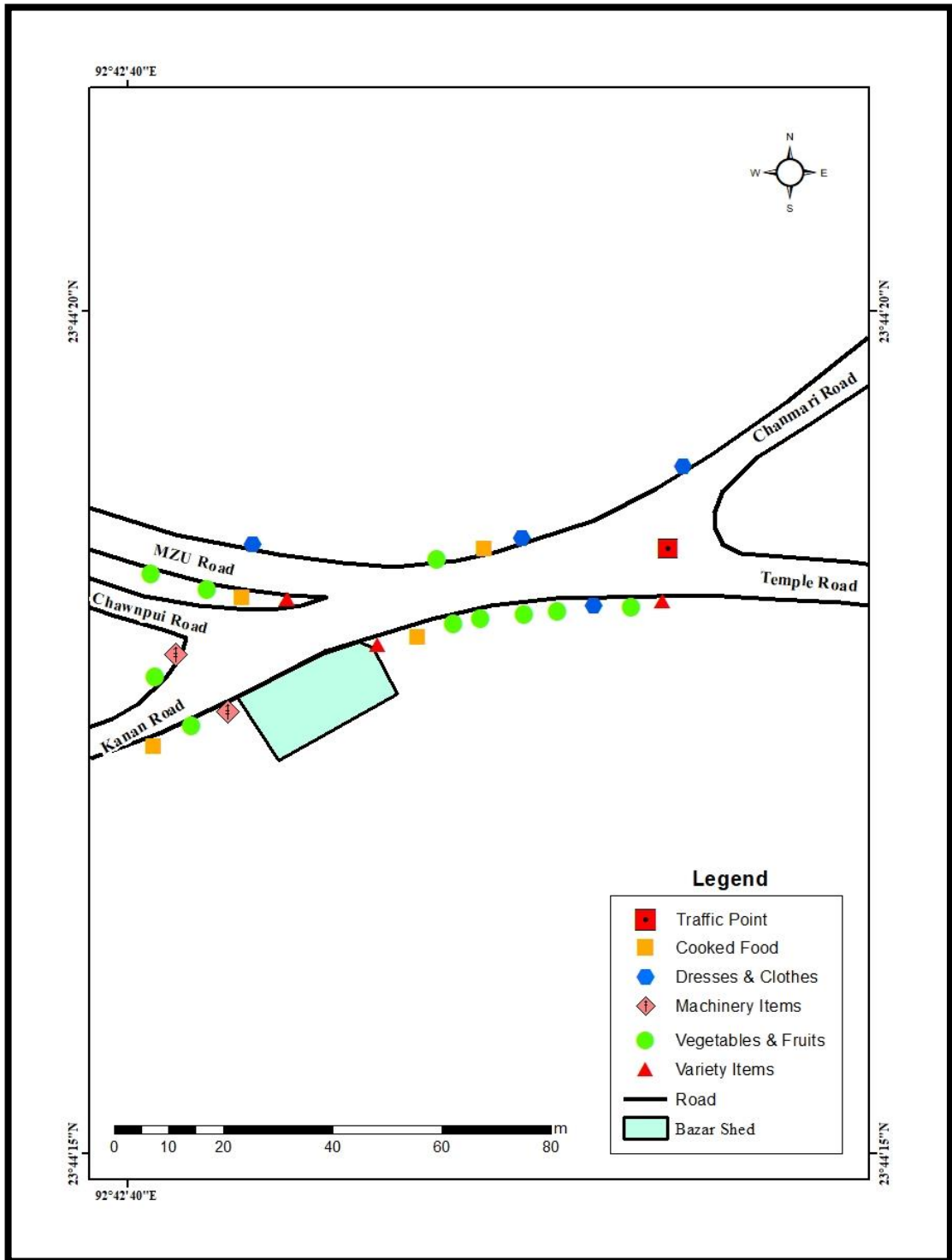


Figure 3.8 Location map of street vendors in Vaivakawn, Aizawl City

## PHOTO PLATES

Plate 1. *Dawr ak* or mobile vendors at Bara Bazar, Aizawl



Source: Author's photograph, 2021



Plate 2. Street vending in the middle of footsteps at Bara Bazar, Aizawl



Source: Author's photograph, 2021



Plate 3. Machinery vendors behind parking lot of Bara Bazar, Aizawl



Source: Author's photograph, 2021

Plate 4. Street vendors in the elevated footsteps at Bawngkawn, Aizawl



Source: Author's photograph, 2021



Plate 5. Non-local migrant vendor selling Paan and Cigarette at Bawngkawn, Aizawl



Source: Author's photograph, 2021

Plate 6. Fruit vendors at sidewalk, Bawngkawn, Aizawl



Source: Author's photograph, 2021



Plate 7. Fruit vendors at Thakthing, Aizawl



Source: Author's photograph, 2021

Plate 8. Garment vendors hanging their items at sidewalk, Thakthing, Aizawl



Source: Author's photograph, 2021

Plate 9. Licensed vendors at Treasury Square in their roofed vending stalls



Source: Author's photograph, 2021

Plate 10. Vegetable vendors at Saturday market in Treasury Square, Aizawl



Source: Author's photograph, 2021



Plate 11. Vendors at roadsides, Vaivakawn, Aizawl



Source: Author's photograph, 2021

Plate 12. A woman vendor using small vacant space at roadsides, Vaivakawn, Aizawl



Source: Author's photograph, 2021

## CHAPTER 4

### PROFILE OF STREET VENDORS IN AIZAWL CITY

#### 4.1 Introduction

This chapter explores basic information related to street vendors in Aizawl City. The chapter also deals with spatial variation on profile of the vendors in the selected vending market such as Bawngkawn, Bara Bazar, Treasury Square, Thakthing and Vaivakawn. This chapter is divided into three broad sections. The first section is about the socio-demographic characteristics of the street vendors in Aizawl City, the second section deals with the occupational characteristics of the street vendors and the third section describe about the household characteristics of the street vendors. A Chi-square tests were employed to prove the hypotheses.

#### 4.2 Socio-demographic characteristics

This section describes the socio-demographic characteristics of street vendors in Aizawl City including sex, age, marital status, religion, ethnicity, educational level and place of origin.

##### 4.2.1 Sex and age composition

Sex and age composition is an important component of demographic characteristics. A study of gender and age composition of the street vendors helps us to discover a group of population who participates in street vending. The study reveals that street vending in Aizawl City is primarily a female oriented occupation. As shown in Table 4.1, female street vendors constitute 84.80 per cent of the total vendors. In Thakthing market, females constitute as high as 92.5 per cent of the total vendors. The percentage of male vendors was relatively high in Vaivakawn market (Figure 4.1).

Table 4.1 Socio-demographic characteristics of street vendors in Aizawl City

<b>Indicators</b>	<b>Percentage</b>	
<b>Sex</b>	Female	84.8
	Male	15.2
<b>Age group</b>	Less than 30 years	12.5
	31-40 years	26
	41-50 years	38.3
	51-60 years	15
	More than 60 years	8.2
<b>Marital status</b>	Currently married	66.5
	Never married	17.3
	Divorced	10.3
	Widowed	6
<b>Religion</b>	Christian	96.5
	Hindu	2.5
	Muslim	1
<b>Ethnicity</b>	Mizo	94.8
	Bengali	3.5
	Others	1.8
<b>Educational level</b>	Below High school	80.2
	Below Higher secondary	16
	Graduate	1.5
	Professional	0.8
<b>Place of origin</b>	Outside Aizawl	60.5
	Aizawl	34
	Outside Mizoram	3.3
	Outside India	2.3

Source: Field survey, 2019

The mean age of street vendors was 42 years with a standard deviation of 12.02. The age distribution shows that the highest number of street vendors belonged to the age-group of 41-50 years (38.3%) followed by 31-40 years (36%). Only 12.5 per cent of the respondents belonged to the age-group of below 30 years and there were a few vendors who still work after attaining 60 years and above (Table 4.1). The relatively lower participation of below 30 years age-group indicates the unattractiveness of street vending for job seeking urban youth. The age distribution is fairly uniform in all the markets. More youthful vendors were found in Treasury Square and Thakthing markets while older vendors were relatively more in Bawngkawn market (Figure 4.2).

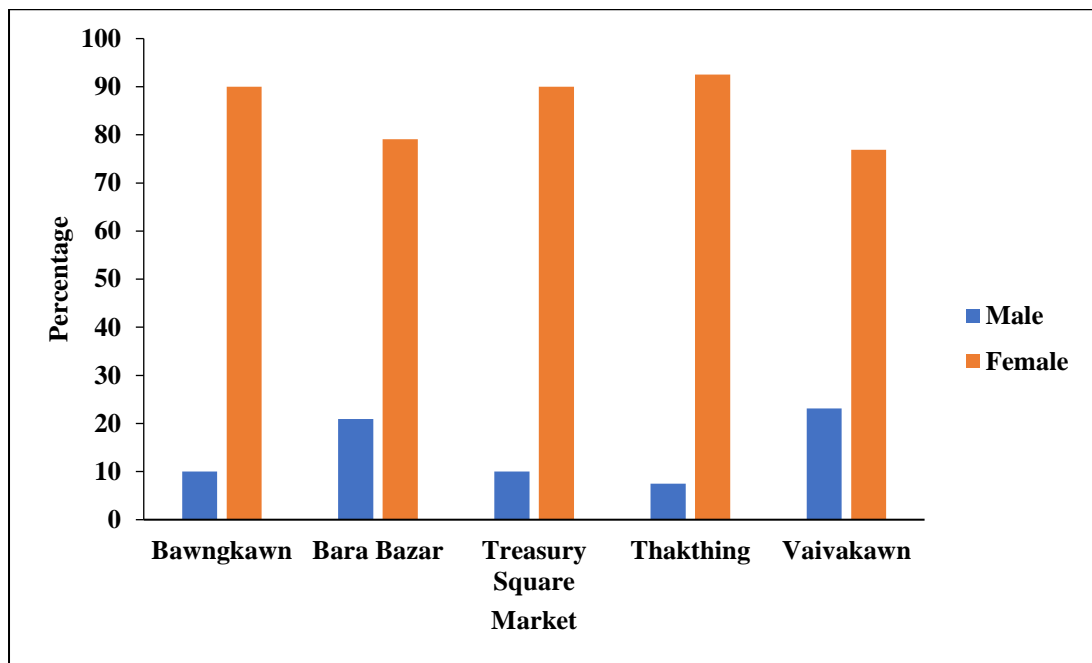


Figure 4.1 Gender composition of street vendors in Aizawl City



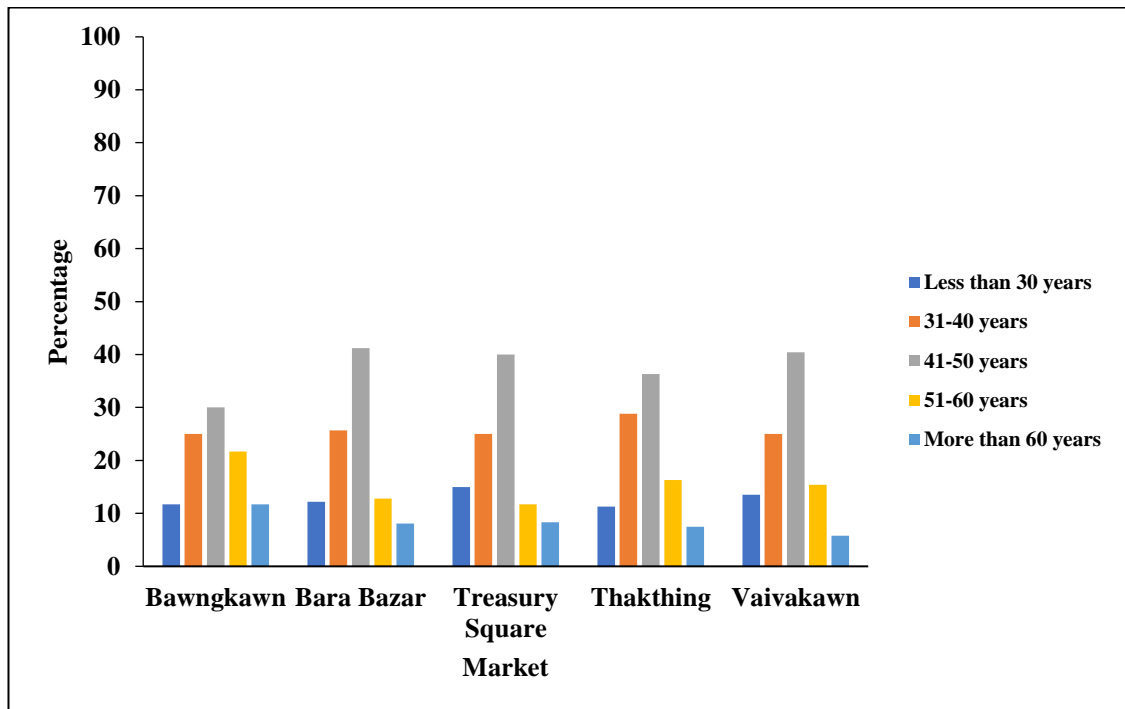


Figure 4.2 Age distribution of street vendors in Aizawl City

#### 4.2.2 Marital status

Marital status is crucial for determining factor of employment in informal sector, particularly in street vending. Based on the marital status, the need also differs. Although, married would be burdensome due to pressures and responsibilities but on the other hand they can receive support from their family members.

The study found that 66.5 per cent of the total street vendors in Aizawl City were currently married at the time of the study. The percentage of never married vendors was 17.3 per cent while 10.3 per cent were either separated or divorced and 6 per cent were widowed (Table 4.1). The high proportion of married population among street vendors indicated that street vending is convenient for married women due to its flexibility of time. They generally prefer flexible works to routine jobs as they have to combine works with household chores. So, street vending is a highly suitable for the relatively poor, married women to earn their livelihood. Market-wise study revealed that Thakthing and Treasury Square have the highest percentage of currently married vendors (75% each) followed by Vaivakawn (73.1%). The highest number of single

or never married vendors was found in Bara Bazar (22.3%) while the highest number of divorced and widowed vendors was found in Bawngkawn (Figure 4.3)

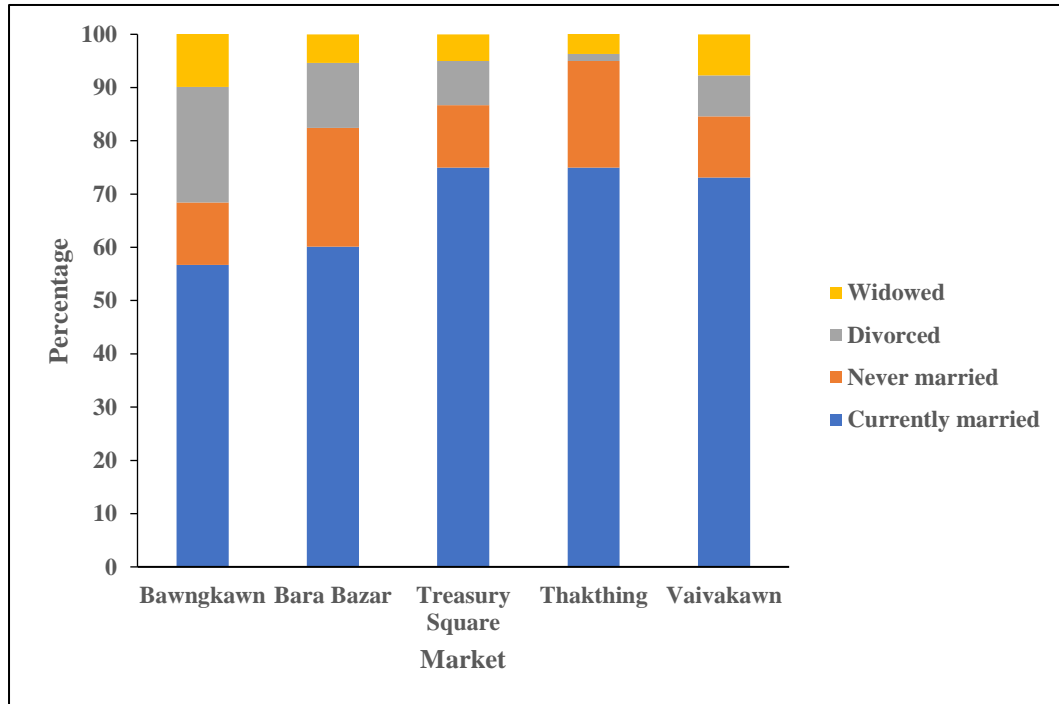


Figure 4.3 Marital status of street vendors in Aizawl City

#### 4.2.3 Ethnicity and religion

Street vending in Aizawl city is almost entirely dominated by the local ethnic Mizos tribes who constituted 94.8 per cent of the total respondents. The rest belonged to Bengali speaking Assamese migrants from Cachar district of Assam, the Chin ethnic group who have migrated from Myanmar (Burma) and the Nepali (Gurkhas) and Meiteis from Nepal and Manipur respectively. The last three ethnic groups are classified under the category of ‘Others’. The Bengali speaking community consisted of 3.5 per cent and the ‘Others’ constituted only 1.5 per cent of the total respondents (Table 4.1). The Bengali speakers usually claimed to belong to General category or Other Backward Class (OBC). The Nepali (Gurkhas) belonged to General category and the Meitei vendors were mostly Scheduled Caste (SC). The foreign-born Chin vendors are categorized under others. Bawngkawn market has the highest number of foreigners constituting for 10 per cent. The Bengali vendors are found in all the study sites (Figure 4.4).

Christianity is the dominant religion in Mizoram followed by Hinduism and Muslim. As expected, majority of the street vendors were Christians (96.5%). Only a small number of the respondents were Hindu (2.5%) and Muslim (1%). The Hindu vendors were mainly non-local migrants from Manipur and Nepal while the Muslim vendors were mostly originated from Cachar areas of Assam. Muslim religious followers were found in Bara Bazar and Vaivakawn areas (2% and 1.9% respectively) while a small number of Hindus were found in all the areas (Figure 4.5).

Unlike other parts of the country, no significant vendors from outside the state were observed in Aizawl city. The factors behind the undiversified linguistic composition among the street vendors are that Mizoram is native to Mizo tribe and implementation of Inner Line Permit (ILP) which prevent the migration of the non-tribal community to the state and leading to concentration of Mizo community in the state. The factor behind the high number of Mizo ethnic is the implementation of Inner line Permit (ILP) during the colonial period. This ILP prevent the non-tribal to migrate to Mizoram in order to prevent from assimilation. This is the reason of few numbers of Assamese/Bengali are found in Aizawl. Apart from these, Burmese/Myanmarese people are also found in the study area. These people came to sell their items. These items are normally electronics and machinery items.

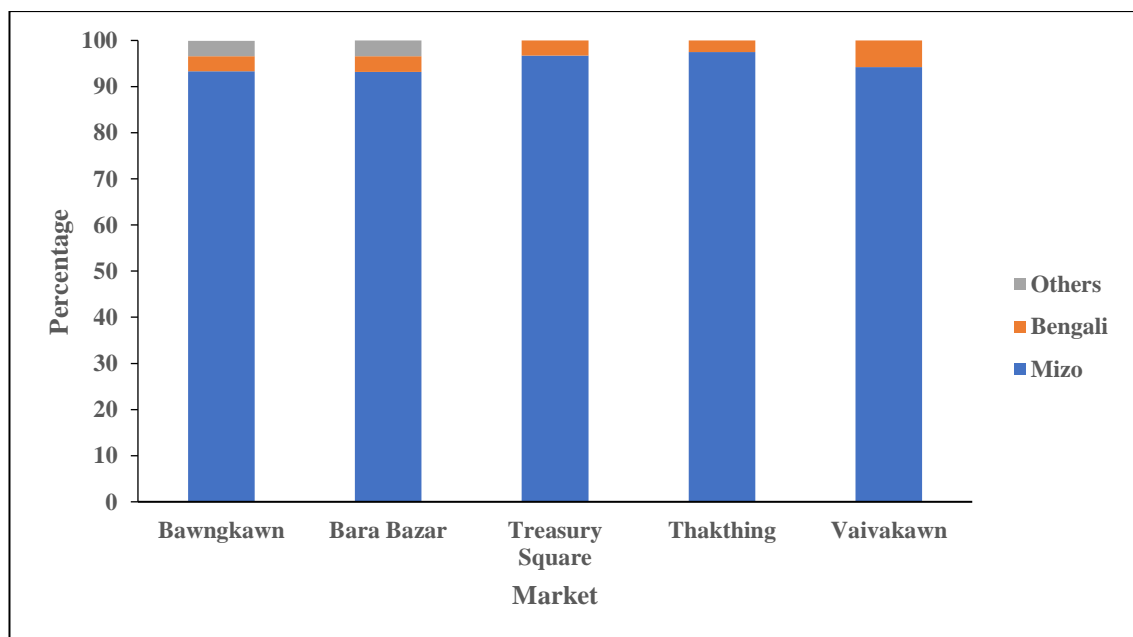


Figure 4.4 Ethnicity of street vendors in Aizawl City



Figure 4.5 Religious composition of street vendors in Aizawl City

#### 4.2.4 Educational level

The educational attainment level of the street vendors showed that 80.3 per cent of the respondents have not completed high school (Table 4.1). This shows that less educated persons were more likely to engage in street vending due to lack of opportunities in other sectors of employment. There are various factors responsible for poor educational background of these vendors. Lack of quality education due to poverty is one of the most important factors of their low level of education. A few vendors have reported that either of their parents has died early and they have to earn their living which provided no scope for them to go to school. Moreover, limited opportunities in the formal sector have compelled some vendors to drop out of school as there is no assurance that they will get good jobs. This is exemplified by the presence of a few vendors in Bara Bazar, Bawngkawn and Treasury Square markets who have completed higher educational and professional courses. The highest percentages of high school dropouts were found in Thakthing (87.5%) and Vaivakawn (86.5%) markets (Figure 4.6).

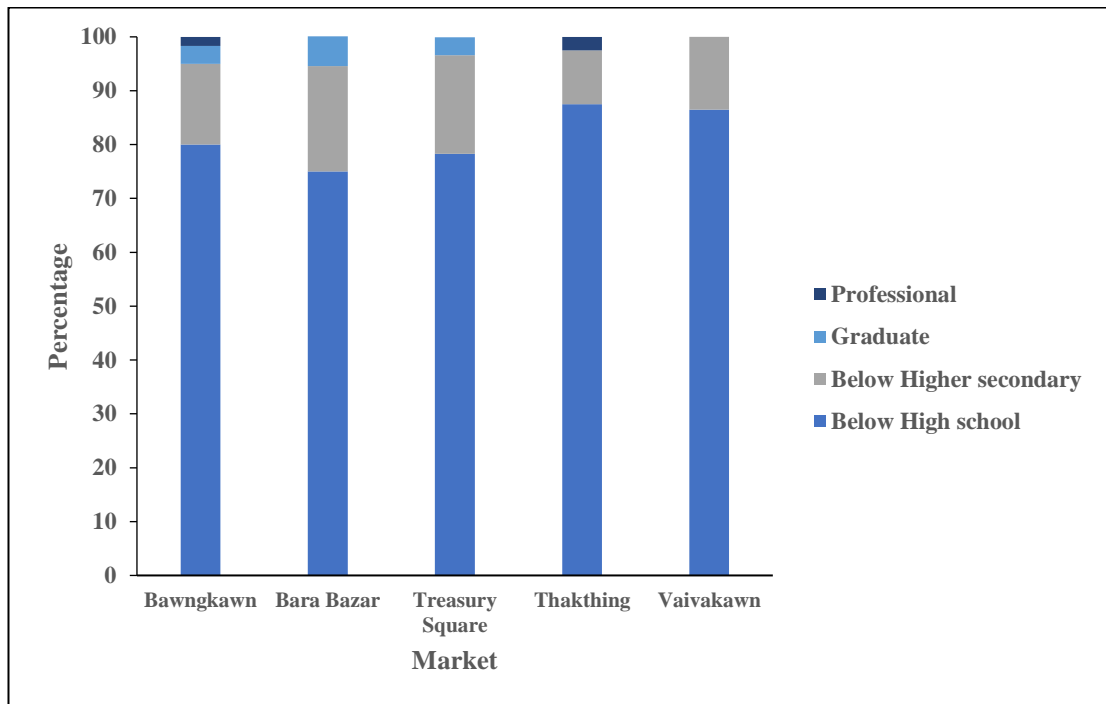


Figure 4.6 Educational levels of street vendors in Aizawl City

#### 4.2.5 Place of origin

With regards to place of origin, 60 per cent of the total respondents were from outside Aizawl. This means that among the total numbers of the street vendors in Aizawl city, more than 60 per cent were from rural markets. 34 per cent were from Aizawl city market while 3.20 per cent of the total respondents were from outside Mizoram but from India (Table 4.1). These people were from Assam (Cachar markets). As shown in Figure 3.6.9, most of the vendors from Aizawl City were from rural markets in Mizoram. Vendors from outside India were mostly originated from Myanmar. They constituted for 2.80 per cent from the total respondents. These people were found in Bawngkawn market (10%) and Bara Bazar market (3.4%) (Figure 4.7).

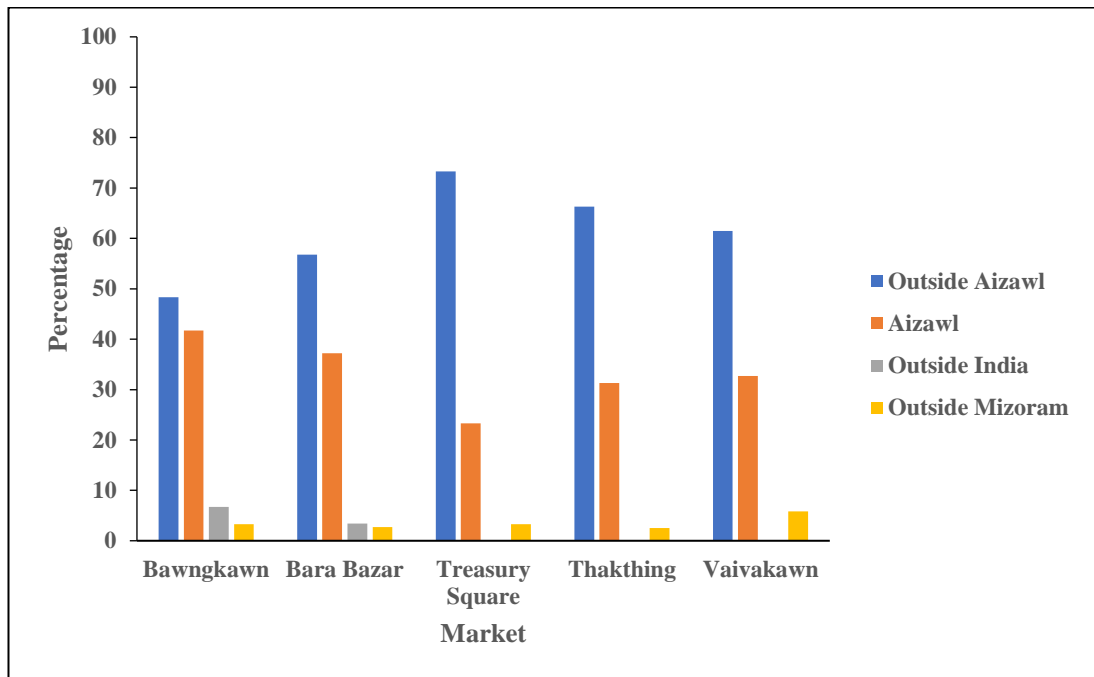


Figure 4.7 Place of origin of street vendors in Aizawl City

### 4.3 Housing characteristics of street vendors

Housing is a basic necessity and the characteristics of housing reflect the social and economic well-being of a population. The present section discusses ownership and type of house as well as housing amenities like electricity, water supply, sources of energy for cooking, electricity and toilet facility all of which are important indicators of the well-being of the respondents.

Table 4.2 Housing characteristics of street vendors in Aizawl City

<b>Indicators</b>	<b>Percentage</b>	
<b>Ownership of house</b>	Rented	55.3
	Owned	44.8
<b>Type of house</b>	Assam-Type	57.5
	Reinforced Cement Concrete (RCC)	42.5
<b>Source of water supply</b>	Piped water supply	92.8
	Spring	7.3
<b>Cooking fuel</b>	Liquefied Petroleum Gas (LPG)	99.3
		0.8
<b>Electricity</b>	Yes	100
	No	0
<b>Toilet</b>	Septic tank	95.3
	Pit latrine	4.8

Source: Field survey,2019

#### **4.3.1 Ownership and type of house**

The physical condition of residential units signifies the living condition of the street vendors. It is found that 55.3 per cent of the sampled street vendors in Aizawl City did not own a house and resided in a rented building (Table 4.2). This suggests the poor economic condition of the respondents. The study on the type of house revealed that more than half of the respondents were living in the Assam type house (57.5%) while the remaining 44.8 per cent of the respondents were lived in Reinforced Cement Concrete (RCC) building type house (Table 4.2).

As shown in Figure 4.8, majority of the vendors in the study sites were renters or tenants. However, only 32.7 per cent of the street vendors in Thakthing market were found to be renters.

In Bara Bazar, street vendors lived in RCC type house (57.4%) was more than that of the Assam type house. The other markets, other than Bara Bazar have high numbers of street vendors living in Assam type house. The reason of living in Assam type house was because of the rent paid by the street vendors. The rent of Assam type house is much cheaper than that of the RCC type house (Figure 4.9).

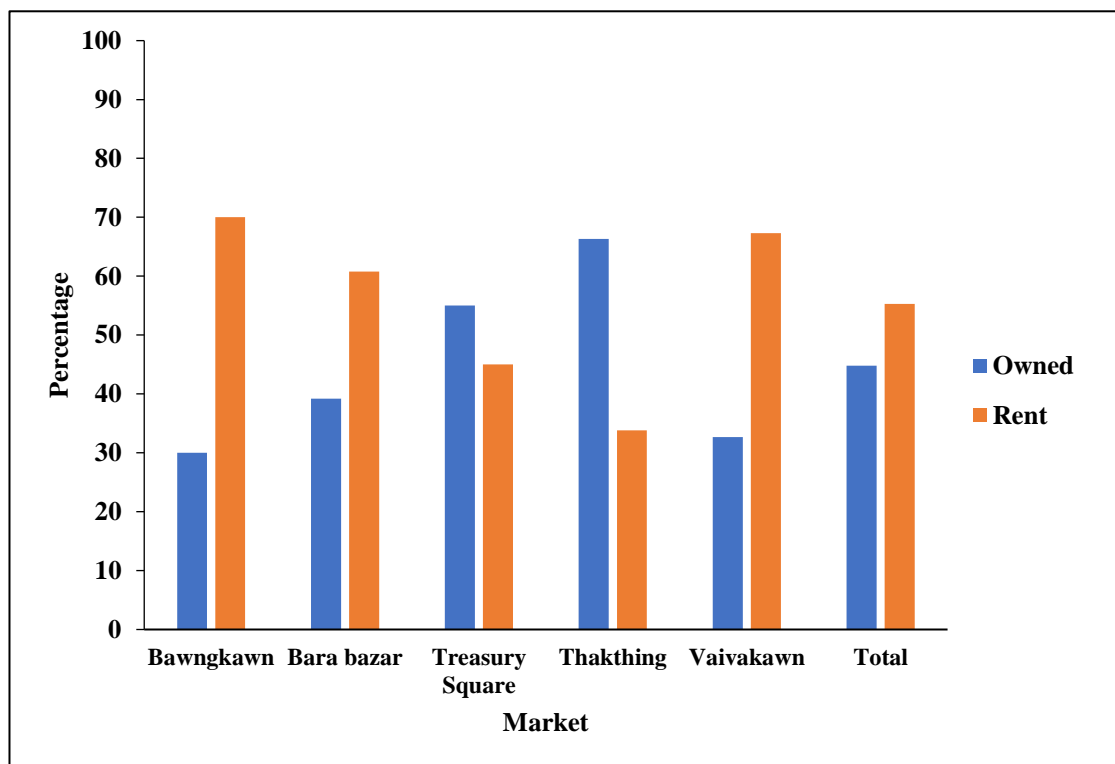


Figure 4.8 Ownership of house of street vendors in Aizawl City



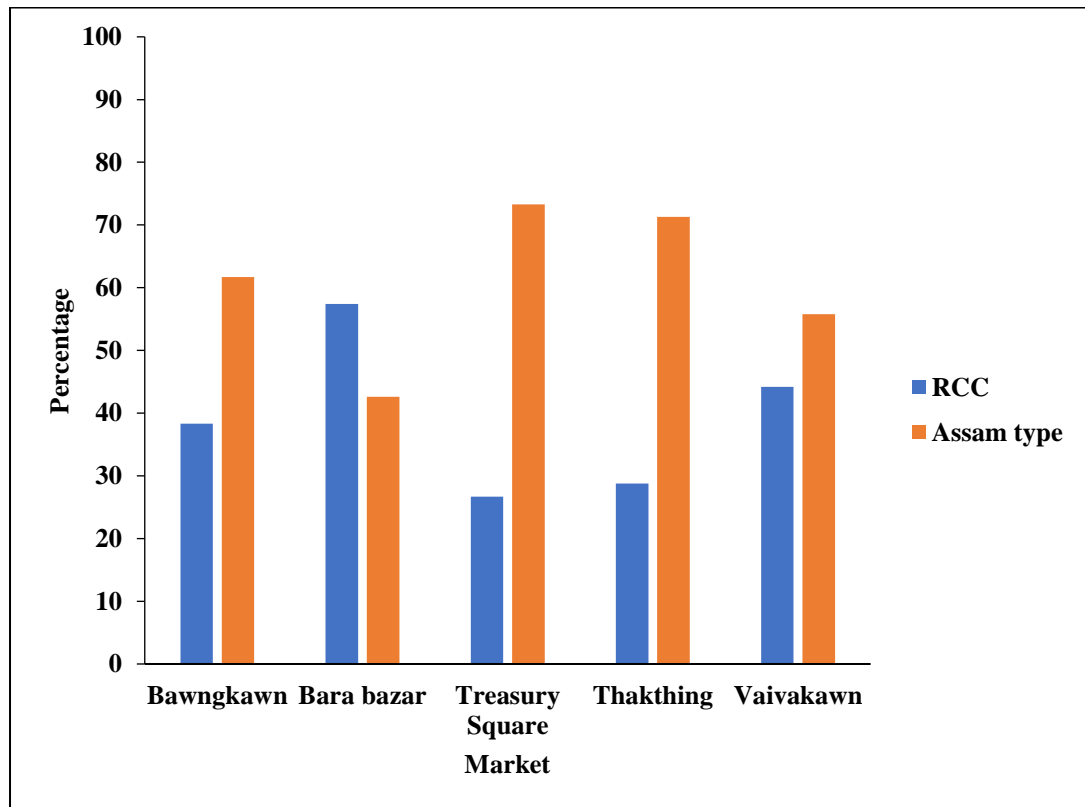


Figure 4.9 Type of house of street vendors in Aizawl City

#### 4.3.2 Housing amenities

From the study, 92.7 per cent of the street vendors relied on piped water supply from the government while 7.3 per cent used traditional spring as their main source of water supply (Table 4.2). Rainwater is plenty due to heavy Monsoon but no vendor has reported harvesting of rainwater. For cooking, almost all the street vendors were relied on Liquefied Petroleum Gas (LPG). Only 0.8 per cent used twigs or wood log for cooking (Table 4.2). The fact that majority of the street vendors have used cooking gas is encouraging from the perspective of enhancement of quality of life of marginalised section of population like informal workers. Most of the respondents have also used modern toilet facility at their homes. 4.8 per cent of the street vendors have Latrine type toilet and 95.2 per cent of the street vendors have septic tank type toilet in their home (Table 4.2). Majority of the vendors are using septic tank type toilet indicating that the vendors are having a hygienic live. Regarding electricity all the vendors were using electricity at home (Table 4.2).

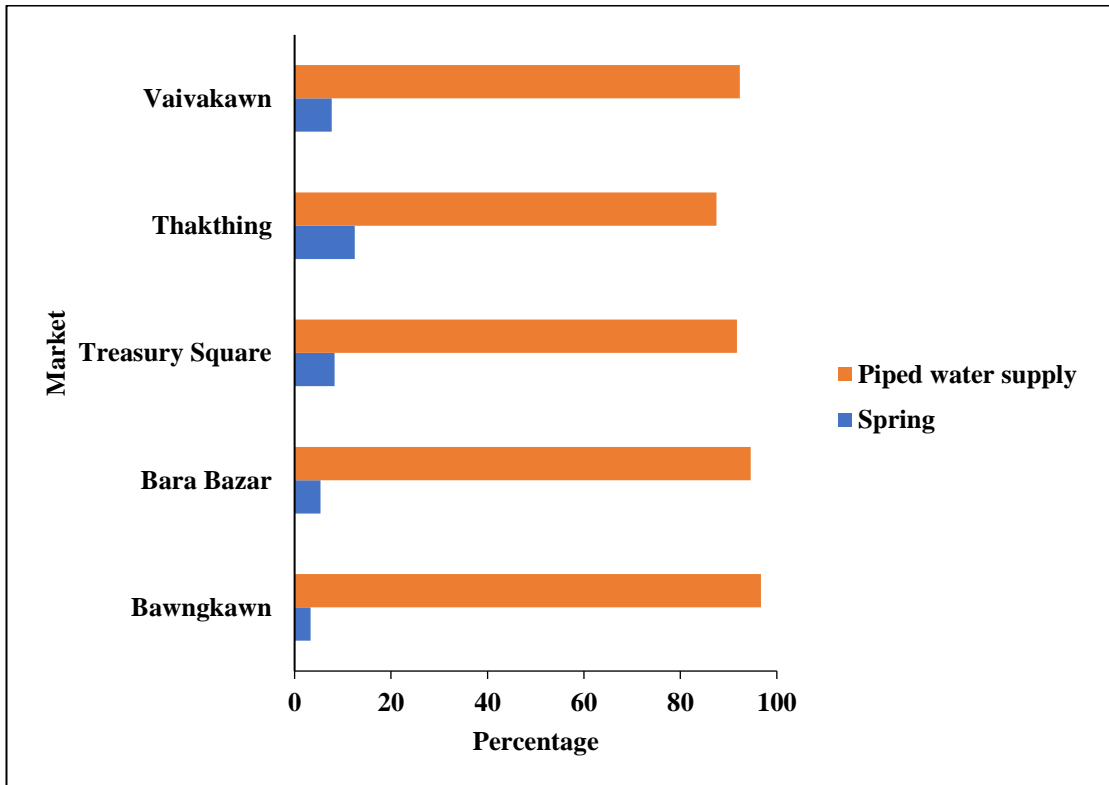


Figure 4.10 Sources of water supply in households of street vendors, Aizawl City

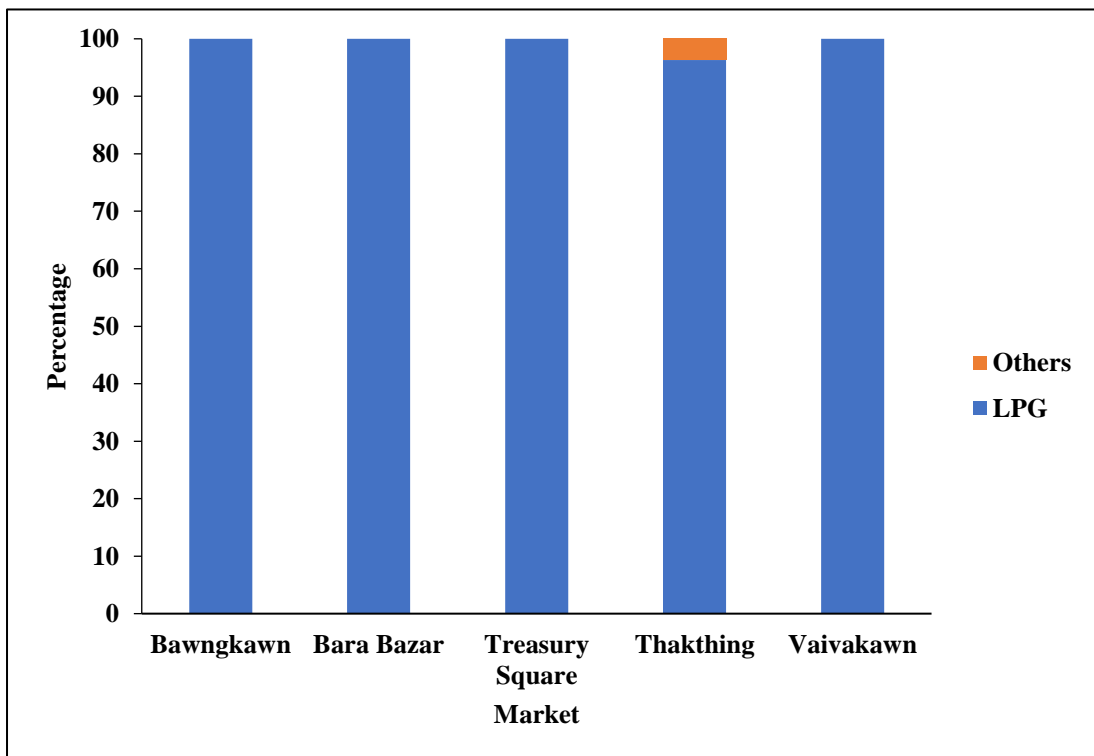


Figure 4.11 Cooking fuel used in household of street vendors, Aizawl City

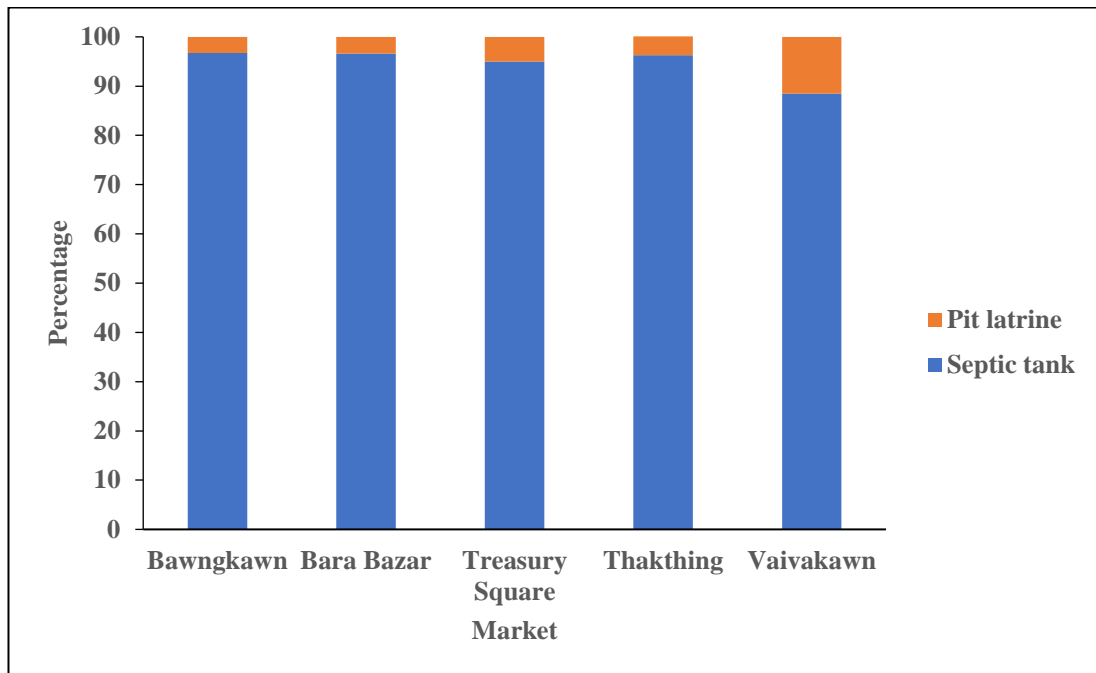


Figure 4.12 Toilet facilities in household of street vendors, Aizawl City

In market wise, almost all the street vendors from all markets depend on supply water from the government (PHE). Few vendors were still relying on spring water. These vendors who still relying on spring waters are mostly from rural market where there is no water connection (Figure 4.10). Among the study sites, 12.5 per cent of the street vendors from Thakthing market depend on spring. Almost all the vendors were using LPG for cooking except some of the vendors from Thakthing. Around 3.8 per cent of street vendors used twigs or wood log for cooking fuel (Figure 4.11).

Around 3.3 per cent of the street vendors in Bawngkawn market have latrine type toilet while 96.7 per cent of the street vendors used septic tank type toilet which is the highest septic tank type toilet users among the markets. In Bara bazar market, 96.6 per cent of the street vendors used septic tank type toilet and only 3.4 per cent used latrine type toilet. In Treasury market, 5 per cent of the street vendors used latrine toilet while 95 per cent used septic tank type toilet. There were 3.8 per cent of the street vendor used latrine type toilet and 96.2 per cent used septic tank type toilet in Thakthing market. The highest users of Latrine type toilet were found in Vaivakawn market (11.5%) of the street vendors and 88.5 per cent of the street vendors used septic tank type toilet (Figure 4.12).

#### **4.4 Occupational characteristics of street vendors**

The occupation characteristics includes information regarding vending and place of vending which include type of vendors, type of vending items, reasons to enter in vending, experience, mode of transport of vending items by mobile vendors, distance from home to vending place, rent, rent collector, holding license, monthly income, sources of capital on initial stage, mode of payment for purchasing vending items, sources of vending items. A Chi-square test is used to examine the relationship between different variables including income and types of vendors, type of vending items and duration of vending.

##### **4.4.1 Type of street vendors**

The most common street vendors in Aizawl City were the stationary vendors who sell goods and services from their fixed location. Stationary vendors account for 82.5 per cent while itinerant or mobile vendors who sell goods from one place to another by carrying their items accounted for 17.5 per cent (Table 4.3). Although they are mobile, they usually moved around within a particular market only. Mobile vendors constituted 20 per cent of the total vendors in Bawngkawn market while only 13.5 per cent constituted mobile vendors in Vaivakawn market (Figure 4.13)

Table 4.3 Occupational Characteristics of street vendors in Aizawl City

<b>Indicators</b>	<b>Percentage</b>	
<b>Type of Vendors</b>	Stationary	82.50
	Mobile	17.50
<b>Type of items sold</b>	Vegetables and fruits	65.00
	Cooked food	11.50
	Garments	11.25
	Machinery items	5.25
	Variety items	5.00
	Utensils	2.00
<b>Reasons of vending</b>	Unemployment	66.25
	Financial Problem	21.00
	Due to children's education	6.50
	Health problem	6.25
<b>Experience in vending</b>	Above 6 years	43.00
	1-3 years	30.25
	4-6 years	26.75
<b>Rent of vending place</b>	Yes	75.00
	No	25.00
<b>Holding of license</b>	Yes	68.00
	No	32.00
<b>Sources of capital</b>	Personal savings	80.50
	From relatives	9.25
	Private financiers	9.25
	Loan from bank	1.00
<b>Monthly Income</b>	Less than Rs 10000	15.75
	Rs 10000-Rs 20000	37.50
	More than Rs 20000	46.75

Source: Field survey, 2019

#### 4.4.2 Type of vending items

Street vendors sell variety products such as cooked foods, vegetables and fruits, utensils, clothes and dresses, machines and variety items. The study revealed that majority of the street vendors in Aizawl City were fruits and vegetables (65%).

Street vendors preferred to sell fruits and vegetables due to high demand of the consumers. Selling of cooked foods contributed for 11.5 per cent of the total vendors. Cooked food vendors were mostly found nearby educational institutions during daytime and along popular roadsides at night, Street vendors engaged in selling of garments comprises of 11.3 per cent of the respondents. Most of the garments sold by vendors were imported second-hand garments which are popular among the local people due to its quality and affordability. Another type of street vendors found in the study area were those who engaged in selling of variety items like *paan*, cigarettes and packed eatables; and utensils which constitute 5 per cent and 2 per cent of the total respondents respectively (Table 4.3).

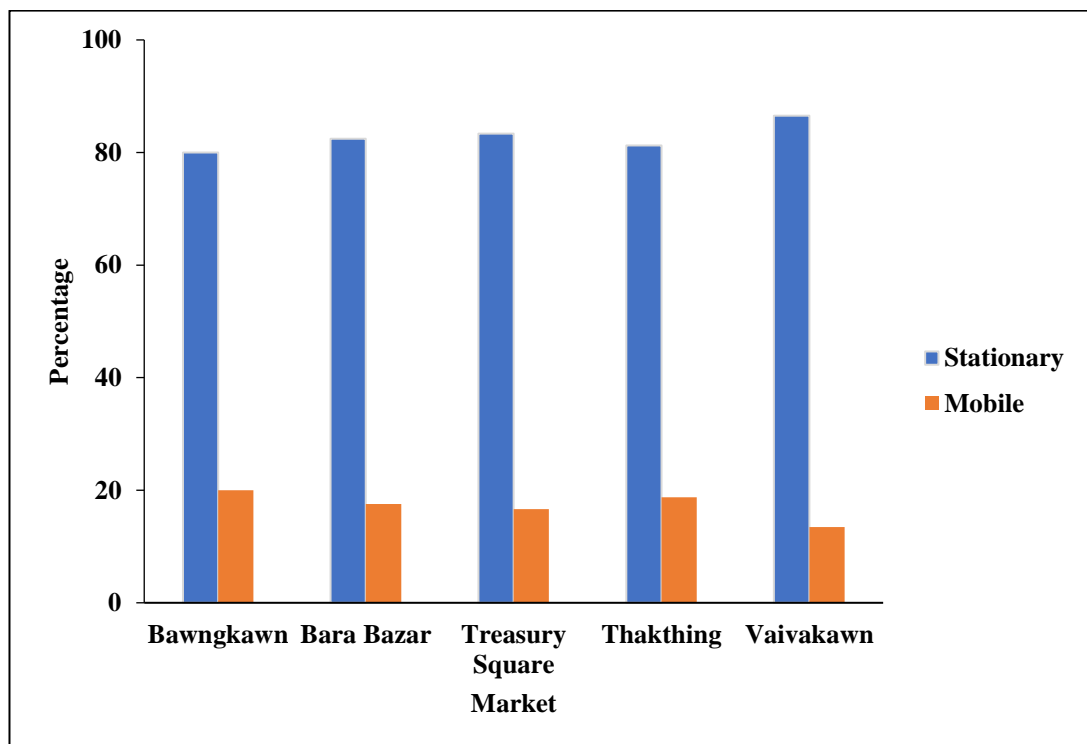


Figure 4.13 Type of street vendors in Aizawl City

The highest proportion of fruits and vegetables vendors was found in Thakthing market followed by Vaivakawn. More than 80 per cent of the total respondents in Thakthing market were engaged in selling of fruits and vegetables. In Bara Bazar, fruits and vegetable vendors accounted for only 53.4 per cent which is the

least among all the markets. It is also found that Bawngkawn has the highest proportion of cooked food vendors with 18.3 per cent of the total respondents engaged in cooked food (Figure 4.14).

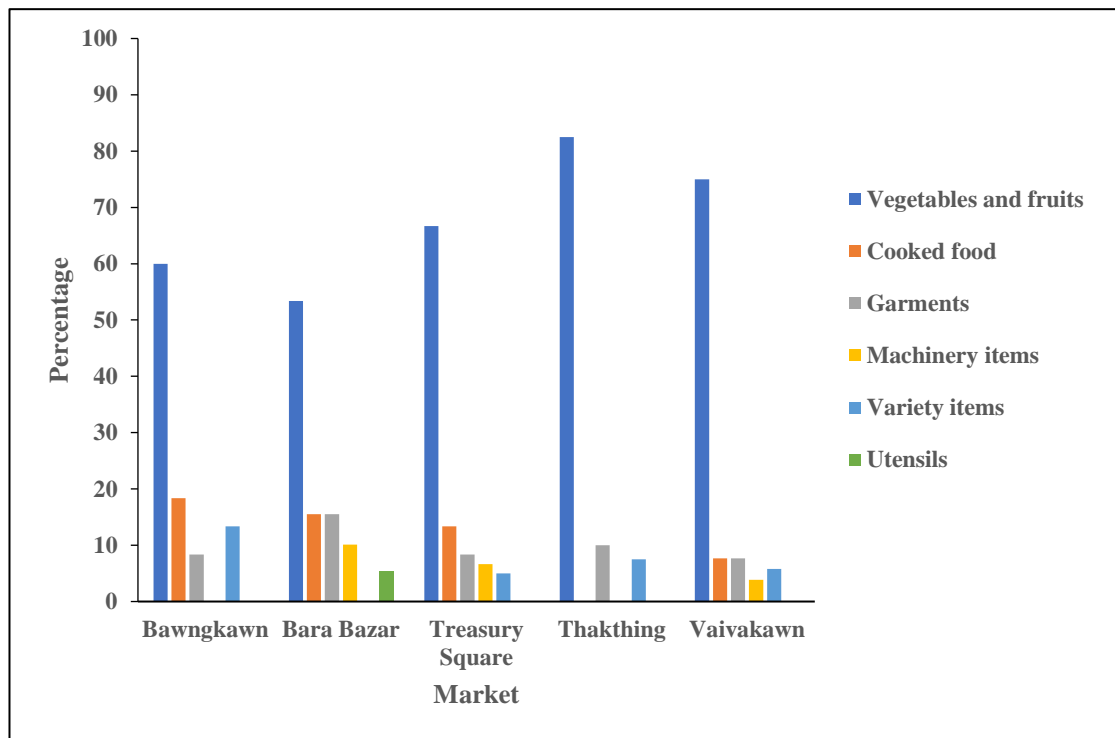


Figure 4.14 Type of vending items, Aizawl City

#### 4.4.3 Reasons of vending

Majority of the respondents have reported that they choose street vending due to unemployment. Many of them failed to get jobs into formal sector mainly due to low educational level, lack of skills and absence of other necessary qualifications. Significant number of respondents have attributed financial problem as the main reason behind entering into street vending. Generally, they are vendors who have not even tried to get formal jobs due to their lack of skills and educational qualification. They choose vending as it does not require skills, capital and proper education. Around 6 per cent of the respondents have reported that they choose vending due to health reason as they could not work hard in other manual activities. Some vendors have also reported that they migrated to Aizawl for their children’s education and started street

vending business for which they could easily procure vending items like fruits and vegetables from their original village (Table 4.3).

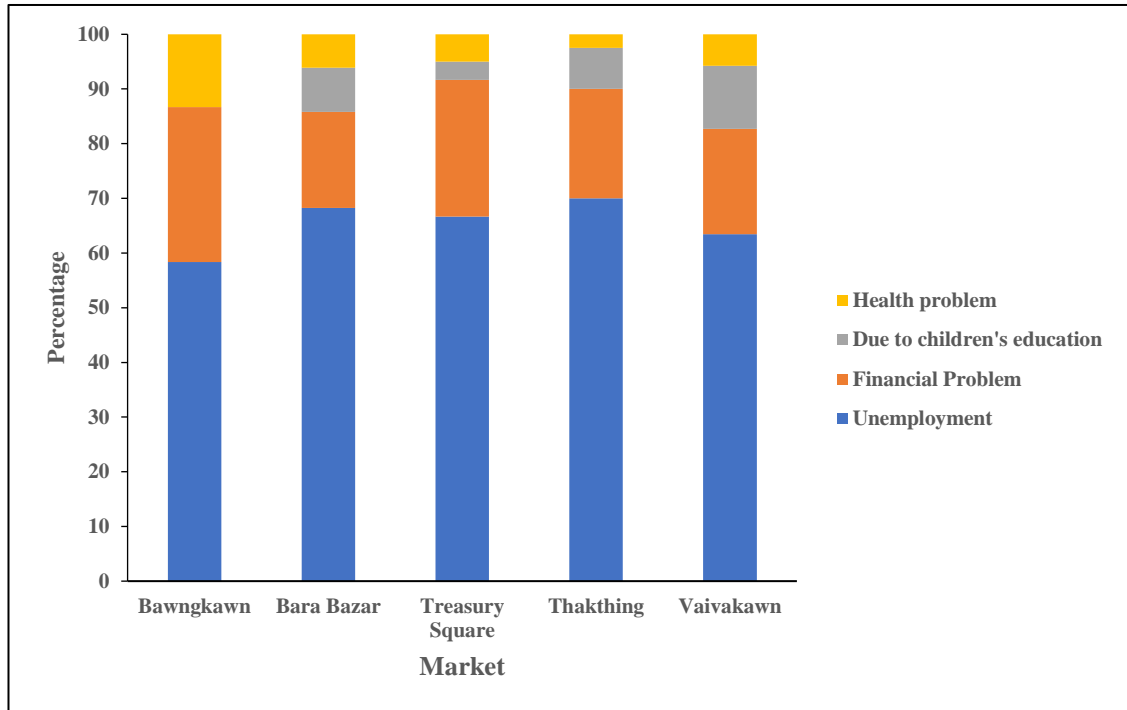


Figure 4.15 Reasons of vending, Aizawl City

In market wise, in all the areas the highest percentage of reason of entering into street vending was unemployment. Thakthing market has the highest number of street vendors who involved in vending due to unemployment (70%) and followed by Bara bazar, Treasury, Vaivakawn and Bawngkawn markets. Bawngkawn market (28.3%) has the highest number of vendors due to financial problem (Figure 4.15).

#### 4.4.4 Experience in vending

The study revealed that 43 per cent of the sampled respondents have engaged in street vending for more than 6 years. On the other hand, 30.3 per cent of the vendors have only 1-3 years of experience in the street (Table 4.3). The experience of the vendors is important as the earning and economic status may vary between the less experienced and more experienced street vendors. It is observed that the average income of the less experienced vendors is Rs 22645 per month which is relatively bigger than the average income of the more experienced vendors that is Rs. 20681 per



month. The most experienced vendors were found in Bawngkawn market and Bara Bazar. These are the oldest markets where street vending has been a family tradition for a number of vendors. On the other hand, Thakthing and Treasure Square markets have the least experienced vendors among the markets (Figure 4.16).

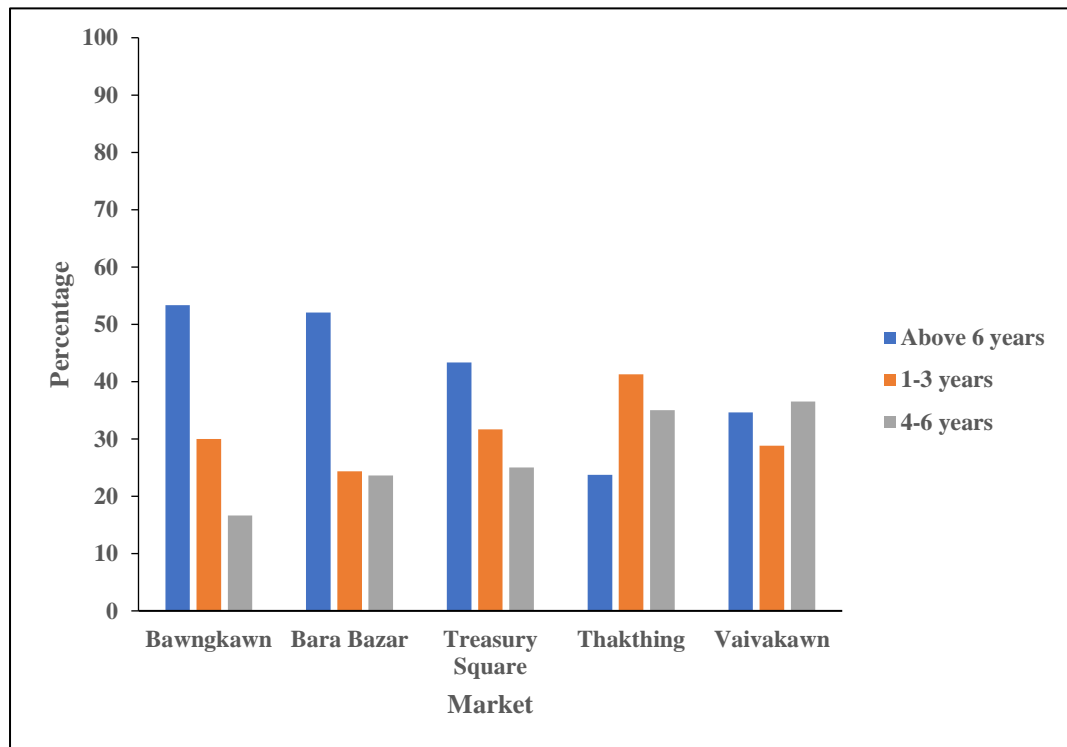


Figure 4.16 Experience of street vendors in vending, Aizawl City

#### 4.4.5 Rent of vending place

Street vendors used to sell their items in vacant public spaces or in front of shops, offices, public offices or educational institutions. It is found that 79 per cent of the total vendors paid fees to Aizawl Municipal Corporation, 16.0 per cent paid to the shop owner and 5 per cent paid rent to organization or association. Out of the total vendors, only 25 per cent did not pay fees or rent (Table 4.3). The rent paying vendors varies from 58.78 per cent in Bara Bazar to 91.7 per cent in Treasury Square market. All of the rent paying street vendors from Treasury Square paid their fees to Aizawl Municipal Corporation. In other markets, the percentage of vendors who paid fees to the municipal corporation ranges from 64.29 per cent in Bawngkawn to 92.86 per cent in Thakthing market (Figure 4.16).

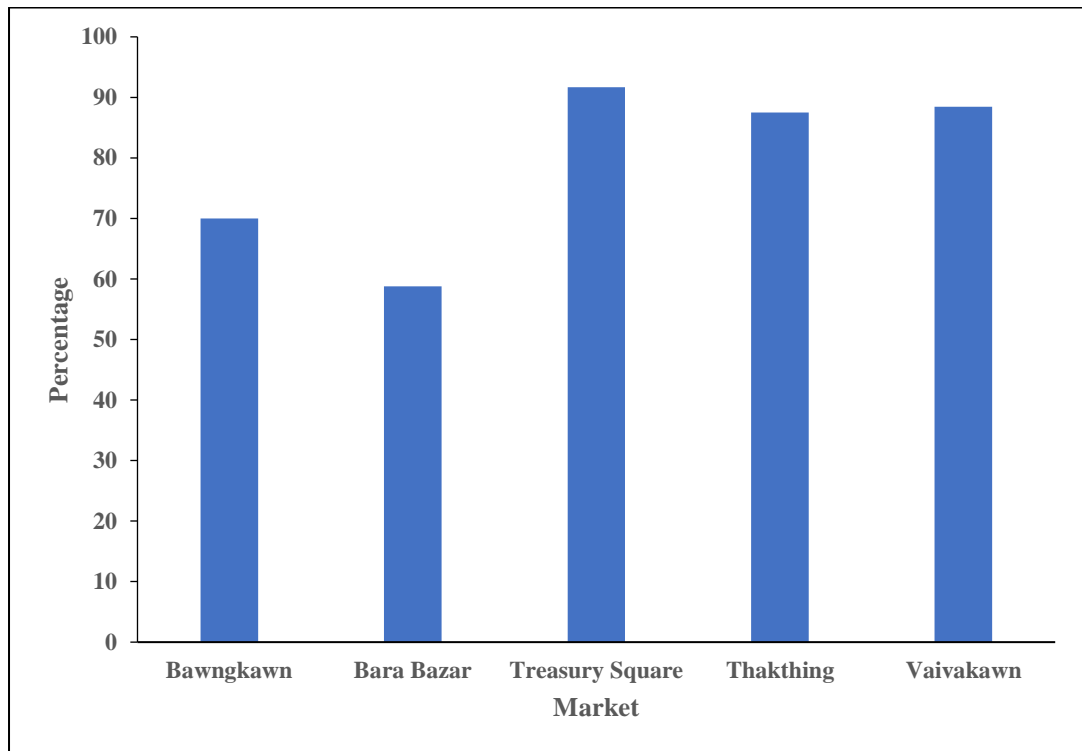


Figure 4.16 Percentage of rent paying vendors, Aizawl City

#### 4.4.6 Holding of license

Street vendors were issued license by the state government and the municipal authorities. Issuing license minimize the number of harassment and prevent confiscation and eviction of street vendors by authorities. The study shows that 68 per cent of street vendors in Aizawl city possessed license (Table 4.3). Market wise study revealed all vendors in Treasury Square hold license. In other markets, the percentage of vending license holders varied from 55 per cent in Bawngkawn to 70 per cent in Thakthing market (Figure 4.17).

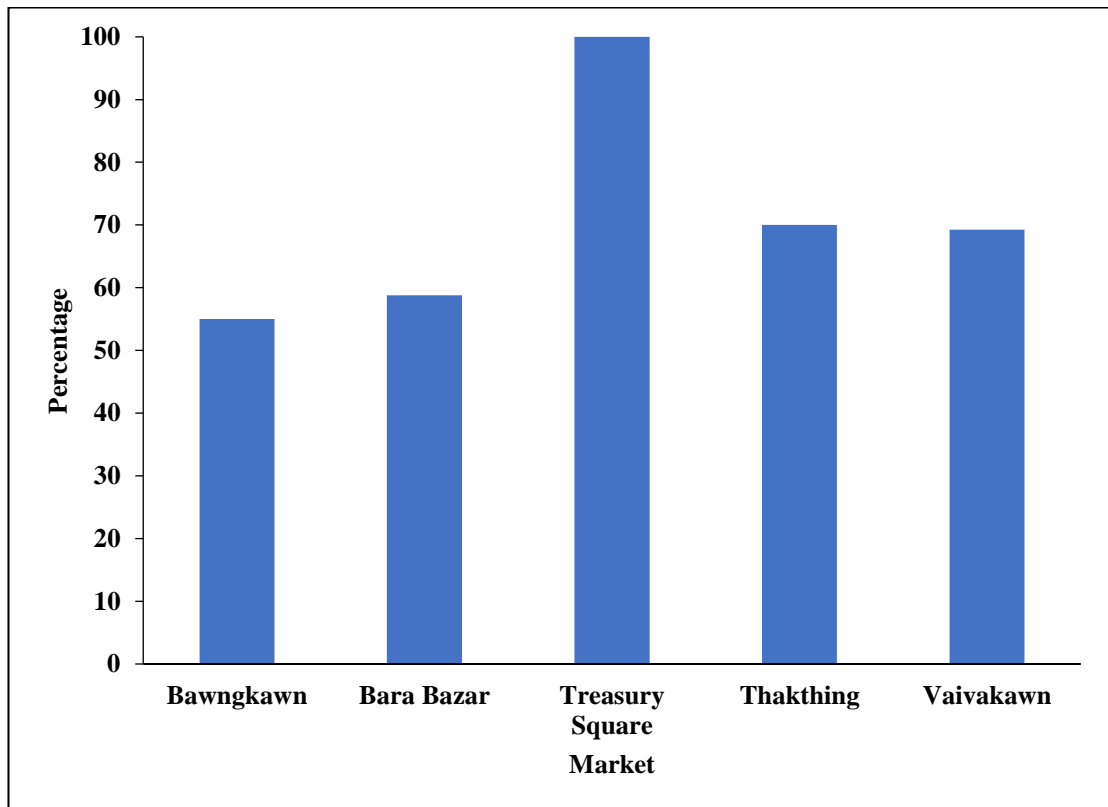


Figure 4.17 Percentage of vending license holder, Aizawl City

#### 4.4.7 Sources of capital

Among the different sources of capital, majority of the street vendors relied on their personal savings to start up vending. Out of the total street vendors, 80.5 per cent used their savings to start up their business. Borrowing of initial capital from relatives, private lenders or bank is less popular. Only 9.3 per cent of the sampled street vendors borrowed initial capital from their relatives. Money lenders and private financiers loaned initial capital to another 9.3 per cent of the total street vendors. Only 1.1 per cent borrowed money from the banks (Table 4.3). All of the vendors who have borrowed from banks found in Bara Bazar only. Vaivakawn market has relatively higher number of vendors who have borrowed from private lenders (Figure 4.18).

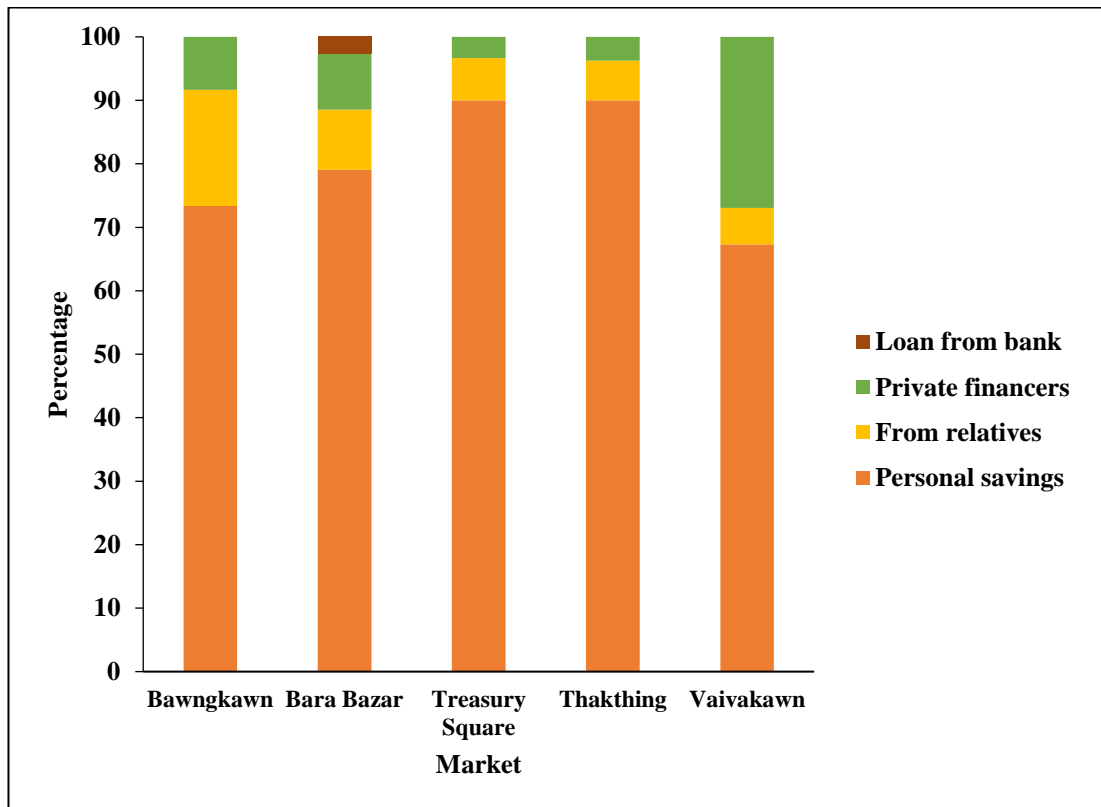


Figure 4.18 Sources of capital

#### 4.4.8 Income

The average monthly income of street vendors in Aizawl city was Rs. 23,100. Majority of the vendors in every market earned more than Rs. 20,000 in a month. However, the reported income from vending varies significantly. More than 45 per cent of the total respondents have earned more than Rs. 20,000 per month. On the other hand, respondents who earned less than Rs. 10,000 per month constituted 15.8 per cent of the total vendors. The earning of the latter is quite low to sustain families taking into account of the cost of living in Aizawl city (Table 4.3)

In Treasury Square market, 63.3 per cent of the street vendors earned more than Rs 20,000 in a month. Relatively higher income was also reported by vendors from Thakthing and Vaivakawn. On the other hand, Bawngkawn and Bara Bazar have relatively higher proportions of low income vendors (Figure 4.19).

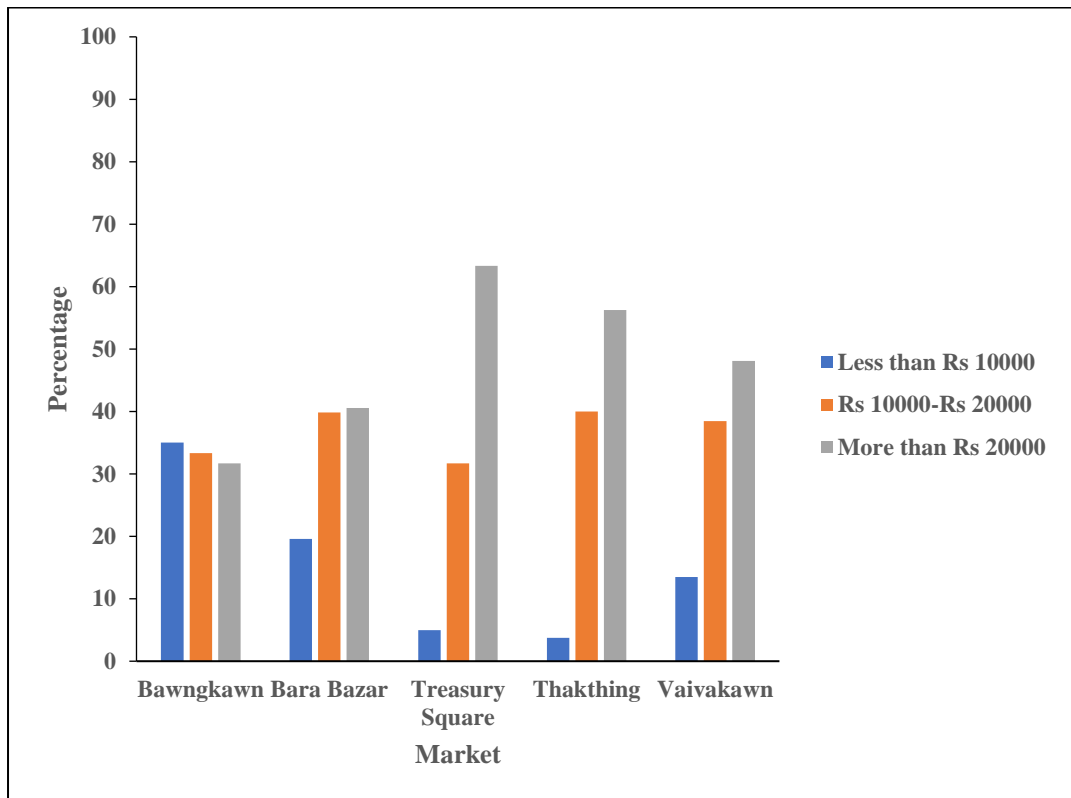


Figure 4.19 Income of street vendors

#### 4.5 Chi-Square test

Chi-square tests were conducted to test the null hypotheses that there are no significant differences in income levels of street vendors in Aizawl City on the basis of gender, marital status, educational attainment level, types of vendors, types of vending items, and experience of vending. Table 4.4 shows that the asymptomatic significance values or p-values of all the variables are greater than 0.05. Thus, it can be concluded with 95 per cent level of significance that there is no association between income of street vendors and gender, marital status, educational level, types of vendors, types of vending items, or experience in vending.

Table 4.4 Chi-square test on association between income and vendor's characteristics

<b>Variables</b>	<b>Calculated Value</b>	<b>df</b>	<b>Asymp. Sig. (2-sided)</b>
Gender	1.035	2	0.596
Marital status	8.814	6	0.184
Educational level	8.630	6	0.195
Types of vendors	2.254	2	0.324
Vending items	8.768	10	0.554
Experience in vending	2.456	4	0.653

Computed by: SPSS 20

#### **4.6 Conclusion**

Street vending is primarily a female oriented occupation in Aizawl City. Female migrants from rural areas dominated the business of street vending in all the study markets. The average age of street vendors was 42 years and majority of the vendors were found in the age group of 41-50 years. The educational attainment level of the street vendors showed that majority of the respondents have not completed High school. With respect to housing, majority of the sampled street vendors in Aizawl City did not have their own houses but resided in rented buildings. More than half of the respondents were living in tin-roofed Assam type buildings. The study also showed almost the entire street vendors relied on piped water supply and Liquefied Petroleum Gas (LPG) for domestic water and cooking respectively.

It is also found that most of the street vendors were stationary vendors and majority of the street vendors in Aizawl City were fruits and vegetables. Most of the vendors reported that they entered into street vending because of unemployment. Majority of the sampled vendors were involved in street vending for more than 6 years.

The study also found that 68 per cent of street vendors in Aizawl city possessed vending license. Market wise study revealed that all the vendors in Treasury Square hold license. Lastly, Chi-square tests were conducted and prove that there is no significant difference in income levels of street vendors in Aizawl City on the basis of gender, marital status, educational attainment level, types of vendors, types of vending items, duration of vending.

## CHAPTER 5

### LIVABILITY OF STREET VENDORS IN AIZAWL CITY

#### 5.1 Introduction

Streets are not only commercial place for the street vendors, they are also lived spaces where vendors spend and live most of their time. The everyday lives of vendors revolve around the street and their wellbeing is determined by the physical and social environment of their spaces of work.

Livability is a broad concept that encompasses multiple fields of study (Vergunst, 2003). It has been defined in various ways based on the context and dimensions, all emphasizing different livability attributes (Satu and Chiu, 2017). It is an umbrella to a variety of meanings, which depend both on the objects of measurement and on the perspective of those making those measurements (Heuvel, 2013). The term can be applied to a variety of perspectives depending on the subject of research, the object of study and the perception of those conducting the study. As such, livability has been defined in a different of ways, but it generally refers to the quality of life provided by the place they occupy. Thus, livability refers to the state of living environment, which should offer an acceptable quality of life to the residents of a particular locale. It also refers to the physical, social and mental well-being and personal development of the population. It includes a variety of various issues that are supported by a common set of guiding principles such as accessibility, equity, and participation that give matter to the concepts of livability (Cities Plus, 2003).

Livability depends on the locally prevailing economic, social and cultural conditions. It refers to the condition of living of a place and which should offer an acceptable quality of life to the residents of a particular locale. It relies on the prevailing economic, social and cultural conditions of a locale. Livability has turned out to be a global necessity for health, economic and social survival in agglomerations all over the place (Lyndhurst, 2004). It encompasses issues such as environmental quality, safety, affordability, neighbourliness, convenience, and the presence of



neighbourhood amenities such as parks, open space, sidewalks, restaurants, and neighbourhood-serving stores (Wheeler, 2001).

The present chapter deals with livability of street vendors of Aizawl City in their vending environment by focusing on their physical, social, and economic environments. Livability is measured with the help of a composite livability index. Livability indicators are selected and classified into three dimensions – workplace environment, safety and security and, economic dimensions.

## **5.2 Indicators and dimensions of livability**

Fifteen indicators were selected to measure livability of street vendors in their vending places. The selected indicators were grouped into three dimensions. The first dimension is workplace environment which is composed of seven (7) indicators like distance of workplace from home, availabilities of toilet facility, drinking water facility, roof, electricity, storage and dustbin. The second dimension is safety and security which is composed of six (6) indicators including safety from robbery and harassment, problems with vendors, health problems due to rain or pollutions, street floods problem and safety from road traffic accident. The third dimension is economic dimension which is made of up of two indicators- assistance from government and income of street vendors. The indicators and dimensions of livability are shown in Table 5.1.

Table 5.1 Indicators and dimensions of livability of street vendors in Aizawl City

<b>Dimensions</b>	<b>Indicators</b>	<b>Code of Indicator</b>
Workplace environment	Percentage of vendors living within 4 kms from workplace	X1
	Percentage of vendors having toilet facility within vending area	X2
	Percentage of vendors having drinking water facility within vending area	X3
	Percentage of vendors having roofed vending stall	X4
	Percentage of vendors having electricity in vending units	X5
	Percentage of vendors having dustbin in vending area	X6
	Percentage of vendors having storage facility at vending area	X7
Safety and Security	Percentage of vendors who did not report from robbery	X8
	Percentage of vendors who did not report harassment	X9
	Percentage of vendors who do not have problem with fellow vendors	X10
	Percentage of vendors who do not have health problem due to rain or pollution	X11
	Percentage of vendors who do not face problem with street flood	X12
Economic	Percentage of vendors who injury from road accident	X13
	Percentage of vendors received assistance from Government	X14
	Percentage of vendors having income more than monthly average	X15

### 5.3 Workplace environment dimension

In workplace environment dimension, indicators like distance of workplace from home, availability of toilet, drinking water, roof, electricity, dustbin, and storage are taken. These indicators reflect the accessibility and availability of the daily needs of vendors.

Table 5.2 Workplace environment dimension of livability

<b>Dimensions</b>	<b>Indicators</b>	<b>Percentage</b>
Workplace environment	Percentage of vendors living within 4 kms from workplace	41.5
	Percentage of vendors having toilet facility within vending area	46.8
	Percentage of vendors having drinking water within vending area	11.00
	Percentage of vendors having roofed vending stall	17.3
	Percentage of vendors having electricity in vending units	89.8
	Percentage of vendors having dustbin in vending area	45.2
	Percentage of vendors having storage facility at vending area	34.7

Source: Field survey, 2019

### 5.3.1 Distance of vending place from home

Vendors in Aizawl resided in different localities in the city. Some of them came from distant peripheral localities and villages outside the city area. They travelled long distances to work and earn their living. The study revealed that 58.5 per cent of the total respondents have travelled more than 4 kilometres to reach their workplace which is relatively far keeping in mid the cost of transport and time taken in a city like Aizawl (Table 5.2). The average distance covered by street vendors in Thakthing and Treasury Square were relatively longer than those in other markets. A number of vendors in these markets were found to travel from peripheral villages (Figure 5.1).

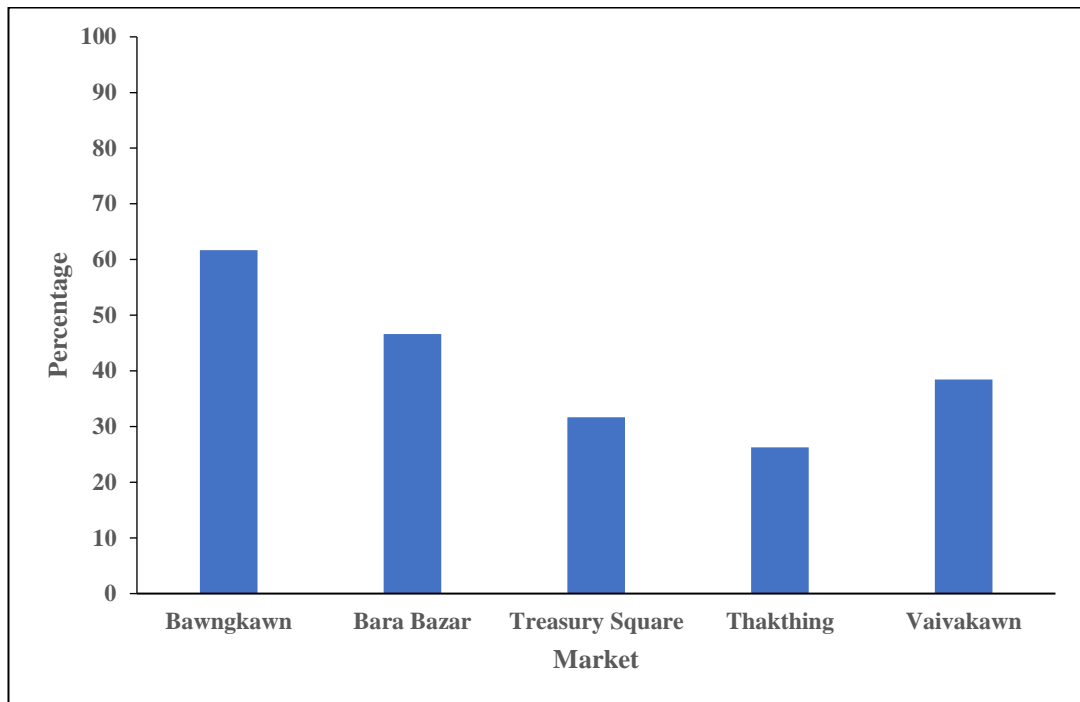


Figure 5.1 Percentage of vendors living within 4 kms from workplace

A Chi-Square test is conducted to test the null hypothesis that there is no significant difference in distance of workplace from home and location of vending.

Table 5.3 Chi-Square test on association between location and distance of workplace from home

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.901	4	.000
N of Valid Cases	400		

Computed by: SPSS 20

Table 5.3 shows that the calculated value (21.901) is larger than the critical value which is 9.488. Thus, the asymptomatic significance value or p-value is smaller than 0.05. Therefore, it can be concluded that there is significant association between distance of workplace from home and location of vending.

### 5.3.2 Availability of toilet facility

Availability of toilet facility in workplace is necessary for maintaining sanitation and hygiene. However, vending markets in Aizawl are highly congested and

there are limited vacant spaces for construction of public toilet. Although a few public urinals and paid toilets were available in some markets, they were located at considerable distance beyond the reach of many vendors. Only 46.8 per cent of the street vendors reported that they have accessed to toilet facility in their vending areas (Table 5.2). Regarding the type of toilet in their vending place, it is observed that 71.6 per cent have access to traditional public urinals and the remaining 28.4 per cent have access to septic tank which are usually paid toilets. Vendors in Bawngkawn, Treasury Square and Thakthing markets have relatively poor access to proper toilet in their vending areas. The vendors in these markets have to walk and find toilets at considerable distance from their vending sites. On the other hand, Bara Bazar and Vaivakawn markets have fared relatively better in access to toilet facility (Figure 5.2).

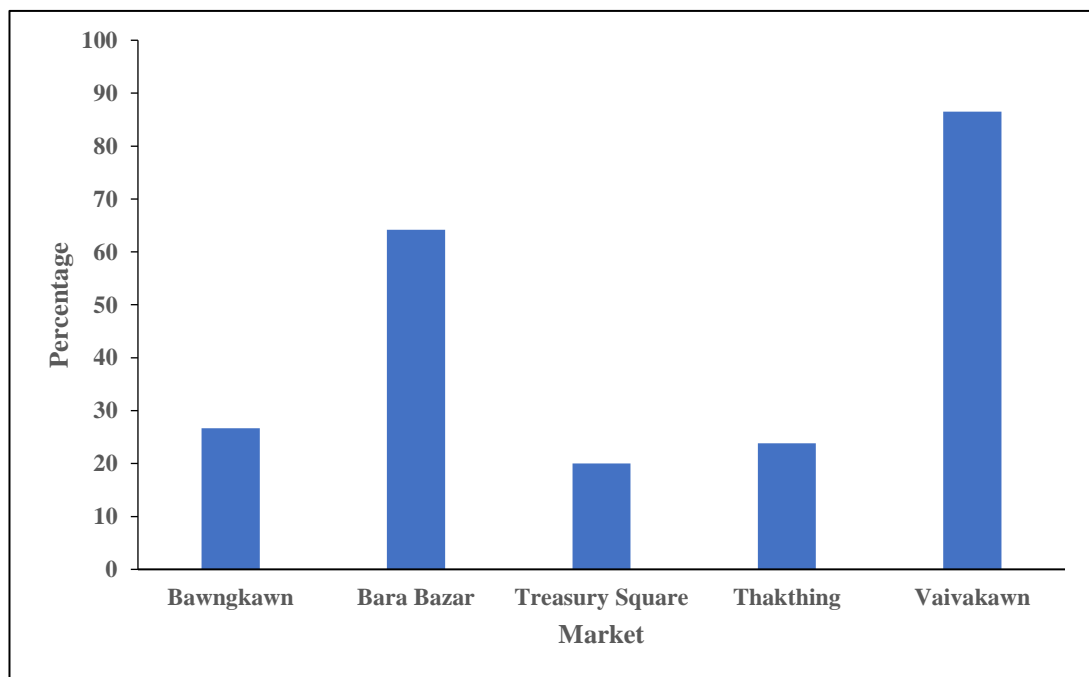


Figure 5.2 Percentage of vendors having toilet facility within vending area

A Chi-Square test is conducted to test the null hypothesis that there is no significant difference in availability of toilet facility in vending space in Aizawl City on the basis of location of vending.

Table 5.4 Chi-Square test on association between location and toilet

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	95.117	4	.000
N of Valid Cases	400		

Computed by: SPSS 20

Table 5.4 shows that the calculated value (95.117) is much larger than the critical value which is 9.488. Thus, the asymptomatic significance value or p-value is smaller than 0.05. Therefore, it can be concluded that there is significant association between availability of toilet facility and location of vending.

### 5.3.3 Drinking water facility

Accessibility and availability of drinking water is essential for the vendors as well as the customers. The study found that only 11 per cent of street vendors have access to drinking water in their vending areas (Table 5.2). The low percentage of vendors without safe drinking water is mainly due to inadequate water points. Water points were found in a few places only in the market usually nearby government offices and shopping malls. The street vendors who did not have safe drinking water manage by their own - either by bringing water from their home, bought packaged water or filling their water bottle from the nearby households near their vending place. Vendors in markets of Bawngkawn, Treasury Square and Vaivakawn did not have drinking water facility. Besides, only a few vendors in Bara Bazar and Thakthing markets have access to drinking water facility in their vending areas (Table 5.5).

Table 5.5 Percentage of vendors having drinking water facility

Safe drinking water	Bawngkawn	Bara Bazar	Treasury Square	Thakthing	Vaivakawn
Yes	0	22.3	0	13.8	0

Source: Field survey

A Chi-Square test is conducted to test the null hypothesis that there is no significant difference availability of drinking water facility and location of vending.

Table 5.6 Chi-Square test on relationship between location and availability of drinking water facility

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	41.171	4	.000
N of Valid Cases	400		

Computed by: SPSS 20

Table 5.6 shows that the calculated value (41.171) is larger than the critical value which is 9.488. So, it can be concluded that there is a significant relationship between availability of drinking water facility and location of vending.

#### 5.3.4 Presence of roofed vending stall

Presence of roof in vending stalls or vending places is considered an important indicator of livability of street vendors in Aizawl City keeping in mind the climatic condition of the region. However, it is found that only 17.3 per cent of the vendors have equipped their vending stalls with either temporary or permanent structure (Table 5.2). This includes a cluster of vendors who have joined roof in their vending areas. Majority of the vendors used portable or temporary roof as it is not possible to construct permanent roof in their vending places. Bara Bazar has the highest percentage of vendors having roofed vending stall (Table 5.7). While no vendors from Bawngkawn have roofed vending stall because most of the vendors were found in the sidewalks where construction of roof is not possible.

Table 5.7 Percentage of vendors having roofed vending stall

Roof	Bawngkawn	Bara Bazar	Treasury Square	Thakthing	Vaivakawn
Yes	0	20.3	18.3	12.5	17.3

Source: Field survey

A Chi-square test is conducted to test the null hypothesis that there is no significant difference in presence of roofed vending stall on the basis of location of vending.

Table 5.8 Chi-Square test on association between location and presence of roofed vending stall

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.945	4	.005
N of Valid Cases	400		

Computed by: SPSS 20

Table 5.8 shows that the calculated value (14.945) is much larger than the critical value which is 9.488. Hence, it can be concluded that there is a significant association between presence of roofed vending stall and location of vending.

### 5.3.5 Availability of electricity

Access to electricity is quite low among street vendors in Aizawl City. The percentage of vendors who have access to any type of electricity is only 10.2 per cent from the total respondents (Table 5.2). Access to electricity is quite less as the necessity of electricity in vending place depends on the type of vendors and the items they are selling. Electricity is mostly required by street food and machinery vendors while mobile vendors do not need electricity as they constantly changed their location of vending. The cooked food and machinery vendors are less in number and leading to less number of electricity user among the vendors.

Access to electricity is quite low among street vendors in Aizawl City. Electricity is vending place in Aizawl City markets is quite low. Among the vending markets Bara Bazar has the highest number of vendors having access to electricity (13.5%) followed by Treasury. In all the markets, the percentage of vendors having electricity was below 15 per cent each from the total respondents (Figure 5.3).



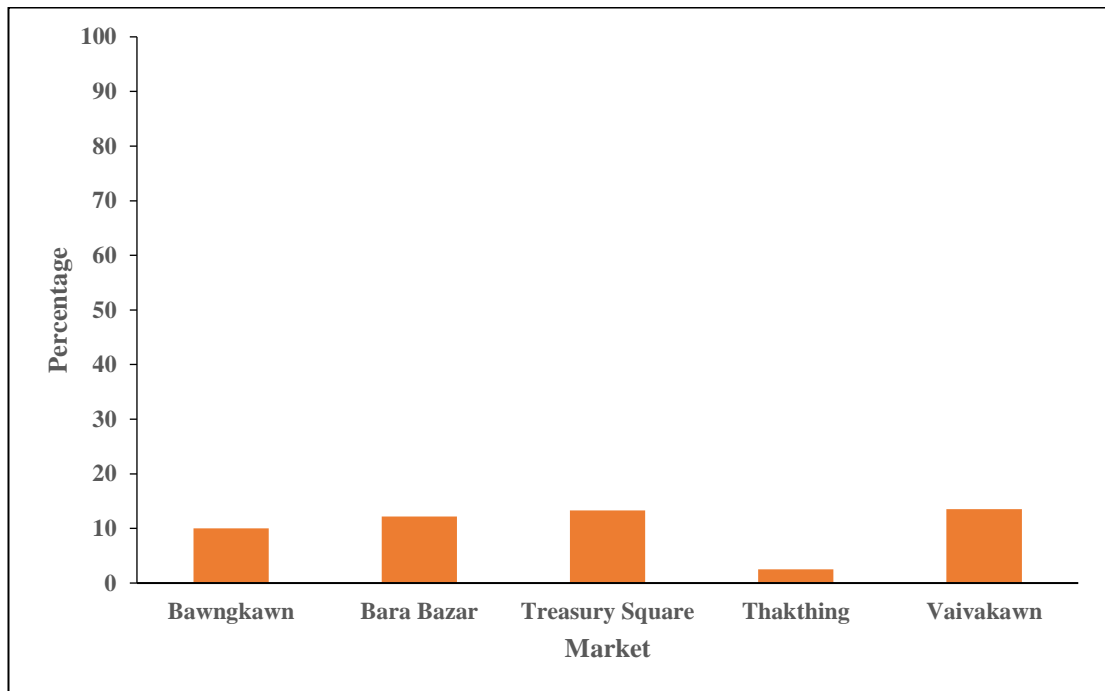


Figure 5.3 Percentage of vendors who used electricity in their vending place

Chi-Square test is conducted to test the null hypothesis that there is no significant difference in availability of electricity on the basis of location of vending.

Table 5.9 Chi-Square test on association between location and availability of electricity in vending place

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.019	4	.135
N of Valid Cases	400		

Computed by: SPSS 20

Table 5.9 shows that the calculated value (7.019) is smaller than the critical value which is 9.488. Therefore, it can be concluded that there is no significant association between availability of electricity and location of vending.

### 5.3.6 Availability of dustbin

Insufficient sanitation results in unhygienic market conditions that undermine vendors' health. Availability of dustbin in workplace is an important determinant of cleanliness that affect the health of vendors and customers. Out of the 400 sampled

vendors, only 45.3 per cent have reported availability of dustbin in their vending area. More than half of the vendors reported that they did not either keep or access to public dustbin in their vending places (Table 5.2). Among the markets, Bawngkawn has the highest number of vendors having dustbin in their vending place followed by Vaivakawn. Huge difference in availability of dustbin is observed among the markets. In Thakthing only 10 per cent of the street vendors have dustbin facilities in their vending place where as 91.7 per cent of vendors in Bawngkawn have kept dustbin (Figure 5.4).

A Chi-Square test is conducted to test the null hypothesis that there is no significant difference in availability of dustbin on the basis of location of vending.

Table 5.10 Chi-Square test on association between location and availability of dustbin in vending place

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	135.633	4	.000
N of Valid Cases	400		

Computed by: SPSS 20

Table 5.10 shows that the calculated value (135.633) is much larger than the critical value which is 9.488. Hence, it can be concluded that there is a significant association between availability of dustbin and location of vending.

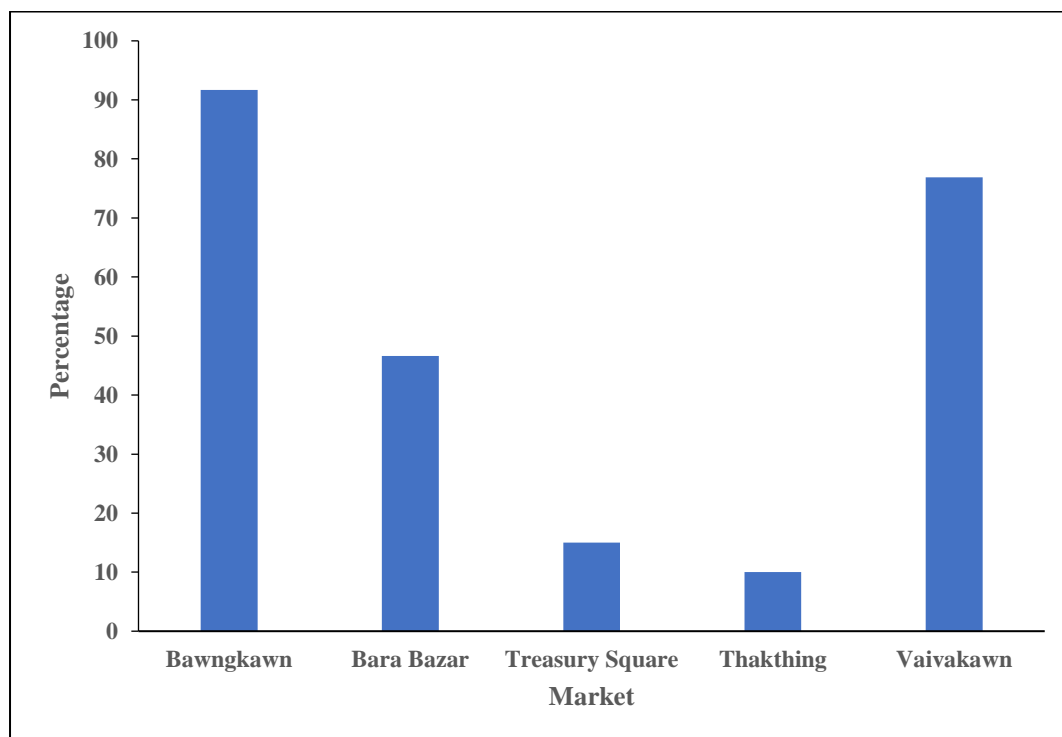


Figure 5.4 Percentage of street vendors who has accessed to dustbin

### 5.3.7 Storage facility

Storage facility is needed by street vendors to keep their goods and items. It is found that the percentage of vendors having storage facilities is much lesser than those who have vendors having storage unit. Vendors having storage facility in Aizawl City is only 34.8 per cent (Table 5.2). Those who do not have their storage facility have to bring back their items to their home every day or stored in nearby rented rooms. In Vaivakawn, all the vendors have storage facilities in their vending area. Here, the vendors used to store their vending items in the market building (Table 5.11).

Table 5.11 Percentage of vendors having storage facility

Storage	Bawngkawn	Bara Bazar	Treasury Square	Thakthing	Vaivakawn
Yes	13.3	42.6	0	20	100

Source: Field survey

A Chi-square test is conducted to test the null hypothesis that there is no significant difference in availability of storage in vending area on the basis of location of vending.

Table 5.12 Chi-Square test on association between location and availability of storage in vending area

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	101.197	4	.000
N of Valid Cases	400		

Computed by: SPSS 20

Table 5.12 shows that the calculated value (101.197) is much larger than the critical value which is 9.488. So, it can be concluded that there is a significant association between availability of storage in vending area and location of vending.

#### 5.4 Safety and security dimension

Street Vendors are not only trying to earn their livelihood but also providing valuable goods and services to the urban community. However, they face harassment and even eviction in many places since they are treated as encroacher of public spaces. They are also vulnerable to crimes like robbery and road side accident. Therefore, safety and security dimension is an important dimension of livability of street vendors (Table 5.13).

Table 5.13 Safety and Security dimension

Dimensions	Indicators	Percentage
Safety and Security	Percentage of vendors who did not report robbery	68.44
	Percentage of vendors who did not report harassment	89.56
	Percentage of vendors who do not have problem with fellow vendors	70.20
	Percentage of vendors who do not have health problem due to rain or pollution	68.78
	Percentage of vendors who do not face problem with street flood	14.56
	Percentage of vendors who did not report injury from road accident	89.00

Source: Field survey, 2019

### 5.4.1 Robbery

Street vendors are considered highly vulnerable to crime like robbery and harassment. The study, however, found that only 70 per cent of the street vendors did not ever face robbery while vending (Table 5.13). The highest incidence of robbery occurred in Bara Bazar which is the largest market in the city (Figure 5.5). Absence of security system in a highly crowded and congested market is one of the main reasons behind the greater incidence of robbery in the market. Security posts were established only during festive seasons like Christmas and New Year due to higher incidence of loss of money and items during these times.

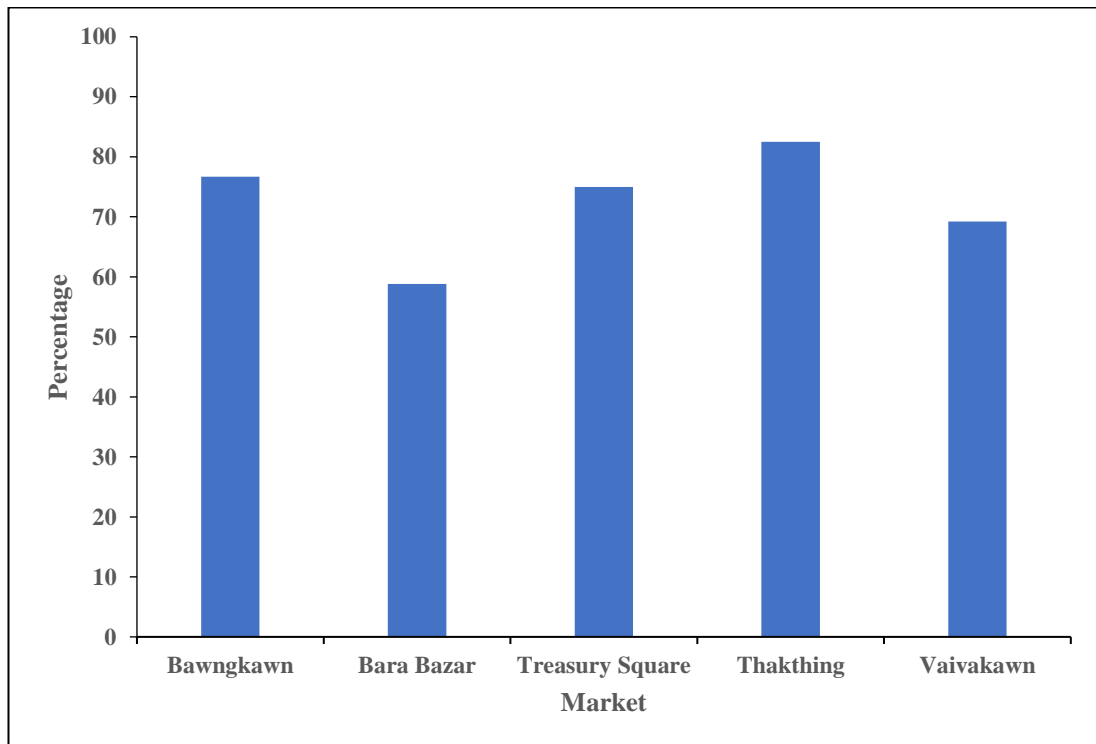


Figure 5.5 Percentage of vendors who did not report robber

A Chi-square test is conducted to test the null hypothesis that there is no significant difference in robbery faced by the street vendors on the basis of location of vending.

Table 5.14 Chi-Square tests on association between location and incidence of robbery

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.008	4	.199
N of Valid Cases	400		

Computed by: SPSS 20

Table 5.14 shows that the calculated value (6.008) is smaller than the critical value which is 9.488. Thus, the asymptomatic significance value or p-value is larger than 0.05. Therefore, it can be concluded that there is no significant association between robbery faced by the street vendors and location of vending.

#### 5.4.2 Harassment

Harassment in any form is reported by vendors throughout the world. In Aizawl, 89.56 per cent of the total sampled vendors did not report that they have faced harassment in their workplace (Table 5.13). Most of the vendors reported harassment in the form of verbal abuse while a few vendors faced physical harassment mainly from municipal authorities and police duties. The main reason of reported harassment was illegal use of sidewalks and improper place for vending and those who found guilty were penalised by imposing fine or eviction. Among the vending markets Bara Bazar market has the highest number of vendors who have faced harassment while relatively low incidence of harassment was found in Bawngkawn and Vaivakawn markets (Figure 5.6). Bara Bazar market is the biggest market and more number of vendors were found in the market. Due to intense competition for vending spot among the vendors, some vendors tended to occupy illegally vending sites that attracts customers. This often resulted in eviction and harassment from the market authorities.

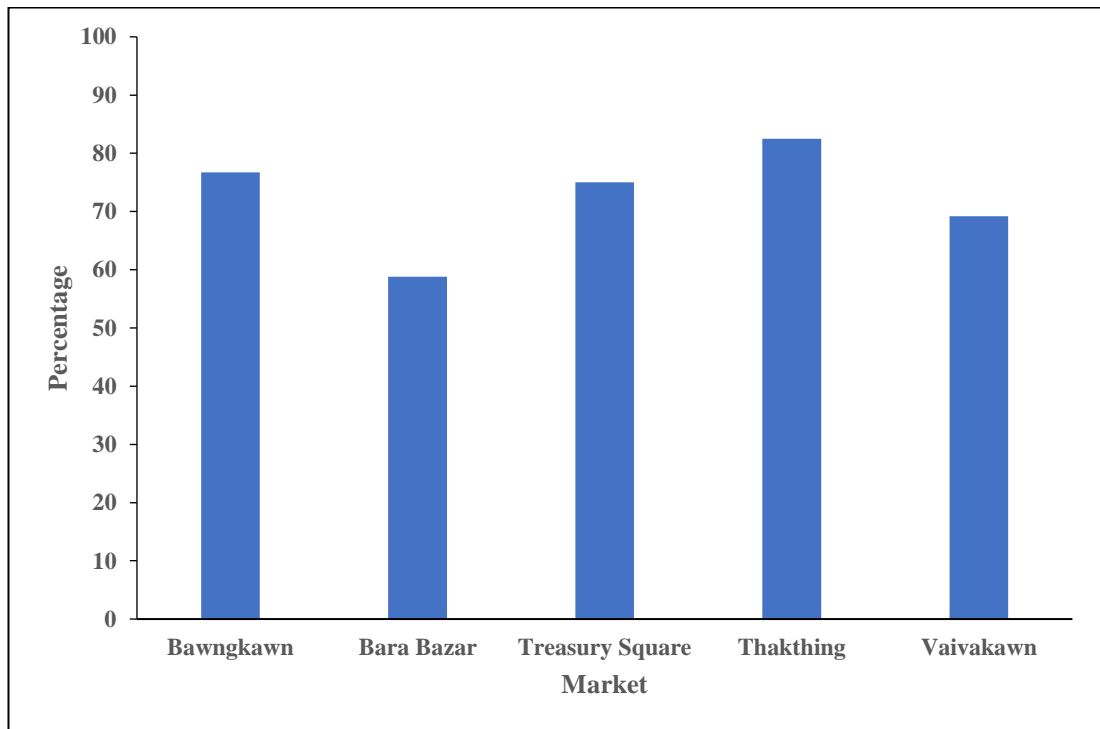


Figure 5.6 Percentage of vendors who did not report harassment

A Chi-square test is conducted to test the null hypothesis that there is no significant difference in harassment faced by the street vendors on the basis of location of vending.

Table 5.15 Chi-Square test on association between location and incidence of harassment

	Value	df	Asymp.Sig. (2-sided)
Pearson Chi-Square	32.341 <sup>a</sup>	4	.000
N of Valid Cases	400		

Computed by: SPSS 20

Table 5.15 shows that the calculated value (32.341) is larger than the critical value which is 9.488. Thus, the asymptomatic significance value or p-value is smaller than 0.05. Therefore, it can be concluded that there is a significant association between injury faced by the street vendors due to accident and location of vending.

### 5.4.3 Problems with fellow vendors

The livability of street vendors depends a lot on their social environment. The relationship among street vendors is not always cordial due to competition for vending space and attraction of customers. The study found that 70.20 per cent of vendors have reported that they do not have problems with their fellow vendors (Table 5.13). Conflicts between vendors arose mainly due to snatching of customers, conflict for vending spots and different pricing of vending items.

Vendors having problems with their fellow vendors is highest in Bara bazar. Among all the vending markets, Bara bazar is inadequately high in vendors having problems with their fellow vendors. Markets excluding Bara bazar has comparatively low as these places have less numbers of vendors. The main reasons are due to snatching of customers as well as place of vending (Figure 5.7).

A Chi-square test is conducted to test the null hypothesis that there is no significant difference in problems with fellow vendors on the basis of location of vending.

Table 5.16 Chi-Square test on association between location and problems with fellow vendors

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	42.967	4	.000
N of Valid Cases	400		

Computed by: SPSS 20

Table 5.16 shows that the calculated value (42.967) is much larger than the critical value which is 9.488. Hence, it can be concluded that there is a significant association between problems with fellow vendors on the basis of location of vending.



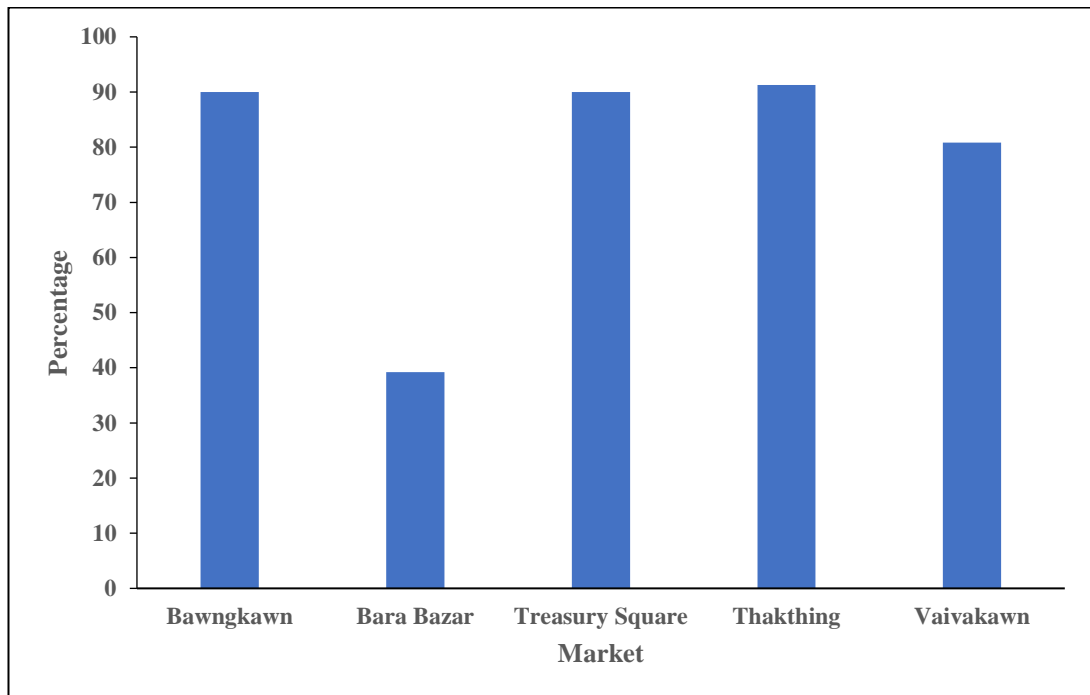


Figure 5.7 Percentage of Vendors who do not have problems with fellow vendors

#### 5.4.4 Health problems

In this study, a health problem is a condition or a state of physically ill where medical attention is needed. It is experienced by the respondents. So, the symptoms, as well as the diseases, are considered as health problems. A health problem relating to pollution or rain a condition of illness caused by pollution and rain experienced by the street vendors. In this study, the majority of the sampled street vendors (68.78%) were not having any health-related problems due to pollution or rain (Table 5.13). The main health problem faced by the street vendors is respiratory tract infection such as cough, runny nose, sore throat and others as they were exposed to street dust and pollution.

The percentage of vendors who do not have health problems due to rain or pollution is lowest in Treasury Square market and it is found highest in Vaivakawn market. In Vaivakawn market, all the vendors have had health problem due to rain or pollution. This market is located in the western part of Aizawl city and the junction which is near the market is one of the busiest junctions in Aizawl city which makes it high chance of polluted area and due to unavailability of proper roof in this market

area also causes the high percentage of vendors having problem due to rain or pollution (Table 5.17).

Table 5.17 Percentage of Vendors who did not report health problems due to rain or pollution

Health problems	Bawngkawn	Bara Bazar	Treasury Square	Thakthing	Vaivakawn
Not Report	85	93.2	96.7	90	0

Source: Field survey

A Chi-square test is conducted to test the null hypothesis that there is no significant difference in health problems on the basis of location of vending.

Table 5.18 Chi-Square test on association between location and health problem

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.746	4	.019
N of Valid Cases	400		

Computed by: SPSS 20

Table 5.18 shows that the calculated value (11.746) is much larger than the critical value which is 9.488. Thus, the asymptomatic significance value or p-value is smaller than 0.05. it can be concluded that there is there is a significant difference between health problems on the basis of location of vending.

#### 5.4.5 Flood

In certain locations, street vendors faced overflow of water on the streets that disturb their vending routine. Based on the study, 14.56 per cent of the sampled vendors have not reported that they were affected by street flood (Table 5.13). Most of the vendors suffered street flood problems due to improper drainage. Vendors who were safe from street flood were mainly those who have proper place of vending such as in front of shop, offices and proper roof.

The percentage of vendors who do not face problems with street flood is highest in Bawngkawn (Figure 5.8). In this market, vendors used sidewalks for

vending and better side drain reduce the percentage of vendors having problem with street flood. In Treasury Square market, vendor having street flood problem is found highest as vendors used main road for vending and there is no proper drainage in the market. The major problem because of rainfall and street flood is decline in the number of customers. Vendors also face problems like collecting and arranging items. The even have to use umbrella and plastic sheet to cover and protect their products.

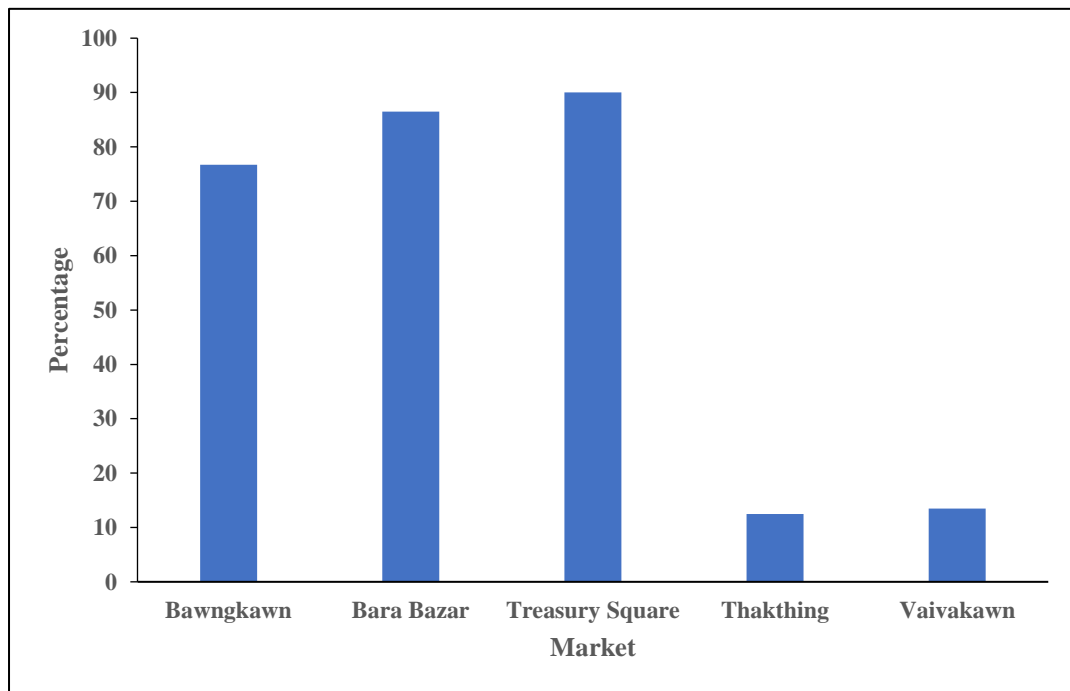


Figure 5.8 Percentage of vendors who did not face problem with street flood

A Chi-square test is conducted to test the null hypothesis that there is no significant difference in problem faced due to street flood by the street vendors in Aizawl City on the basis of location of vending.

Table 5.19 Chi-Square tests on association between location and street flood

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	196.758	4	.000
N of Valid Cases	400		

Computed by: SPSS 20

Table 5.19 shows that the calculated value (196.758) is much larger than the critical value which is 9.488. Thus, the asymptomatic significance value or p-value is

smaller than 0.05. So, it can be concluded that there is a significant association between problem faced due to street flood by the street vendors and location of vending.

#### 5.4.6 Accident

Street vending is a high risk job as vendors operate on roadsides, sidewalks and other public places where accidents may occur at any time. Thus, they are highly vulnerable to road accidents. However, the study revealed that 89 per cent have not met injury due to traffic accident (Table 5.12). One of the main reasons is that some sidewalks were properly equipped with railing which protected the vendors from road traffic accident and secondly, the traffic flow in the city is properly managed by the authorities that effectively prevent road accidents. Among the vending markets, Treasury square market has the lowest number of injuries caused by traffic accident. Among the total vendors in Treasury square, 95 per cent were safe from traffic accident. Here, roads are relatively wider and proper sidewalk is constructed for the pedestrians. Bara Bazar has the highest number of road accidents as it is the busiest market and incidents happened frequently than in other market areas (Figure 5.9).

A Chi-square test is conducted to test the null hypothesis that there is no significant difference in injury faced by the street vendors due to accident in Aizawl City on the basis of location of vending.

Table 5.20 Chi-Square test on association between location and accident

	Value	df	Asymp.Sig. (2-sided)
Pearson Chi-Square	4.868	4	0.301
N of Valid Cases	400		

Computed by: SPSS 20

Table 5.20 shows that the calculated value (4.868) is smaller than the critical value which is 9.488. Therefore, it can be concluded that there is no significant association between injury faced by the street vendors due to accident and location of vending.

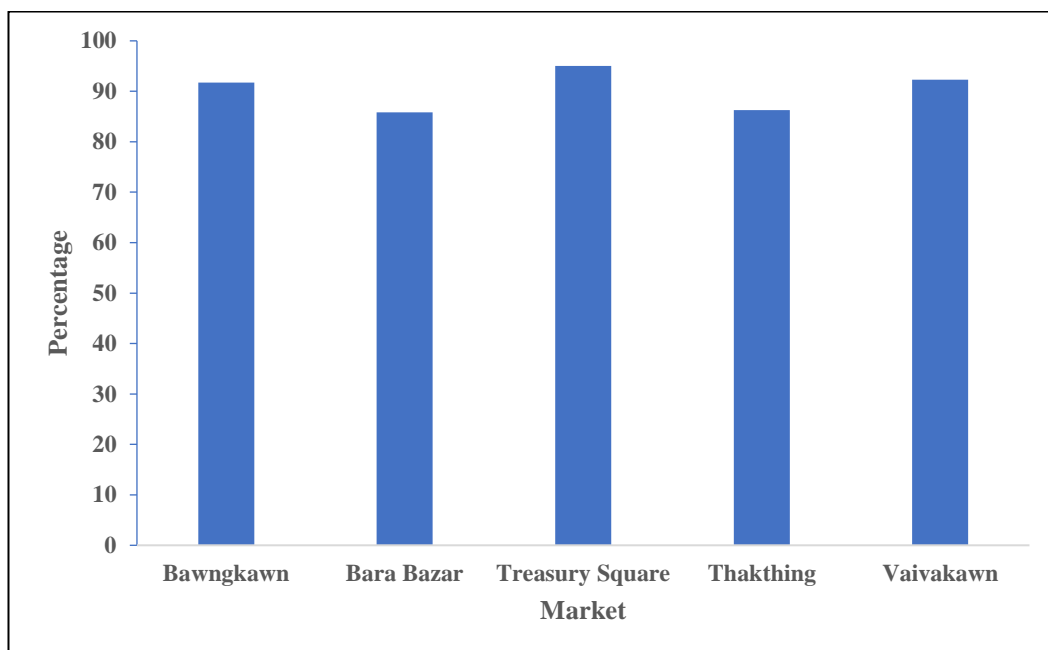


Figure 5.9 Percentage of vendors who did not report injury from road accident

## 5.5 Economic dimension

Economic dimension is made up of two indicators such as vendors receiving assistance from the government and monthly income.

Table 5.21 Economic dimension of Livability

Dimensions	Indicators	Total
Economic dimension	Percentage of vendors who received assistance from Government	49.80
	Percentage of vendors whose income is more than the average monthly income of the street vendors	53.25

Source: Field survey

### 5.5.1 Assistance from government

A number of vendors received roofed vending stalls or displaying tables free of cost from the Aizawl Municipal Corporation (AMC) through Local Councils (LC). The government also provided financial assistance in the form of cash to some vendors through government flagship schemes like New Land-use Policy (NLUP) and

Mizoram Intodelh Project (MIP). The study found that the percentage of vendors who received assistance from the government were 49.8 per cent from the total respondents (Table 5.21). Among them, 60.3 per cent received cash benefits and 39.7 per cent received vending stalls from the government authorities.

Unequal geographical distribution is observed among those who received government support. All the respondents from Treasury Square market received assistance from the government (Figure 5.10). Only vendors in Treasury Square market were provided vending tables by the AMC. Roofed vending stalls were also provided to vendors in other markets. Some vendors also reported that they received financial assistance from the government through policies like NLUP and MIP.

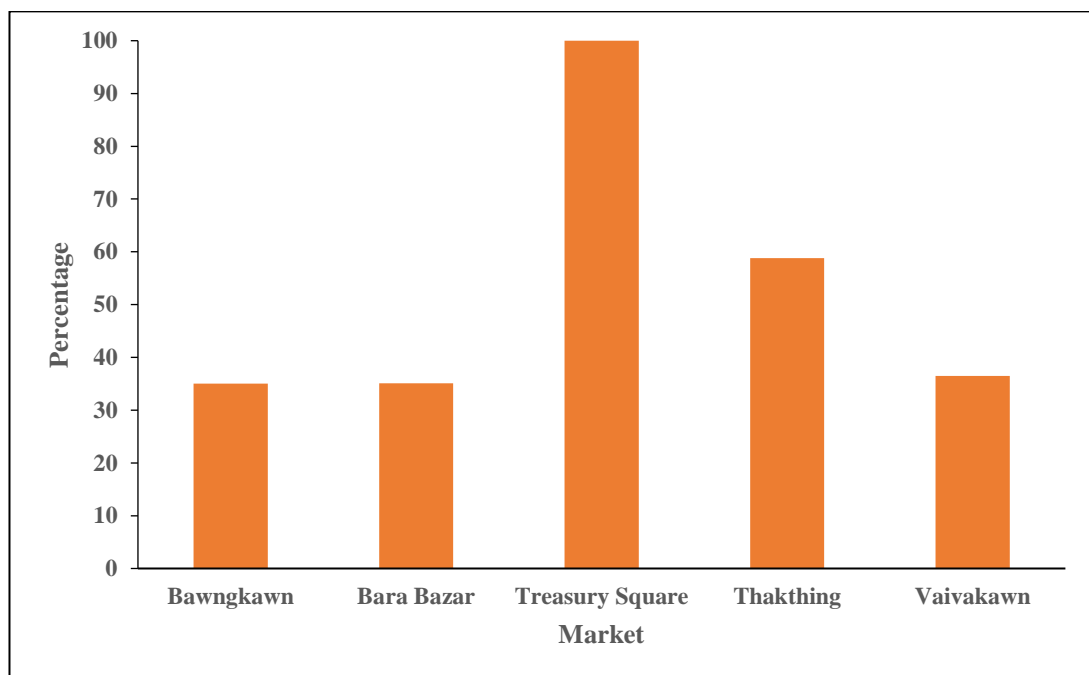


Figure 5.10 Percentage of vendors who received assistance from government

A Chi-Square test is conducted to test the null hypothesis that there is no significant difference in assistance received from government on the basis of location of vending.

Table 5.22 Chi-Square tests on association between location and government assistance

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.369	4	.850
N of Valid Cases	400		

Computed by: SPSS 20

Table 5.22 shows that the calculated value (1.369) is smaller than the critical value which is 9.488. Therefore, it can be concluded that there is no significant association between assistance received from government and location of vending.

### 5.5.2 Average monthly income

Street vendors contribute significantly to the informal as well as the overall urban economy by providing cheap availability of goods and services. The average monthly income of to the total respondents in Aizawl city was Rs. 23,100. As shown in table 5.12, the average monthly income of the street vendors revealed that majority of the respondents (53.25%) earned more than the average income of street vendors. In market wise, majority of the street vendors in Treasury Square and Thakthing earn more than the average income. The other vending markets such as Bawngkawn, Bara Bazar and Vaivakawn have low income than the average monthly income.

A Chi-Square test is conducted to test the null hypothesis that there is no significant difference average income of the street vendors on the basis of location of vending.

Table 5.23 Chi-Square tests on association of location and monthly average income

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.919	4	.205
N of Valid Cases	400		

Computed by: SPSS 20

Table 5.23 shows that the calculated value (5.919) is smaller than the critical value which is 9.488. Thus, the asymptomatic significance value or p-value is larger

than 0.05. So, it can be concluded that there is no significant difference in average income of the street vendors and location of vending.

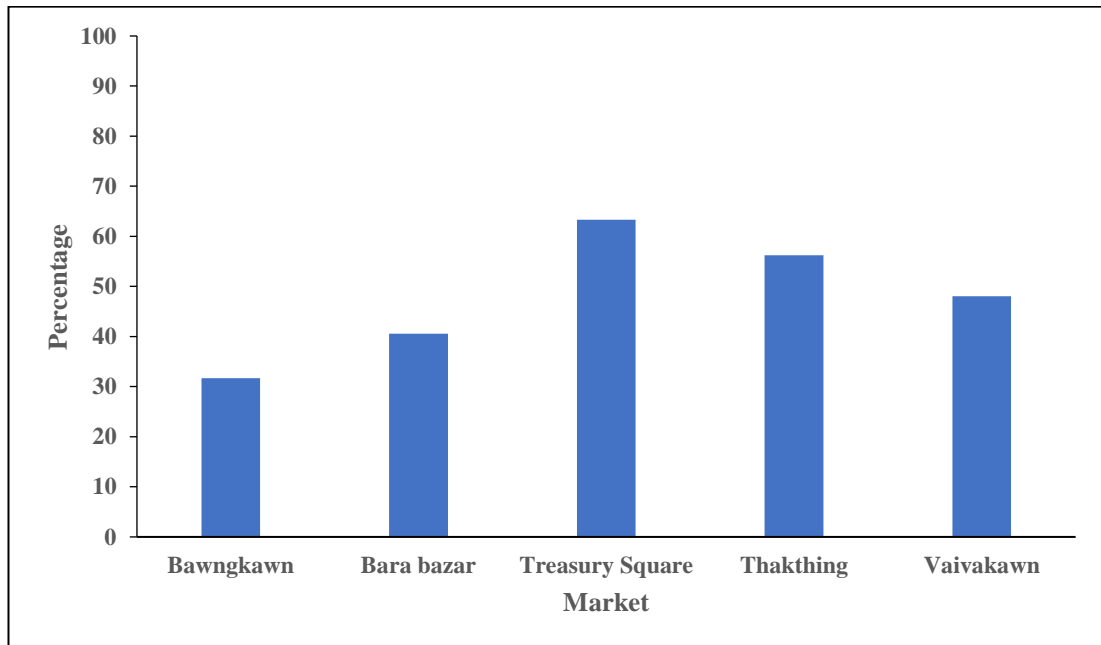


Figure 5.11 Percentage of vendors having income more than the average monthly income

## 5.6 Vendor's Livability Index

### 5.6.1 Calculation of Indicators Index

Firstly, the raw score of the selected indicators (Table 5.24 and Table 5.25) were normalized using the following equation:

$$Index_{shi} = \frac{S_h - S_{min}}{S_{max} - S_{min}}$$

Where  $S_h$  is indicators of dimensions and  $S_{max}$  and  $S_{min}$  are maximum and minimum value of each indicator respectively.



## 5.6.2 Calculation of Dimension Index

After each indicator of all the markets were standardized, the indicators were standardized to obtain the dimensions index. The result of the dimension index calculation is showing in a Table 5.26.

In workplace environment dimension, Vaivakawn is the most livable market and Treasury square market is the least livable market. In safety and security, Treasury Square market is the most livable market while Vaivakawn bazar is the least livable market. Treasury square market is the most livable market and Bawngkawn market is the least livable market in term of economic dimension.

Table 5.24 Raw data

Dimensions	Code of Indicator	Bawngkawn	Bara Bazar	Treasury Square	Thakthing	Vaivakawn
Workplace Environment	X1	61.67	46.62	31.67	26.25	20.46
	X2	26.67	64.19	20.00	23.75	76.54
	X3	0.00	22.30	0.00	13.75	0.00
	X4	0.00	20.27	18.33	12.50	7.31
	X5	10.00	12.16	13.33	2.50	13.46
	X6	50.00	46.60	15.00	10.00	46.90
	X7	13.33	42.57	0.00	20.00	100.00
Safety and Security	X8	56.67	58.78	75.00	82.50	69.23
	X9	95.00	77.03	88.33	92.50	76.92
	X10	90.00	39.19	90.00	91.25	80.77
	X11	85.00	93.24	96.67	79.00	0.00
	X12	23.30	13.50	10.00	12.50	13.50
	X13	91.67	85.81	95.00	86.25	92.31
Economic	X14	35.00	35.1	100.00	58.80	36.50
	X15	31.67	40.54	63.33	56.25	48.08

Source: Field survey, 2019

Table 5.25 Standardized data of livability indicator

<b>Dimensions</b>	<b>Code of Indicator</b>	<b>Bawngkawn</b>	<b>Bara Bazar</b>	<b>Treasury Square</b>	<b>Thakthing</b>	<b>Vaivakawn</b>
Workplace Environment	X1	0.617	0.466	0.317	0.263	0.205
	X2	0.267	0.642	0.200	0.238	0.765
	X3	0.000	0.223	0.000	0.138	0.000
	X4	0.000	0.203	0.183	0.125	0.073
	X5	0.100	0.122	0.133	0.025	0.135
	X6	0.500	0.466	0.150	0.100	0.469
	X7	0.133	0.426	0.000	0.200	1.000
Safety and Security	X8	0.567	0.588	0.750	0.825	0.692
	X9	0.950	0.770	0.883	0.925	0.769
	X10	0.900	0.392	0.900	0.913	0.808
	X11	0.850	0.932	0.967	0.790	0.000
	X12	0.233	0.135	0.100	0.125	0.135
	X13	0.917	0.858	0.950	0.863	0.923
Economic	X14	0.350	0.351	1.000	0.588	0.365
	X15	0.317	0.405	0.633	0.563	0.481

Table 5.26 Dimension Index

<b>Dimensions</b>	<b>Bawngkawn</b>	<b>Bara Bazar</b>	<b>Treasury Square</b>	<b>Thakthing</b>	<b>Vaivakawn</b>
Workplace Environment	0.231	0.364	0.140	0.155	0.475
Safety and Security	0.769	0.613	0.758	0.758	0.555
Economic	0.333	0.378	0.817	0.575	0.423

Among the street markets, Vaivakawn bazar showed greater livable on the physical environment (Table 5.26 and Figure 5.12). Although, the majority of the street vendors are living in outside 4 kilometers from their workplace which is also observed in other markets such as Bara bazar, Treasury, Thakthing. Vaivakawn market has the highest number of vendors having dustbin, storage and toilet/urinal facilities.

Treasury Square markets is the least livable market among the street markets in Aizawl city on physical environment. Like other places, the majority of the street vendors are living in outside 4 kilometers from their workplace which is also observed in other markets. The number of vendors having toilet/urinal facilities is less and none of the vendors is having storage facility in Treasury (Table 5.26 and Figure 5.12).

In safety and security dimension, Treasury Square market is the most livable market among the street markets in Aizawl City. Among the street vendors in Treasury Square, around three fourth of them are safe from robbery, which is the third highest among the street markets. Unlike other street markets, Treasury Square market has the highest number of vendors who do not face problem with street flood and also majority of the vendors do not have health problems due to rain or pollutions. Although the market is in one of the major junctions in Aizawl city, it is the safest place for the vendors in term of road accident in Aizawl city market area. The percentage of vendors who got injured due to traffic accident is less. The reason can be due to the availability of footpath with railing which protecting the street vendors from the accident and the

proper traffic rules and arrangement made by the authority. In Saturday market, two-way road within this market is made one way in order to provide more space as well as for the safety of the vendors from early in the morning to around 11:00 AM (Table 5.26 and Figure 5.12).

Vaivakawn market is the least livable market on workplace environment. It is the second least safe market for the vendors in terms of robbery and harassment. Unlike other markets in Aizawl city, all the vendors in Vaivakawn market have affected by health problems due to rain and pollution (Table 5.26 and Figure 5.12). The scale of the diagram ranges from 0 (less livable) to 1 (more livable).

In Economic dimension, Treasury Square market is the highest livable markets among the street market in Aizawl. All the vendors from Treasury Square market received assistance or support from the government. Assistance or support includes providing schemes such as NLUP, SEDP and others. Apart from schemes, the vendors from Treasury Square are also provided equipment like Table for displaying their items. Majority of the street vendors had more income than the monthly average income of the respondents in Aizawl city. The monthly average income of the street vendors in Aizawl city is Rs 23100 and 63.33 per cent of the total street vendors in Treasury earned more than the monthly average of the total respondents in Aizawl city. The average monthly income of the vendors in Treasury Square market is Rs 25833, which is more than the average monthly income of the total vendors in Aizawl city. Among the street markets in Aizawl city, Treasury Square has the highest monthly average income (Table 5.26 and Figure 5.12).

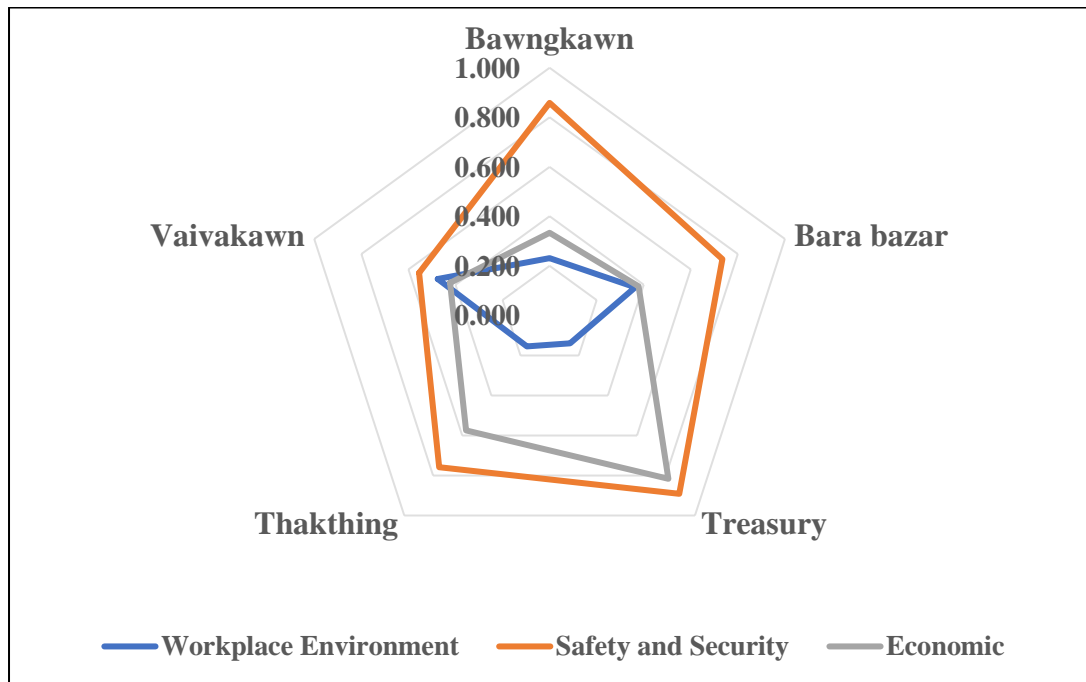


Figure 5.12 Dimension Index

### 5.6.3 Calculation of Livability Index

Once the value of dimensions of each locality is calculated, they were averaged to obtain the livability index of each locality. As shown in Table 5.27, the livability index showed that Treasury Square market is the most livable market for vendors in Aizawl city. This market is located nearby the old central secretariat office, the Assembly house and the main Treasury office of the state government. The state government has reserved proper vending space in the area which accommodates 100-120 vendors. All the vendors were allotted vending license too. Moreover, there was a good participatory management system of vending. The Local Councils of the nearby market has involved in the conduct of weekly Saturday market. They manage seating arrangement and allocate vending spots and duration of vending for the street vendors. On Saturday weekly markets, road traffic system was altered by turning the two-way road into one-way during the vending period so that the vendors as well as the customers could have more space. Most of the vendors were provided either roofed-vending stalls or vending tables to display their items by the Aizawl Municipal Corporation (AMC) through Local Councils. The average income of vendors in Treasury market was also relatively higher than those in other markets (Table 5.27).

Thakthing market, on the other hand, is the least livable market for street vendors (Table 5.27). The area is located in the southern part of the city. Most of the vendors came from the nearby localities and the southern outskirts of Aizawl city. The market is linear street and there was no space properly demarcated for vending. Sidewalks are not allowed for vending and most of the permanent vendors have used vacant space along the roads by taking permission from the owners of shops nearby. Unlike Treasury Square market, alteration of road traffic on Saturday weekly market is impossible as there is no alternative road to bypass the traffic from the main road which connects the central area of the city from the southern part of the city.

Table 5.27 Vendors Livability Index, Aizawl City

<b>Vending Market</b>	<b>VLI</b>
Treasury Square	0.478
Bara Bazar	0.465
Vaivakawn	0.455
Bawngkawn	0.447
Thakthing	0.445

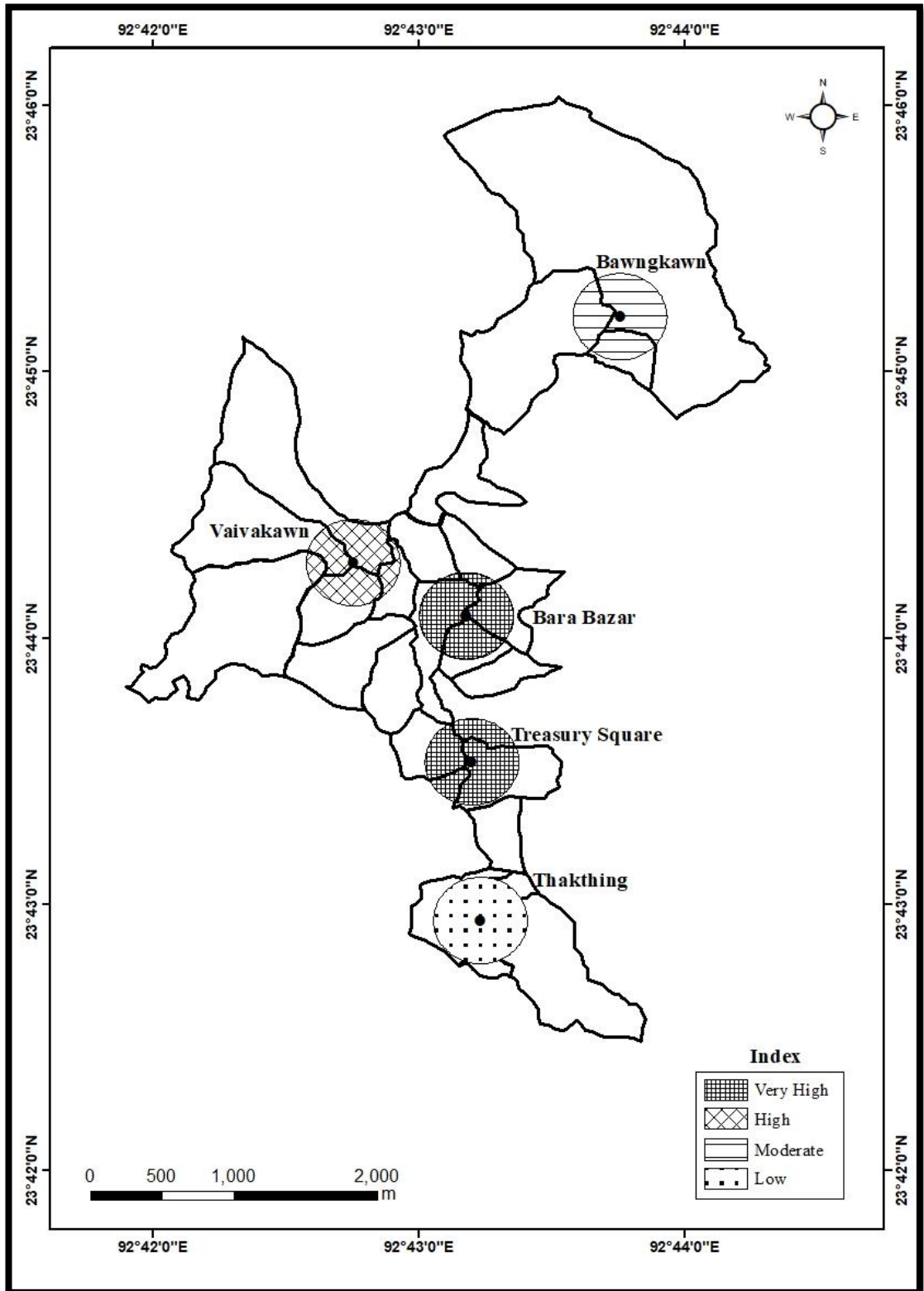


Figure 5.13 Livability index of street vendors in Aizawl City

## 5.7 Conclusion

Livability is a broad concept and it encompasses numerous fields of study. It refers to the state of living environment, which should offer an acceptable quality of life to the residents of a particular locale. Livability depends on the prevailing economic, social and cultural conditions of a particular place. Livability of the street vendors in Aizawl City is measured by focusing on their social, economic and physical environment. In this study three dimensions such as workplace environment, safety and security and, economic dimensions were developed.

With the help of Chi-square tests, it is found that there was significant association between distance of workplace from home, availability of toilet facility, availability of drinking water facility, presence of roofed vending stall, dustbin facility, availability of storage, injury faced by the street vendors due to accident, problems with fellow vendor, health problems, problem faced due to street flood with location.

Chi-square tests also proved that there was a significant association between availability of electricity, robbery faced by the street vendors, injury faced by the street vendors, assistance received from government, average income of the street vendors with location of vending place.

It was found that very high livability index of the street vendors in Aizawl City were found in Bara Bazar and Treasury Square markets. Vaivakawn market is the highly livable market, Bawngkawn market is moderately livable market and Thakthing market least livable markets. The centrally located markets have the highest scores in livability index. The livability index is better in the centrally located markets such as Bara Bazar and Treasury Square.



## CHAPTER 6

### QUALITY OF LIFE OF STREET VENDORS IN AIZAWL CITY

#### 6.1 Introduction

Street vending is considered as one of the most vulnerable occupations due to unsafe working environment, absence of social security, low income and lack of access to basic infrastructures. In spite of its important role in provision of employment and income to urban poor, it is one of least attractive jobs and it continues to exist mainly due to poverty. The quality of the working environment of street vendors is hardly liveable in many places. In the meantime, the perception of street vendors towards their quality of life may vary across space and from one individual to another.

Quality of life (QoL) is a multidimensional concept (Baldwin *et al.*, 1990; Fahey *et al.*, 2003; Noll, 2004; Böhnke, 2005). Around 1950s, quality of life was defined as a good standard of living. The traditional economic theory defined quality of life from economic growth perspective by including objective variables such as income, employment rate and others (Zhao *et al.*, 2005:84). However, inclusion of mere quantifiable standard of living in the measurement of well-being of community ignores the importance of other life domains such as health, freedom, education, environment, safety, happiness, and life satisfaction (Hajiran, 2006). Thus, the concept of quality of life has been enlarged to cover life satisfaction, happiness, welfare, health, environment, trust, security, economy and freedom (Anderson, 2004:4-5). Quality of life thus includes all domains of life including ‘physical well-being, material well-being, social well-being, and emotional well-being (Anderson, 2004). Therefore, the concept of quality of life covers both objective components related with observable living conditions and subjective components related with perception of individuals about their living conditions (Lawton, 1997). In other words, quality of life is measured by both subjective indicators using surveys on perceptions of the residents, evaluations and satisfaction with urban living and by objective indicators using data relating to objective personal well-being and environmental attributes (Saitluanga, 2017).

The subjective dimension of QoL focuses on mental states like “satisfaction and kindred states such as one’s sense of well-being, happiness or unhappiness” (Schuessler and Fisher 1985:131) The World Health Organisation (WHO) defines subjective quality of life as “an individual's perception of their position in life in the context of the culture and value system in which they live and in relation to their goals, expectations, standards, and concerns. It is a broad-ranging concept affected in a complex way by the person's physical health, psychological state, level of independence, social relationships, and relationship to salient features of their environment” (WHO, 1997:1). Thus, subjective indicators focus more on individual perception on hopes, expectations, sensations etc. (Petrucci and D’Andrea., 2002; Shackman *et al.*, 2005). A number of scholars have asserted that subjective methods of measurement of QoL are preferred over objective methods, mostly for planning and policy purpose, as it can provide more significant feedback (Ibrahim and Chung, 2003; Lee, 2008). Subjective indicators are only accessible by “interviewing or asking the people their opinions, beliefs, feeling and life conditions” (Inkeles, 1993:4).

Geographical studies on quality of life started after the 1970s only. To put the discipline more relevant, prominent geographers turned towards social issues and produced a number of works on social justice (Harvey, 1973), social well-being (Smith, 1972, 1973; Knox, 1974), and quality of life (Helburn, 1982). Since then, a number of studies have been taken out by geographers to examine various dimensions of quality of life of various communities in different settings (see Fakhrudin, 1991; Marans & Stimson, 2011; Saitluanga, 2017).

## **6.2 Selected indicators of Subjective Quality of Life (QoL)**

Subjective QoL of street vendors in Aizawl city is measured in the present study by using a multivariate statistical technique called Principal Component Analysis (PCA). The technique is used to identify important factors that affect QoL of street vendors and to develop composite index of QoL. The selected indicators of the subjective dimension of QoL are given in Table 6.1. They consist of satisfaction on street vending as a means of livelihood (livelihood), satisfaction on safety from robbery (robbery), satisfaction on safety from road accident (accident), satisfaction on

crowdedness of vending space (crowdedness), satisfaction on cleanliness of vending place(cleanliness), satisfaction on safety from hazards and disasters (hazard), satisfaction on distance of workplace from home (distance), satisfaction on location of vending spots (location), satisfaction from municipal services (municipal), satisfaction from workload in street vending (workload), satisfaction with cooperation from local authorities (cooperation) and satisfaction on relationship with fellow vendors (relationship). They are composed of a wide range of variables relating to satisfaction of vendors from attributes of quality of life in their workplace.

**Livelihood:** The first indicator is level of satisfaction on vending as a means of livelihood. As shown in Table 6.1, the mean of the indicator is 2.82 which is a little less than half of the vendors. It may be said that more than half of the street vendors in Aizawl City were satisfied with street vending to support their livelihood. However, it is also observed that street vendors who were highly satisfied with their livelihood constituted only 12.25 per cent which is comparatively less than those who were highly dissatisfied that comprises 27 per cent of the total vendors.

**Robbery:** Robbery is one of the most common problems faced by vendors in Aizawl City. Vending in crowded markets without any security measures has left vendors vulnerable to robbery and other crimes. The mean of robbery is 3.00 which show that half of the vendors were satisfied with safety from robbery. The highest numbers of vendors have reported 'satisfied'. However, more vendors were found to be 'highly dissatisfied' in comparison to those 'highly satisfied' (Figure 6.1 and Table 6.2).

Table 6.1 Subjective quality of life indicators

<b>Code of Indicators</b>	<b>Definition</b>	<b>Mean</b>	<b>Standard Deviation</b>
Livelihood	Satisfaction on street vending as means of livelihood	2.82	1.4
Robbery	Satisfaction on safety from robbery	3.00	1.38
Accident	Satisfaction on safety from road accident	3.24	1.45
Crowdedness	Satisfaction on crowdedness of vending space	3.09	1.39
Cleanliness	Satisfaction on cleanliness of vending place	2.78	1.27
Hazard	Satisfaction on safety from disaster and calamities	2.74	1.26
Distance	Satisfaction on distance of workplace from home	3.05	1.48
Location	Satisfaction on location of vending spots	3.13	1.39
Municipal	Satisfaction from municipal services	2.66	1.26
Workload	Satisfaction from workload in street vending	3.06	1.38
Cooperation	Satisfaction with cooperation from local authorities	2.23	1.36
Relationship	Satisfaction on relationship with fellow vendors	2.18	1.41

Source: Field survey, 2019

Table 6.2 Raw data

Indicators	Scale				
	Highly dissatisfied	Dissatisfied	Neutral	Satisfied	Highly satisfied
Livelihood	108 (27)	60 (15)	72 (18)	111 (27.75)	49 (12.25)
Robbery	80 (20)	84 (21)	68 (17)	105 (26.25)	63 (15.75)
Accident	83 (20.75)	44 (11)	65 (16.25)	115 (28.75)	93 (23.25)
Crowdedness	77 (19.25)	70 (17.5)	67 (16.75)	113 (28.25)	73 (18.25)
Cleanliness	84 (21)	80 (20)	103 (25.75)	96 (24)	37 (9.25)
Hazard	93 (23.25)	80 (20)	103 (25.75)	90 (22.5)	34 (8.5)
Distance	84 (21)	79 (19.75)	64 (16)	78 (19.5)	95 (23.75)
Location	81 (20.25)	50 (12.5)	69 (17.25)	134 (33.5)	66 (16.5)
Municipal	91 (22.75)	98 (24.5)	103 (25.75)	70 (17.5)	38 (9.5)
Workload	76 (19)	66 (16.5)	92 (23)	91 (22.75)	75 (18.75)
Cooperation	171 (42.75)	89 (22.25)	57 (14.25)	41 (10.25)	42 (10.5)
Relationship	172 (43)	87 (21.75)	48 (12)	46 (11.5)	47 (11.75)

Source: Field survey, 2019

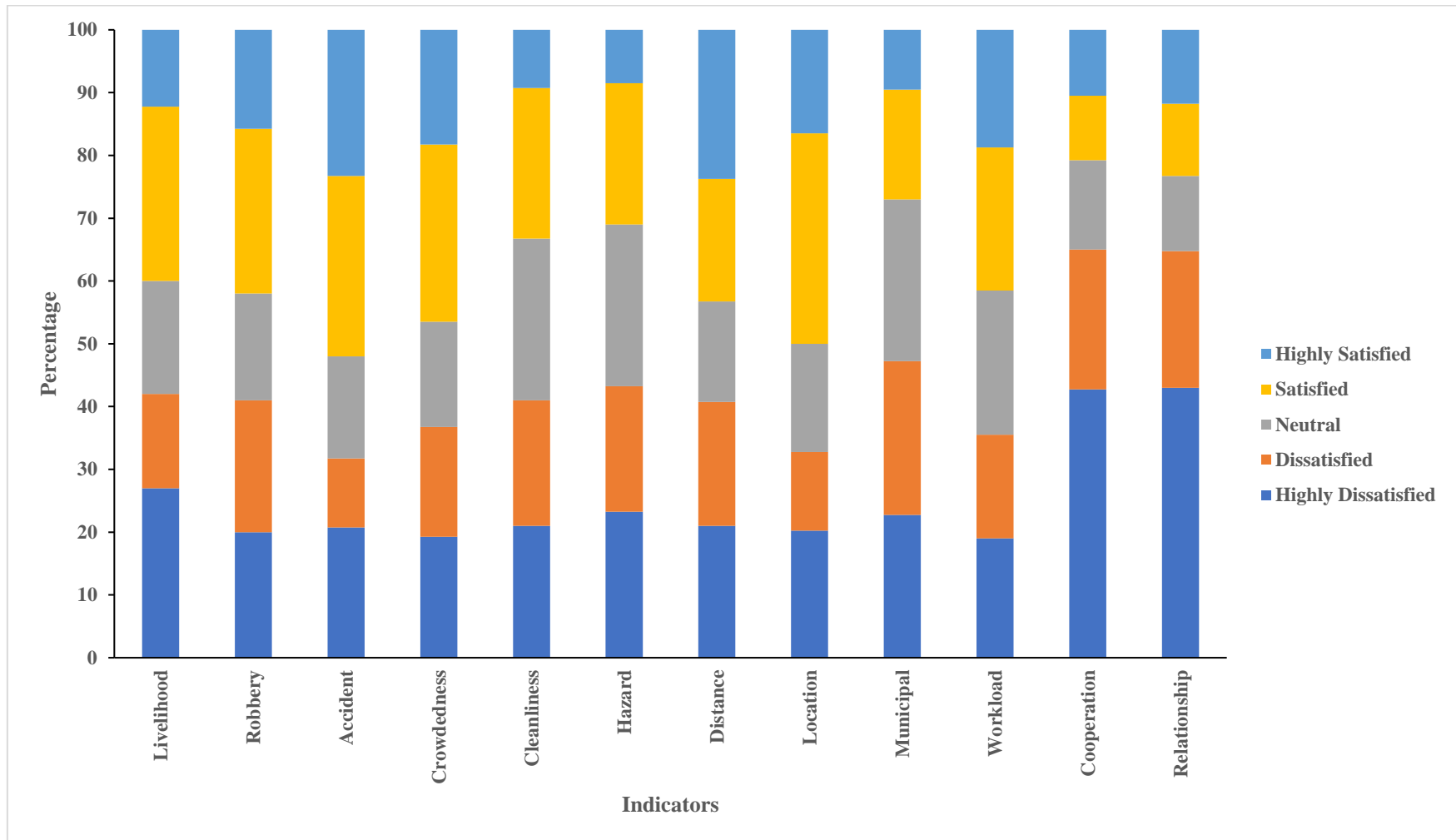


Figure 6.1 Selected Indicators of Subjective Quality of Life

**Accident:** Street vending usually takes place in roadsides which are accident prone areas that poses greater risk to vendors. In Aizawl City, majority of the street vendors were either ‘satisfied’ or ‘highly satisfied’ with their safety from accident related injury in their vending places (Figure 6.1 and Table 6.2). Normally, traffic movement in Aizawl city is slow due to congestion which resulted in fewer incidence of road accident related injury among street vendors.

**Crowdedness:** Street vendors prefer crowded spaces such as sidewalks and roadsides for selling their items. In Aizawl city, majority of the respondents were satisfied with the crowdedness of their vending areas (Figure 6.1 and Table 6.2).

**Cleanliness:** Clean space is important for physical and mental health and street vendors are often seen cleaning their surroundings. Majority of the street vendors in Aizawl City cannot decide whether they were satisfied or dissatisfied with the cleanliness of their place of vending. However, those who reported ‘highly dissatisfied’ were comparatively greater in number than those who were ‘highly satisfied’. (Table 6.2).

**Hazard:** Hazard includes street floods, landslides, earthquakes and other sudden naturally occurring hazards which may affect vending activities. Street vendors are considered more vulnerable to hazards as they do not have proper shelter. Out of the total 400 respondents, 23.25 per cent of the vendors have reported that they were ‘highly dissatisfied’ with the safety of their vending place from natural hazards. On the other hand, only 8.5 per cent were ‘high satisfied’ from occurrence of hazards (Figure 6.1 and Table 6.2).

**Distance:** In Aizawl City, many street vendors have travelled long distances to reach their vending areas. Some of them have to travel more than 7 kilometers by either bus or taxi from their home and the transport cost becomes heavy considering their meager income. From the total respondents, 23.7 per cent were ‘highly dissatisfied’ with the distance of their workplace from home.

**Location:** The income of street vendors highly depends on the location of their vending spaces. Certain locations are more profitable while some vendors do not

attract customers due to their hidden location. Among the total respondent, 33.5 per cent of the total vendors were satisfied and 16.50 per cent were highly satisfied with their vending locations.

**Municipal:** Majority of the street vendors were dissatisfied with municipal services within their vending areas (Figure 6.1 and Table 6.2). Most of the vendors were either 'dissatisfied' or 'highly dissatisfied' with the service they obtained from the municipal authorities. Only a few of them who were mostly from Treasury Square were found satisfied with municipal service as they received vending stalls and tables from the local government.

**Workload:** Street vendors were found to suffer from health problems such as constant fatigue and tiredness. Street vendors complained tiredness due to constant work and movement for hours without any protection from sunlight and sometimes cold and rain. Most of the street vendors reported that street vending is workload. On the other hand, relatively younger and more energetic vendors have reported that they were satisfied with the level of their workloads.

**Cooperation:** Majority of the vendors were not satisfied with the support and cooperation from the local authorities (Figure 6.1 and Table 6.2). Although the government had delivered some schemes to uplift the quality of life of the vendors, majority of the vendors did not received support from the local authorities like Local Councils (LCs). As shown in Table 6.1, the mean of this indicator is the lowest among all the indicators which means that vendors were least satisfied on this indicator.

**Relationship:** Majority of the vendors have reported conflicts with their fellow vendors. Among the total vendors 43 per cent of the street vendors were highly dissatisfied on their relationship with fellow vendors (Figure 6.1 and Table 6.2). Most of the problems were related to conflict towards vending spots, pricing of vending items and snatching of regular customers.



### 6.3 Principal Component Analysis

Principal Component Analysis (PCA) involves correlation analysis, a statistical test called Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity to assess the suitability of the use of the techniques. The correlation matrix shows that most of the variables were interrelated and there was no extreme multi-collinearity (Table 6.4). The value of KMO measure of sampling adequacy was 0.832 which is acceptable to run PCA. The value of Bartlett's Test of Sphericity was also significant at 0.000 level of significance (Table 6.3).

Table 6.3 KMO & Bartlett test of sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.832
	Approx. Chi-Square	1493.733
Bartlett's Test of Sphericity	Df	66
	Sig.	.000

Computed by: SPSS 20

Then, PCA was run in the computer using SPSS software to obtain communalities and components. Using Kaiser's criterion of taking eigen value of more than 1, three components were extracted which together explained 59.44 per cent of the total variation in the data set. The percentage of variation explained is good enough to continue the analysis. The component loadings are shown in Table 6.4.

Table 6.4 Inter-Correlation of indicators of subjective quality of life of street vendors in Aizawl City

Indicator	Livelihood	Robbery	Accident	Crowdedness	Cleanliness	Hazard	Distance	Location	Municipal	Workload	Cooperation	Relationship
Livelihood	1	0.545	0.554	0.277	0.322	0.415	0.36	0.53	0.268	0.27	-0.093	-0.058
Robbery		1	0.593	0.279	0.319	0.458	0.302	0.489	0.288	0.258	-0.134	-0.126
Accident			1	0.408	0.324	0.478	0.392	0.528	0.204	0.316	-0.06	-0.056
Crowdedness				1	0.242	0.292	0.423	0.28	0.061	0.417	0.053	0.058
Cleanliness					1	0.385	0.218	0.347	0.234	0.195	-0.037	-0.008
Hazard						1	0.232	0.43	0.271	0.203	-0.081	-0.121
Distance							1	0.288	0.077	0.432	0.046	0.061
Location								1	0.317	0.299	-0.09	-0.089
Municipal									1	0.029	-0.117	-0.053
Workload										1	0.12	0.08
Cooperation											1	0.716
Relationship												1

Table 6.5 Intermediate composites indices of subjective quality of life

Indicators	Components			Communality	Squared Factor loadings (Scaled to unity sum)		
	1	2	3		1	2	3
Cooperation	<b>0.705</b>	0.258	-0.069	0.568	0.155	0.030	0.003
Relationship	<b>0.700</b>	0.277	-0.143	0.588	0.153	0.035	0.012
Crowdedness	<b>0.683</b>	0.312	-0.068	0.623	0.145	0.044	0.003
Cleanliness	<b>0.677</b>	0.186	-0.082	0.56	0.143	0.016	0.004
Municipal	<b>0.660</b>	-0.27	0.016	0.359	0.136	0.033	0.000
Distance	<b>0.640</b>	0.456	-0.071	0.59	0.128	0.095	0.003
Accident	<b>0.582</b>	0.131	0.056	0.573	0.106	0.008	0.002
Hazard	0.206	<b>0.728</b>	0.031	0.568	0.013	0.242	0.001
Livelihood	0.201	<b>0.720</b>	0.036	0.509	0.013	0.237	0.001
Location	0.128	<b>0.746</b>	0.093	0.582	0.005	0.254	0.005
Robbery	-0.049	0.045	<b>0.923</b>	0.845	0.001	0.001	0.490
Workload	-0.09	0.084	<b>0.911</b>	0.857	0.003	0.003	0.477
% of Expl. Variance	26.722	18.232	14.486				
Expl. Variance (eigen value)	3.207	2.188	1.738				
Expl./Total	0.45	0.307	0.244				
Total Variance	7.133						

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 5 iterations.

Note: Expl.Var. is the variance explained by the component and Expl./Total is the explained variance divided by the total variance of the three components.

From Table 6.5, the first component consists of 7 indicators. This is the most important component and it accounts for 26.72 per cent of the total variance. It has high positive loadings in cooperation from local authorities (cooperation) and relationship with fellow vendors (relationship). It also includes indicators like satisfaction on crowdedness of vending space (crowdedness), satisfaction on cleanliness of vending place (cleanliness), Satisfaction from municipal services (municipal), satisfaction on distance of workplace from home (distance) and satisfaction on safety from road accident (accident). This component mainly describes

satisfaction from support and cooperation from municipal service and cooperation from local authorities. Thus, it can be labeled as ‘municipal service and cooperation’ component.

The second component explains 18.232 per cent of the total variance. This component has high positive loadings on safety from hazards and disaster (hazard), vending as a means of livelihood (livelihood), and location of vending space (location) (Table 6.5). These variables are related to location of vending sites and thus, can be called as ‘locational’ component.

The third component accounts for 14.486 per cent of the total variance. This component has high positive loadings on variables such satisfaction from robbery (robbery) and satisfaction from workload (workload) (Table 6.5). This component may be termed ‘safety and health’.

Thus, the principal component analysis reduced the 12 variables in to three principal components. All the three components have positive loadings on their respective significant variables. Out of these three components, ‘municipal service and cooperation’ is the most important one as it explains the highest variance. The other components are ‘locational’ and ‘safety and health’.

After this, intermediate composites were obtained to calculate composite index. The intermediate composites are normalized squared rotated component loadings. The squared rotated loading is calculated by squaring the component each value and which is divided by their respective explained variance (Table 6.5). It represents the proportion of the total unit variance of the indicators, which was explained by the components. The first intermediate composite includes cooperation with a weight of 0.155, relationship (0.153), crowdedness (0.145). cleanliness (0.143), municipal (0.136), distance (0.128) and accident (0.106). Similarly, the second intermediate composite is formed by hazard (0.242), livelihood (0.237) and location (0.254). The third intermediate composite includes robbery (0.490) and workload (0.477).

In order to obtain the ‘domain weight’ for the variable indicators, the highest numbers among the three squared factor loadings (scaled to unity sum) in each variable was taken. Then, the weights for respective factors were obtained by dividing their respective percentage of explained variance and total variance. In order to obtain weight score, ‘domain weight’ and ‘weight for respective factor’ were multiplied to obtain ‘weight score’. Lastly, the ‘resulting weight’ was obtained by dividing the weight score by the total weight.

All the variable indicators have positive resulting weight. Among the variable indicators, safety from robbery and Workload due to work have the highest weight constituting 0.133 and 0.130 respectively while safety from road traffic accident has the lowest resulting weight (Table 6.6).

Table 6.6 Weights of the subjective quality of life variables

<b>Indicators</b>	<b>Domain Weight</b>	<b>Weight for respective factor</b>	<b>Weight score (W<sub>i</sub>)</b>	<b>Total weight</b>	<b>Resulting weight (∑W<sub>i</sub>=1)</b>
Cooperation	0.155	0.450	0.070	0.895	0.078
Relationship	0.153	0.450	0.069	0.895	0.077
Crowdedness	0.145	0.450	0.065	0.895	0.073
Cleanliness	0.143	0.450	0.064	0.895	0.072
Municipal	0.136	0.450	0.061	0.895	0.068
Distance	0.128	0.450	0.057	0.895	0.064
Accident	0.106	0.450	0.047	0.895	0.053
Hazard	0.242	0.307	0.074	0.895	0.083
Livelihood	0.237	0.307	0.073	0.895	0.081
Location	0.254	0.307	0.078	0.895	0.087
Robbery	0.490	0.244	0.119	0.895	0.133
Workload	0.477	0.244	0.116	0.895	0.130

Table 6.7 shows the mean values of the selected indicators for each vending market. After the resulting weights were obtained, the resulting weight of each indicator was multiplied with the mean value of the respective indicator for each vending market to derive the weight score. The obtained weight scores are shown in Table 6.8. The weight scores of all the indicators were added up for each vending market and the resulting sum represents the final score of each market (Table 6.8).

Table 6.7 Mean value of subjective quality of life indicators

Indicators	Mean value					Resulting weight ( $\sum W_i=1$ )
	Bawngkawn	Bara Bazar	Treasury Square	Thakthing	Vaivakawn	
Livelihood	2.600	2.926	2.933	3.125	2.173	0.078
Robbery	2.517	3.020	3.200	3.450	2.538	0.077
Accident	2.883	3.392	3.150	3.650	2.673	0.073
Crowdedness	2.983	3.074	3.233	3.438	2.519	0.072
Cleanliness	2.867	2.804	2.767	2.850	2.500	0.068
Hazard	2.500	2.845	2.967	2.850	2.250	0.064
Distance	3.017	3.054	3.417	3.375	2.135	0.053
Location	2.733	3.318	3.200	3.413	2.538	0.083
Municipal	2.517	2.520	3.067	2.950	2.269	0.081
Workload	3.100	3.189	3.017	3.038	2.712	0.087
Relationship	2.000	2.574	2.300	1.913	1.923	0.133
Cooperation	1.933	2.331	2.317	2.188	1.865	0.130

Table 6.8 Weight score of quality of life in indicators

Indicators	Market				
	Bawngkawn	Bara Bazar	Treasury Square	Thakthing	Vaivakawn
Livelihood	0.202	0.228	0.228	0.243	0.169
Robbery	0.193	0.232	0.246	0.265	0.195
Accident	0.211	0.248	0.230	0.267	0.195
Crowdedness	0.214	0.221	0.232	0.247	0.181
Cleanliness	0.196	0.191	0.189	0.195	0.171
Hazard	0.160	0.183	0.190	0.183	0.144
Distance	0.160	0.162	0.181	0.179	0.113
Location	0.227	0.275	0.266	0.283	0.211
Municipal	0.204	0.205	0.249	0.240	0.184
Workload	0.270	0.278	0.263	0.265	0.236
Relationship	0.267	0.344	0.307	0.255	0.257
Cooperation	0.251	0.303	0.301	0.284	0.243
<b>Total</b>	2.557	2.869	2.883	2.906	2.299

Table 6.9 shows the ranking of the vending markets in Aizawl City. Thakthing market has scored the highest among all the selected vending markets. Street vendors in this market have high satisfaction on indicators like livelihood, robbery, accident, and crowdedness. Treasury Square and Bara Bazar have also recorded high composite scores. These markets are found along the most important road of Aizawl that dissects the city into two halves. Located at more central locations, street vendors in these more prominent markets were relatively more satisfied with various aspects of their quality of life.

On the other hand, Vaivakawn market is the lowest ranked market in subjective quality of life. The vendors in this market were less satisfied with street vending as means of livelihood, safety from road, crowdedness of vending space, cleanliness of vending place, safety from disaster and calamities, distance of workplace from home, location of vending spots, municipal services, workload in street vending and relationship with fellow vendors. Another peripheral market, Bawngkawn, is the second lowest ranking market. Vendors in this market were less satisfied with safety from robbery, safety from road accident, crowdedness of vending space, safety from disaster and calamities, distance of workplace from home, location of vending spots, municipal services and relationship with fellow vendors

Table 6.9 Ranking of vending markets

<b>Market</b>	<b>Score</b>	<b>Rank</b>
Thakthing	2.906	1
Treasury Square	2.883	2
Bara Bazar	2.869	3
Bawngkawn	2.557	4
Vaivakawn	2.299	5



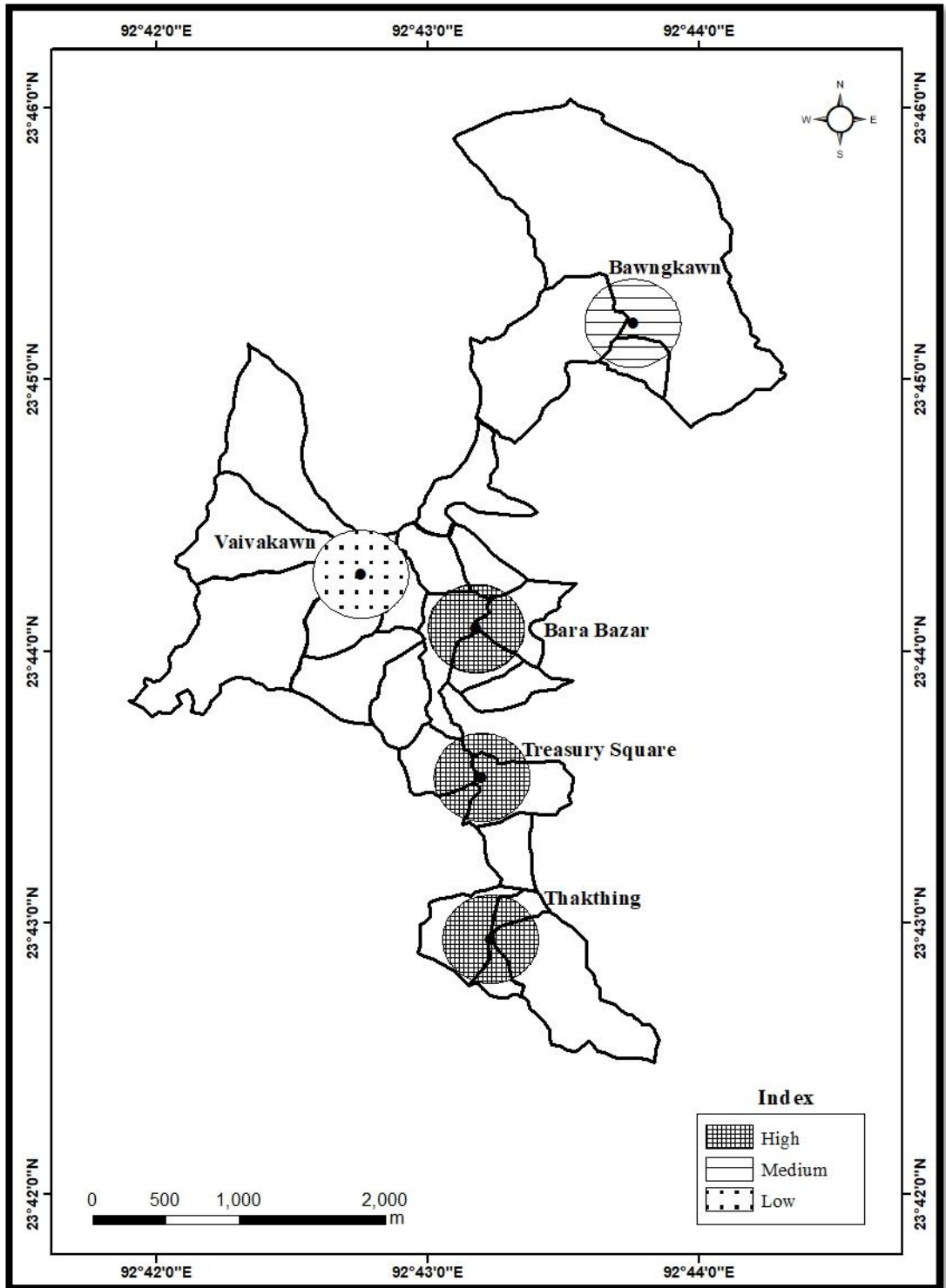


Figure 6.2 Composite Scores of Subjective Quality of Life of Street vendors in Aizawl City

## **6.4 Conclusion**

Subjective QoL of street vendors is determined by a number of factors including their satisfaction from vending as livelihood, location of vending, personal safety and access to amenities and services. From the study, it is found that the most important factor that determines QoL of street vendors as perceived by the respondents is municipal service and cooperation. Other determining factors include locational and, safety and health.

It was also found that the composite scores of subjective quality of life of street vendors were higher in older and centrally located markets like Treasury Square, from Bara Bazar and Thakthing market in comparison to newer and peripheral markets like Vaivakawn and Bawngkawn Markets. This is mainly attributed to the difference in municipal service and cooperation from local authorities that they obtained.

## CHAPTER 7

### SUMMARY AND CONCLUSION

Aizawl City is the primate city of the state of Mizoram. The city was established in the year 1890 by the British Indian Company. The British has chosen the location for their administrative centre owing to its favourable climate, nearness to river which provides easy accessibility, good vantage point, and presence of relatively flatlands in the hill top for habitation. However, due to the British policy of restriction of in-migration, the growth rate of Aizawl population has largely stagnated during the pre-Independence period. Until 1951, it was like a conglomerate of villages with a total population of less than seven thousand only. After Independence, Aizawl has experienced rapid growth of population mainly due to socio-economic, political and legislative factors associated with rampant rural-urban migration. Many rural residents migrated to Aizawl in search of better quality of life. In the meantime, due to gross negligence of urban planning, the city has become a highly congested, monocentric, hazard prone and chaotic city.

The urban economy of Aizawl City is highly dominated by government sector which is the main avenue of employment. Absence of industrialization and too much reliance on government sector for employment in a highly urbanized and literate state has caused sectoral imbalance in the economy. Due to limited opportunities in formal sector, the unskilled and less educated labourers have to create their own employment to earn their livings. Many entered street vending which is one of the easiest ways to survive for the relatively poorer workers who do not have initial capital and other resources to start up their business.

Analysis of demographic characteristics of street vendors show that street vending in Aizawl city is dominated middle-aged married females belonging to the local Mizo tribes. It is also found that majority of the street vendors were local in-migrants who constituted 60.50 per cent of the sampled street vendors while inter-state and international migrants constituted only 5.6 per cent. All of the street vendors are literate but majority of them were high school dropout.

Analysis of occupational characteristics of street vendors in Aizawl City shows that majority of the vendors were stationary vendors. Among the vending items, fruits and vegetables are the most popular items sold by vendors followed by cooked food and garments. The study also found that most of the vendors have relatively long experience of vending while more than one-fourth of the sampled vendors have involved in vending for less than 3 years only. It is also found that most of the street vendors have chosen vending due to unemployment as they failed to get employment in formal sector due to lack of required educational level, skills and other necessary qualifications.

Street vendors in Aizawl City comprised of recognized or rent paying vendors and a few unrecognized vendors who did not pay rent to anyone. More than one-third paid vending rent or fee to the local municipal authorities while some of them paid to the owner of the shop behind their vending place or market association. The study shows that 68 per cent of the street vendors in Aizawl City possessed vending license. All vendors in Treasury Square were vending license holders but in other markets, vending license holders constituted 55 – 70 per cent only of the total vendors.

Analysis of household characteristics shows that more than half of the street vendors in Aizawl City were renters or tenants. However, only 32 per cent of the street vendors in Thakthing market were found to be a renter. Majority of the vendors lived in Assam type house made up of tin roof. Although as many as 44.8 per cent of the vendors lived in concrete buildings, these are usually rented buildings and vendors were usually found in the basement of these multi-storey buildings.

Street vendors in Aizawl City were found to have good access to household amenities. Majority of the vendors relied on piped water supply and a few numbers of street vendors used traditional spring as their main source of water supply. Those who relied upon spring water were mostly from rural areas who have vended on Saturday market. Although some vendors still relied on firewood for cooking, majority of the vendors used LPG. Among the total sampled vendors, only 4.8 per cent used latrine type toilet at their homes and the remaining vendors used septic tank type toilet. The

highest users of Latrine type toilet were found in Vaivakawn market (11.5%) of the street vendors and 88.5 per cent of the street vendors used septic tank type toilet.

Chi-Square tests were employed to test the relationship between income levels and socio-economic variables. The result showed that there is no significant relationship between income and marital status; income and gender; income and educational level; income and type of vendors; income and type of vending items and, income and experience of street vendors.

Livability is one of the main focuses of this study. Livability of the street vendors in Aizawl City is measured with the help of indicators pertaining to social, economic and physical environment of street vendors in their workplace. Three dimensions such as workplace environment, safety and security and, economic dimensions were developed. Workplace environment dimension was formed by seven indicators, safety and security dimension was composed of six indicators and economic dimension was made up by 2 indicators.

Duration of workplace from home is one of the selected indicators of workplace environment dimension. The study reveals that more than half of the vendors travelled more than 4 kilometres to reach their workplaces. The average distance covered by street vendors in Thakthing and Treasury Square were longer than those in other markets. Regarding toilet and drinking water facilities in vending areas, majority of the street vendors reported that they do not have accessed to toilet and drinking water facilities in their vending areas. Only a few vendors in Bara Bazar and Thakthing markets have accessed to safe drinking water facility. Access to electricity in vending units is quite poor among the vendors in Aizawl City. Only 10.2 per cent from the total respondents used electricity in their vending place. Out of the total sampled vendors, only 45.3 per cent have reported availability of dustbin in their vending area. The study also found that vendors having storage facility in Aizawl City is only 34.8 per cent. In Vaivakawn, all the vendors have storage facilities in their vending area.

In Aizawl City, majority of the street vendors did not ever face robbery or harassment while vending. The highest reported incidence of robbery and harassment occurred in Bara Bazar which is the largest market in the city. Other major problems faced by vendors were environment related health problem and street flood and road accident. Although majority of the sampled street vendors reported that they did not contract any health-related problems due to pollution or rain, all the vendors from Vaivakawn markets have experienced either cold, cough or fever due to rain or pollution. The study also revealed that most of the vendors reported they suffered from street flood mainly due to improper drainage.

The average monthly income of to the total respondents in Aizawl city was Rs. 23,100. Majority of the respondents earned more than the average income of street vendors. Among the vending markets, majority of the vendors from Treasury Square and Thakthing have earned more than the monthly average income. It is also found that some vendors have received assistance from the government in cash or in kind through welfare schemes. The study found that majority of the vendors did not receive any assistance from the government. Among those who received benefits from the government, 60.3 per cent received cash benefits and 39.7 per cent received vending stalls from the government authorities.

With the help of Chi-square, it is found that there was significant differences among vending markets in terms of distance of workplace from home, availability of toilet facility, availability of drinking water facility, presence of roofed vending stall, availability of dustbin, availability of storage, injury faced by the street vendors due to accident, problems with fellow vendor, health problems, and street flood. On the other hand, no significant association was observed between location of vending market and availability of electricity, incidence of robbery, assistance received from government, and, income level of the street vendors.

Vendors' Livability Index shows that Treasury Square market is the most livable market for vendors in Aizawl City. The market is surrounded by important government offices. The street vendors were given vending license as well as aid in the form of financial aid or equipment by the Aizawl Municipal Corporation (AMC)

through Local Council. On Saturday market, the road traffic system was altered by turning two ways into one way in order to give more space to the vendors as well as to the customers. The Local Council also involved in seating arrangement and allocation for the vendors. The average income of vendors in Treasury Square market was also relatively higher than those in other markets.

On the other hand, Thakthing market is the least livable market in Aizawl City. The market is located in the southern part of Aizawl City and most of the vendors and customers are from the southern part of Aizawl City. In this market, sidewalks are not allowed for vending and most of the vendors have to take permission from the owner of the shop nearby to use vacant space. Unlike Treasury Square market, alteration of road traffic on Saturday weekly market is impossible as there is no alternative road to bypass the traffic from the main road which connects the central area of the city from the southern part of the city.

Quality of life is another main focus of the study. To measure the subjective quality of life, 12 indicators were selected. The selected indicators consists of satisfaction on street vending as means of livelihood (livelihood), satisfaction on safety from robbery (robbery), satisfaction on safety from road accident (accident), satisfaction on crowdedness of vending space (crowdedness), satisfaction on cleanliness of vending place (cleanliness), satisfaction on safety from disaster and calamities (hazard), satisfaction on distance of workplace from home (distance), satisfaction on location of vending spots (location), satisfaction from municipal services (municipal), satisfaction with workload of street vending (workload), Satisfaction from cooperation with local authorities (cooperation) and Satisfaction on relationship with fellow vendors (relationship). These indicators are composed of a wide range of variables relating to satisfaction of vendors towards their livability.

It is surprising to find out that majority of the sampled street vendors were satisfied with street vending as a means of livelihood although there were far greater number of highly dissatisfied in comparison to those who reported highly satisfied. It seems that a number of vendors were contented with their jobs. The same pattern is observed in other subjective indicators like satisfaction level towards incidence of

robbery, crowdedness, location of vending place and workload. On the other hand, in case of indicators like cooperation and relationship, majority of the vendors have reported high dissatisfaction. The percentage of vendors who were 'highly dissatisfied' is also relatively high in case of indicators like municipality, hazard.

With the help of Principal Component Analysis, the selected subjective QoL indicators were reduced into three components which are subsequently labeled municipal service and cooperation, locational and, safety and health components. Out of these three components, 'municipal service and cooperation' is the most important one as it explains the highest variance. It is thus the most important determinant of subjective QoL of street vendors in their vending place. Locational component is the second most important factor followed by 'safety and health'.

Lastly, PCA is employed again to measure the composite index of subjective quality of life. The composite index shows that markets like Bara Bazar, Treasury Square and Thakthing have high composite scores indicating relatively higher quality of life of street vendors. These markets are found along the main road of Aizawl City and vendors were more satisfied with various aspects of their quality of life. On the other hand, vendors in fringe markets such as Bawngkawn and Vaivakawn have low composite score of quality of life.

To conclude, street vendors in Aizawl City have also faced problems like harassment, lack of access to amenities and other hardships in their vending areas as observed in other cities. Majority of the vendors were also less educated females and rural-urban migrants who do not have opportunity in other sectors of employment. It is also observed that street vendors in Aizawl City found to be least satisfied with lack of amenities and support from the government. Municipal service may be strengthened to improve the quality of life of vendors. For this, it is first necessary to fully implement the provisions envisaged in the Street Vendors Act. Proper demarcation of vending space in all the markets is highly crucial to enhance the quality of life of vendors. From the study, it is observed that vendors in Treasury Square market where a vending area is properly allotted have enjoyed better quality of life which is associated with relatively higher rank in livability index. Demarcation of proper



vending space entails provisions of vending license, public amenities like toilet, storage unit and safe drinking water facilities and, allocation of improved vending stalls. Moreover, many vendors found their vending location unsafe from natural hazards including landslide, street flood and others. Allocating them a safer vending space would help improve the livability of vending space and the quality of life of the vendors.

## APPENDIX

### Questionnaire

*The Survey is about the condition of street vendors in Aizawl City and is purely intended for research purpose. The responses will be kept confidential.*

**Location:** \_\_\_\_\_

**Date:** \_\_\_\_\_

#### Part: A

#### Socio-Demographic

Sl.No	Questions	Answers
1	Name	
2	Age	
3	Sex (Male =1, Female=2,Others = 0)	
4	Marital status (Currently married =1 Never married=2, Divorced=3, Widowed=4)	
5	Religion (Christian=1 Hindu=2 Muslim=3 Buddhist=4 Others=0)	
6	Community (ST=1, OBC=2, SC=3, GEN=4)	
7	Ethnicity (Mizo=1, Meitei=2, Nepali=3, Bengali=4, Others=0)	
8	Educational Level (Passed) ( below HSLC=1, HSLC-HSSLC=2, Graduation=3, Above graduation=4,Others=0)	
9	Place of origin (Within Aizawl=1, Outside Aizawl=2, Outside Mizoram=3)	
10	Total no. of Family? (less than 5=1, more than 5=2)	

**Part B:****Household Amenities**

Sl.No	Questions	Answers
1	Ownership of the house? (own=1, rented=2, others=0)	
2	Types of house? (RCC=1, Assam Type=2)	
3	Main sources Water supply? (spring=1, rain water=2, PHE=3)	
4	Main sources of energy? (biofuel=1, LPG=2, Kerosene=3 and other=0)	
5	Do you have Electricity in your House? (yes=1, No=2)	
6	What type of toilet facility do you have? (Latrine=1, Septic tank=2)	

**Part C:****Social Environment**

Sl.No	Questions	Answers
1	Do you ever face any kind of robbery/stolen things? (yes=1, no=2)	
2	Did you face any kind of Harassment (Yes=1, No=2)	
3	What are the techniques of harassment? (verbal=1, physical=2)	
4	Harassment areas (Municipal authority=1, Private=2, Public=3, NGO=4, Others=5)	
5	Do you received any aid/support from the Government?(Yes=1, No=2)	
6	If yes, what type of aid/support? (finance=1, making premises=2, providing tools=3, free tax=4, others=0)	
7	Do you have any problems with fellow street vendors?(internal) (yes=1, No=2)	

**Part D:****Occupational Characteristics**

<b>Sl.No</b>	<b>Questions</b>	<b>Answers</b>
1	Reasons of entering in to vending? (inherit=1, unemployment=2, influence by peers=3, other=4)	
2	For How long you have been interfering with vending? (1-3yrs=1,4-6yrs=2, more than 6yrs=3)	
3	Mobile or Stationary Street Vendor? (Mobile=1, Stationary=2, both=3)	
4	If mobile, what is your mode of transport? (walking=1, cart=2, motor vehicles=3)	
5	Type of goods sold? (cooked food=1, Vegetables and fruits=2, Utensils=3, garments=4, Machinery items=5, variety items=6)	
6	Distance of workplace from present Residence? (within 4km=1, more than 4km)	
7	Do you pay rent for the vending place? (yes=1, no=2)	
8	If yes, Who is collecting the money? (Owner=1, Private=2, Municipal=3, other=0)	
9	Do you have Licence? ( yes = 1, no= 2)	
10	What is your average Monthly income? (Less than Rs 10000=1, Rs 10000-Rs 20000=2, More than Rs 20000=3)	
11	what is your sources of finance? (Self=1, Loans from relatives=2, loans from private=3, loan from bank=4 others=0)	
12	How did you get your supply? (self=1, bought from others=2)	

**Part E:****Physical Environment**

<b>Sl.No</b>	<b>Questions</b>	<b>Answers</b>
1	Is there any toilet in your area? Yes=1, No=2	
2	If yes, what type of toilet? (Latrine=1, Septic Tank=2)	
3	Do you have any safe drinking water? (yes=1, No=2)	
4	If no, how do you manage it? (Bring from home=1, buy=2, fill it from the neighbours near the vending place=3)	
5	Do you have any proper roof? (yes=1, No=2)	
6	Do you ever face street flood? (yes=1, no=2)	
7	Do you have any health issue arising out due to rain/pollution? (yes=1, no=2)	
8	Did you ever face any kind of accident cause by vehicles? Yes=1, No=2)	
9	Do you have electricity? (yes=1, No=2)	
10	Do you have any dustbin or waste disposal bin? (yes=1, No=2)	
11	If yes, how far is it from your space? (in meters)	
12	Do you have any storage or store room for your items? (yes=1, no=2)	

**Part F:**

**Subjective QoL**

Sl. No	Indicators	Level of Satisfaction				
1	Do you think vending is good enough to support your family?					
2	Do you think that you are safe in your vending place from robbery?					
3	Do you think that you are safe from vehicles in your vending area?					
4	Do you think that your vending space is too congested?					
5	Do you think that your surrounding is clean enough?					
6	Do you think that your space is safe from any disaster?					
7	Do you think that your vending place is too far from your home?					
8	Do you think that your space is good for vending?					
9	Do you satisfy with the works of the Government or Municipal?					
10	Do you think that vending is tiresome?					
11	Do you have any problems with your L.C in your vending place?					
12	Do you have any problems with your vending mates in your vending?					

## References

- Abane, A.M. (2010): Background characteristics and accident risk of commercial vehicle drivers in the Cape Coast-Elmina area of the Central Region, Ghana. *Oguaa Journal of Social Sciences*, Vol. 5(1), pp. 64–86.
- Adhikari, D. B. (2012): Income generation in informal sector: A case study of the street vendors of Kathmandu Metropolitan City. *Economic Journal of Development Issues*, Vol. 13, pp. 1–14.
- Agarwal, S., (2013): Dynamics of Market: A Case Study of Putting Out System in Urban Informal Manufacturing Sector of Baroda City, *International Journal of Humanities and Social Science Invention*, Vol. 2(7), pp. 64-69
- Alila, P.O. & Mitullah, W.N. (2000): *Enhancing Lobbying Capacity of Women Street Vendors the Challenges in The Kenyan Policy Environment*, Submitted to the International Development Research Centre (IDRC).
- Anderson, B. (2004): Information society technology and quality of life: a literature review and a tool for thought, Research Paper, CHIMERA Working Papers, 2004-09.
- Anjaria, J. (2006): Street Hawkers and Public Space in Mumbai, *Economic and Political Weekly*, Vol. 41, pp. 2140-2146.
- Asiedu, A. B. & Agyei-Mensah, S. (2008): Traders on the run: Activities of street vendors in the Accra Metropolitan Area, Ghana. *Norsk Geografisk Tidsskrift, Norwegian Journal of Geography*, Vol. 62(3), pp. 191–202.
- Austin, R. (1994): An Honest Living: Street Vendors, Municipal Regulation, and the Black Public Sphere, *The Yale Law Journal*, Vol. 103(8), pp. 2119-2131
- Baldwin, S., Godfrey, C. & Propper, C. (1990): Introduction, *Quality of Life Perspectives and Policies*, Baldwin, S., Godfrey, C. & Propper, C (eds), Routledge, New York, pp. 1-6.
- Banerjee, N. (1985): "Women's Work and Discrimination" in N. Banerjee and D. Jain, *Tyranny of the Household*. New Delhi: Shakti Books.
- Benería, L. (2001): Shifting the Risk: New Employment Patterns, Informalization, and Women's Work, *International Journal of Politics Culture and Society*, Vol. 15. pp. 27-53.

- Bhat, G.M. & Nengroo, A.H. (2013): Urban Informal Sector: A Case Study of Street Vendors in Kashmir, *IJMBS*, Vol. 3 (1), pp. 112-115.
- Bhowmik, S. (2005): Street Vendors in Asia: A Review. *Economic and Political Weekly*. Vol. 40. pp. 2256-2264.
- Bhowmik, S. K. (2007): Street Vending in Urban India: The Struggle for Recognition, *Street Entrepreneurs: People, Place and Politics in Local and Global Perspectives*, Cross, J. & Morals, A. (eds), Routledge Publication, pp. 92-107.
- Bhowmik, S. K. (2001): Coping with Urban Poverty Ex-Textile Mill Workers in Central Mumbai, *Economic & Political Weekly*, Vol. 36(52), pp. 4822-4827.
- Bhowmik, S. K. (2003): "Urban Responses to Street Trading: India", Paper Prepared for panel entitled "Urban Responses to Street Traders: A Comparative Perspective from India, Kenya, and South Africa" at the Urban Research Symposium on Urban Development for Economic Growth and Poverty Reduction, World Bank, Washington, D.C., December 2003.
- Bhowmik, S. K. (2005): Street Vendors in Asia: A Review, *Economic and Political Weekly*, Vol. 40(22), pp. 2256–2264.
- Bhowmik, S.K. (2000): *Street Vendors in Global Urban Economy*, Routledge, New Delhi.
- Bhuyan, Z. & Mohapatra, A. (2012). Women in-migrants in urban informal sectors of a metropolitan city of Assam, India. *The Clarion- International Multidisciplinary Journal*, Vol. 1(2), pp. 205-212.
- Boakye, N. Y. G. (2009): *The street is only a stepping stone: Street vendors account of goals, strategies and obstacles*. Princeton University Press.
- Böhnke, P. (2005): First European Quality of Life Survey: Life Satisfaction, Happiness and Sense of Belonging, European Foundation for the Improvement of Living and Working Conditions, Available at [https://www.eurofound.europa.eu/sites/default/files/ef\\_publication/field\\_ef\\_document/ef0591en\\_0.pdf](https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef0591en_0.pdf) , Accessed on 15.12.2021
- Booyesen, F. (2002): An Overview and Evaluation of Composite Indexes of Development, *Social Indicators Research*, Vol. 59, pp.115-151.



- Bowling, A. & Windsor, J. (2001): Towards the Good Life: A Population Survey of Dimensions of Quality of Life, *Journal of Happiness Studies*, Vol. 2, pp. 55-81.
- Brown, A. (2006): *Contested space: street trading, public space, and livelihoods in developing cities*. Urban Management Series, Rugby: ITDG Publishing, pp.17-36.
- Bunnell, T. & Kathiravelu, L., (2016): Extending urban liveability: Friendship and sociality in the lives of low-wage migrants. *International Development Planning Review*. Vol. 38, pp. 201-220.
- Cassel, D. & Cichy, E. U. (1986): Zur wachsenden Schattenwirtschaft in Ost und West. *Comparative Economic Studies*, vol. 28 (1).
- Castells, M. & Portes, A. (1989): World Underneath: The Origins, Dynamics, and Effects of the Informal Economy, *In The Informal Economy: Studies in Advanced and Less Developed Countries*, Portes, A., Castells, M. & Benton, L.A (eds) Baltimore: Johns Hopkins University Press, pp. 11-37.
- Chakravarty, I. & Canet, C. (1996) Street foods in Calcutta. *Food, Nutrition and Agriculture*, Vol.6 (4), pp. 30-37.
- Chatfield, C. & Collins, A.J. (1980): *Introduction to Multivariate Analysis*, Chapman and Hall, London and New York.
- Chen, M. A. (2007): *Rethinking the informal economy: Linkages with the formal economy and the formal regulatory environment*. DESA Working Paper No. 46
- Chen, M. A. (2012): *The Informal Economy: Definitions, Theories and Policies*, Women in Informal Employment: Globalizing and Organizing (WIEGO), USA.
- Chen, M., Vanak, J. & Heintz, J. (2006): Informality, Gender and Poverty: A Global Picture, *Economic and Political Weekly*, Vol. 41 (21), pp. 2131-2139.
- Choudhury, M., Mahanta, L.B., Goswami, J.S. & Mazumder, M.D. (2011): Will capacity building training interventions given to street food vendors give us safer food? A cross-sectional study from India. *Food Control*, Vol. 22, pp. 1233-1239.

- Companion, M. (2010): Commodities and Competition: The Economic Marginalization of Female Food Vendors in Northern Mozambique. *WSQ: Women's Studies Quarterly*, Vol. 38, pp. 163-181.
- Costello, A.B. & Osborne, J.W. (2005): Best Practices in Exploratory Factor Analysis: Four Recommendations for Getting the Most from Your Analysis, *Practical Assessment Research & Evaluation*, Vol. 10(7), pp. 1-9.
- Cox, R. & Watt, P. (2002): Globalization, Polarization and the Informal Sector: The Case of Paid Domestic Workers in London. *Area*. Vol. 34(1). pp. 39–47.
- Cross, J. C. (1998). Informal sector, *Encyclopaedia of political economy*, O'Hara, P. (ed.), Routledge, London, pp. 580-582.
- Crossa, V. (2009): Resisting the Entrepreneurial City: Street Vendors' Struggle in Mexico City's Historic Center. *International Journal of Urban and Regional Research*. Vol.33, pp. 43-63.
- Culyer, A.J. (1990): Commodities, characteristics of commodities, characteristics of people, utilities, and the quality of life, *Quality of Life Perspectives and Policies*, Baldwin, S., Godfrey, C. & Propper, C. (eds.) Routledge, London and New York, pp. 9-27.
- Cummins, R. A. (1997): Assessing quality of life, *Assessing quality of life for people with disabilities: Models, research and practice*, Brown, R. I. (Ed.), Stanley Thomes (Publishers) Ltd., pp. 116-150.
- Dabir-Alai, P. (2004). The Economics of Street Vending: An Empirical Framework for measuring vulnerability in Delhi in the late 1990s, EGDI and UNU-WIDER Conference, Unlocking Human Potential: Linking the informal and formal sector, 17-18, September, 2004, Helsinki, Finland.
- De Soto, H. (1989): *The Other Path: The Invisible Revolution in the Third World*, Harper and Row, New York.
- Delhey, J., Böhnke, P., Habich, R. & Zapf, W. (2002): Quality of Life in a European Perspective: The “Euromodule” as a New Instrument for Comparative Welfare Research. *Social Indicators Research*, Vol. 58(1/3), pp. 163–176.
- Vennhoven, R. (2002): Why Social Policy Needs Subjective Indicators, *Social Indicators Research* Vol. 58, pp. 33-45.

- Deribie, E. (2012): Women in the informal sector: Evidence from Southwestern Ethiopia, *International Journal of Peace and Development Studies*, Vol. 3(6), pp. 112-117
- Deshingkar, P. (2012): Extending labour inspections to the informal sector and agriculture. *Chronic Poverty Research Centre Working Paper*, (154).
- Dimas, H. (2008): Street Vendors: urban problem and economic potential. *Fakultas Ekonomi Universitas Padjajaran. Bandung*.
- Dinda, S. (2010): Understanding the urban street vending sector: a socio-economic study across 28 towns in Bihar. *Chandragupta Institute of Management Patna and NIDAN*, 4-5.
- Doibale, M., Mohite, S.D., Sawase, G.B. & Pagadal, P.H. (2019): Study of socio-demographic profile and causes of street vending in urban area, Aurangabad, Maharashtra. *International Journal of Community Medicine and Public Health*. Vol. 6(9), pp. 4005-4010.
- Donovan, M. G. (2008): Informal Cities and the Contestation of Public Space: The Case of Bogota's Street Vendors, *Urban Studies*, Vol. 45(1), pp. 29–51.
- Drummond, L. (2000): Street Scenes: Practices of Public and Private Space in Urban Vietnam. *Urban Studies*. Vol. 37, pp. 2377-2391.
- Eapen, M. (2001): Women in Informal Sector in Kerala: Need for Re-examination, *Economic and Political Weekly*, Vol. XXXVI (20), pp.2390.
- Esayas, E., & Mulugeta, S. (2020): Analysis of socioeconomic vulnerability of street vendors, *Theoretical and Empirical Researches in Urban Management*. Vol. 15(2), pp. 49-65.
- Estrada E., & Hondagneu-Sotelo P. (2011): Intersectional Dignities: Latino Immigrant Street Vendor Youth in Los Angeles. *Journal of Contemporary Ethnography*, Vol. 40(1), pp. 102-131.
- Fahey, T., Nolan, B., & Whelan, CT. (2003): Monitoring Quality of life in Europe, European Foundation for the Improvement of Living and Working Conditions  
[https://www.eurofound.europa.eu/sites/default/files/ef\\_publication/field\\_ef\\_document/ef02108en.pdf](https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef02108en.pdf) , Accessed on 15.12.2021.
- Fakhruddin (1991): *Quality of Urban Life*, Rawat Publication, Jaipur.

- Feige, E. L. (1997): Underground Activity and Institutional Change: Productive, Protective and Predatory Behaviour in Transition Economies, *Transforming Post-Communist Political Economies*, J. M. Nelson J.M., Tilley, C. & Walker, L. (Eds.). National Academy Press, Washington D.C., pp.21–35.
- Ferman, P.R., & Louis A.F. (1973): The Structural Underpinning of Irregular Economy, *Poverty and Human Resources Abstracts*, Vol. 8, pp. 3-17.
- Ferriss, A.L. (2004): The Quality of Life Concept in Sociology, *American Sociologist*, Vol. 35 (3), pp. 37-51.
- Field, A. (2000): *Discovering Statistics using SPSS for Windows*, Sage Publications.
- Flora, C.B. (1998): Quality of Life Versus Standard of Living, *Rural Development News*, Vol. 22(4), pp. 1-3.
- Foo, T.S. (2000): Subjective Assessment of Urban Quality of Life in Singapore (1997-1998), *Habitat International*, Vol. 24 (1), pp. 31-49.
- Frey, B. S., Weck, H., & Pommerehne, W.W. (1982): Has the Shadow Economy Grown in Germany? An Exploratory Study. *Weltwirtschaftliches Archiv*, Vol. 118(3), pp. 499–524.
- Geertz, C. (1963): *Peddlers and Princes: Social Change and Economic Modernization in Two Indonesian Towns*, University of Chicago Press, Chicago.
- Geertz, C. (1978): The Bazaar Economy: Information and Search in Peasant Marketing, *American Economic Review*, Vol. 68(2), pp. 28-32.
- Geetha, K. T. & Malarvizhi, V. (2014). Problems faced by domestic women workers in informal sector in Coimbatore city. *ZENITH International Journal of Business Economics & Management Research*, Vol. 4(8), pp. 182-196.
- Geetika, G., Singh, T. & Gupta, A. (2011): Women Working in Informal Sector in India: A saga of Lopsided Utilization of Human Capital, *International Conference on Economics and Finance Research*, IPEDR, Vol.4
- Gerson, E. M. (1976). On “Quality of Life.”, *American Sociological Review*, Vol. 41(5), pp. 793–806.
- Ghai, M. (2007): Contract Labour: A Threat Boon to the Indian Economy, *Southern Economist*, Vol. 46(1).
- Giggs, J.A. & Mather, P.M. (1975): Factorial Ecology and Factor Invariance: An Investigation, *Economic Geography*, Vol. 51 (4), pp. 366-382.

- Greyling, T. (2013): *A Composite Index of Quality of Life for the Gauteng City-Region: A Principal Component Analysis Approach*, Occasional Paper 07, The Gauteng City-Region Observatory, South Africa.
- Gutmann, P. M. (1977): The Subterranean Economy, *Financial Analysts Journal*, Vol. 33(6), pp. 26–34.
- Hajiran, H. (2006): Toward A Quality of Life Theory: Net Domestic Product Of Happiness, *Social Indicators Research*, Vol. 75, pp. 31-43.
- Halpem, A. S. (1993): Quality of life as a conceptual framework for evaluating transition outcomes, *Exceptional Children*, Vol. 59, pp. 486-498.
- Handayani, C.M.S., Lestari, B.B. & Suharyanto, (2017): Factors Affecting the Street Vendor Decision to Sell at Outside of the Street Vendor Center, *International Journal of Business and Management Invention*, Vol. 6(5), pp. 20-26.
- Harries, K.D. (1974): *The Geography of Crime and Justice*, McGraw Hill, New York.
- Hart, K. (1970): *Informal Income Opportunities: Conference on Urban Unemployment in Africa* at Institute of Developmental Studies, University of Sussex, Sept., 1971.
- Hart, K. (1970): 8. Small-scale entrepreneurs in Ghana and development planning. *The Journal of Development Studies*, Vol. 6(4), pp. 104-120.
- Hart, K. (1973). Informal income opportunities and urban employment in Ghana. *The journal of modern African studies*, Vol. 11(1), pp. 61-89.
- Harvey, D. (1973): *Social Justice and The City*, Edward Arnold, London.
- Helburn, N. (1982): Geography and the Quality of Life, *Annals of the Association of American Geographers*, Vol. 72(4), pp. 445-456.
- Ho, R. (2014): *Handbook of Univariate and Multivariate Data Analysis with IBM SPSS*, 2nd Edition, CRC Press, New York.
- Houston, J.F. (1987): The Underground Economy: A Troubling Issue for Policymakers, *Business Review*, September, pp. 3-12.
- Husain, S., Yasmin, S. & Islam, M.S. (2015): Assessment of the Socioeconomic Aspects of Street Vendors in Dhaka City: Evidence from Bangladesh, *Asian Social Science*, Vol. 11 (26), pp. 1-10.

- Hutcheson, G. & Sofroniou N. (1999): *The Multivariate Social Scientist: Introductory Statistics using Generalized Linear Models*, Sage Publications, Thousand Oaks, CA.
- Ibrahim, M.F. & Chung, S.W. (2003): Quality of Life of Residents Living near Industrial Estates in Singapore, *Social Indicators Research*, Vol. 61(2), pp.203-255.
- Ikechebelu, J., Udigwe, G., Ezechukwu, C., Ndinechi, A. & Joe-Ikechebelu, N (2008): Sexual abuse among juvenile female street hawkers in Anambra State, Nigeria. *African Journal of Reproductive Health*. Vol. 12, pp. 111-9.
- Inkeles, A. (1993): Industrialization, Modernization and The Quality of Life, *International Journal of Comparative Sociology*, Vol.34 (1/2), pp. 1-23.
- International Labour Office, (1972): *Employment, Incomes and Equality: A Strategy for increasing productive employment in Kenya*, ILO, 1972.
- International Labour Organization, (1993): *Highlights of the Conference and Text of The Three Resolutions Adopted*. Report of the XVth International Conference of Labour Statisticians International Labour Organization, Geneva, 90th Session.
- International Labour Organization, (2002): *Decent Work and the Informal Economy: Report VI*, International Labour Organization, Geneva, 90th Session.
- Jaffe, K. (2007): The Economic Limits of Trust – The Case of a Latin American Urban Informal Commerce Sector. *Journal of Developmental Entrepreneurship*, Vol. 12 (3), pp. 339-352.
- Jaishankar, V. & Sujatha, L. (2016): A Study on Problems Faced by the Street Vendors in Tiruchirappalli City. *SSRG International Journal of Economics and Management Studies* Vol. 3(9), pp. 40-43.
- Jhabvala, R. (2000): *The Role of Street Vendors in the Growing Urban Economies*, Self-Employed Women's Association (SEWA), Ahmedabad.
- Jhabvala, R. (2005): Unorganised Workers Bill: In Aid of the Informal Worker, *Economic and Political Weekly*, Vol. 44(22), pp. 2227-2231.
- Jimu, I.M., (2004): An Exploration of Street Vending's Contribution towards Botswana's Vision of Prosperity for All by 2016, *Pula-Botswana. Journal of African Studies*, Vol. 18 (1), pp. 18-30.

- Joseph, M.C. (2011). *Beyond modernist planning: understanding urban street vending in Botswana*, Research paper Presented in Amsterdam, 7-9 July 2011.
- Kaiser, H.F. & Rice, J. (1974): Little Jiffy, Mark IV, *Educational and Psychological Measurement*, Vol. 34, pp.111-117.
- Kaiser, H.F. (1970): A Second-Generation Little Jiffy, *Psychometrika*, vol. 35, pp. 401-415.
- Kamunyor, S. (2008): *A Growing Space for Dialogue: The Case of Street Vending in Nairobi's Central Business District*. Submitted to the Department of Urban Studies and Planning in Partial Fulfilment of The Requirements for The Degree of Master in City Planning at the Massachusetts Institute of Technology.
- Kannan, R.S. & Sengupta, A. (2006): Social Security for Unorganized Sector-A Major National Initiative, *Economic and Political Weekly*, Vol. 41(32), pp. 3477–3480.
- Karthikeyan, R. & Mangaleswaran, R. (2013): Quality of Life Among Street Vendors in Tiruchirappalli City, Tamil Nadu, India. *International Research Journal of Social Sciences*, Vol. 2(12), pp. 18-28.
- Kaur, H. & Kaur, S. (2017): A Study on Quality of Work Life of Street Vendors of Khanna, *Biz and Bytes*, Vol. 8 (1), pp. 59-63.
- Kiaka, R., Chikulo, S., Slootheer, S., & Hebinck, P., (2021): “The street is ours”. A comparative analysis of street trading, Covid-19 and new street geographies in Harare, Zimbabwe and Kisumu, Kenya, *Food Security*, Vol. 13, pp. 1263–1281.
- Knox, P.L. (1974): Spatial Variations in Level of Living in England and Wales in 1961, *Transactions of the Institute of British Geographers*, Vol. 62, pp. 1-24.
- Kovac, D. (2004): *Quality of life: A megaconcept of coming époque*, *Psychology Science*, Vol. 46(1), pp. 167-186.
- Kusakabe, K. (2006): *Policy Issues on Street Vending: An Overview of Studies in Thailand, Cambodia and Mongolia*, International Labour Office.
- Lalchandama G., Saitluanga, B.L. & Rinawma, P. (2021): *Long term Annual and Seasonal Temperature and Rainfall Trend Analysis in Aizawl District*,

- Mizoram. Contemporary Issues, Problem and Challenges in India. Research and Publication Cell Govt. Hnahthial College. pp. 14-30.
- Lalchhanhimi, (2016): Socio – Economic Status of Women Vegetable Vendors in Aizawl City: A Case Study, M.Phil Dissertation (Unpublished), Department of Economics, Mizoram University.
- Lall, S.V., Selod, H. & Shalizi, Z. (2006): *Rural- urban migration in developing countries: a survey of theoretical predictions and empirical findings*. Development Research Group, The World Bank, Washington, DC.
- Lalremruati, R. (2012): *Entrepreneurship Among Street Vendors of Vegetables in Aizawl, Mizoram*, M.Phil Dissertation (Unpublished), Department of Commerce, Mizoram University.
- Lauermann, J. (2013): Practicing space: Vending practices and street markets in Sana'a Yemen. *Geoforum*. Vol. 47, pp. 65–72.
- Lawmkima, H. (2010): *Landslide Hazard Studies in and around Aizawl City, Mizoram, India*, (Unpublished Doctoral dissertation), Mizoram University.
- Lee, Y.J. (2008): Subjective Quality of Life Measurement in Taipei, *Building And Environment*, Vol. 43(7), pp. 1205-1215.
- Lingjun, L., Yan, H. & Zong, H. (2009): *The Method of Livable Environmental Evaluation Based on Remote Sensing Technology*. 2009 International Forum on Information Technology and Applications., pp. 144-149.
- Luer, R.H. (1978): *Social Problems and the Quality of Life*, William C.Brown Co. Publishers, Dubuque, Iowa.
- Lund, F. (1998): Women Street Traders in Urban South Africa: A Synthesis Of Selected Research Findings, CSDS Research Report No 15, School of Development Studies, University of Natal, Durban.
- Lyndhurst, B. (2004): *Livability & Sustainable Development: Bad Habits & Hard Choices*, Final Report for the UK Office of the Deputy Prime Minister, London.
- Lyngskor, J. W. (2006): Nature of the Urban Informal Sector in Shillong with Special Reference to Roadside Pan-shops. *Informality and Poverty, Urban Landscape of India's North-East*, Ray, B.D., & Das, G. Akansa (eds), Publishing house, New Delhi, pp. 89-99.



- Lyons, M. & Snoxell, S. (2005): Sustainable Urban Livelihoods and Marketplace Social Capital: Crisis and Strategy in Petty Trade. *Urban Studies*, Vol. 42(8), pp. 1301–1320.
- Mahadevia, D., Mishra, A., Joseph, Y. & Das, A.K. (2016): *Street vending in Guwahati: Experiences of Conflict*, CUE Working Paper 30, February 2016.
- Maloney, W.F. (2004): Informality Revisited, *World Development*, Vol. 32(7), pp. 1159-1178.
- Malsawmtluanga, H. & Lalnunthara, R. (2020): A Study of Financial Inclusion of Street Vendors: With Special Reference to Street Vegetable Vendors in Pukpui Locality Lunglei Town, Mizoram, *International Research Journal of Modernization in Engineering Technology and Science*, Vol. 2 (7), pp. 111-119.
- Marans, R. W. & Stimson, R. J. (2011): An overview of quality of urban life, *Investigating quality of urban life*, Marans, R.W. & Stimson, R. J. (Eds.), Springer, (pp. 1–29).
- Martinez, L., Short, J. & Estrada, D. (2017): The urban informal economy: Street vendors in Cali, Colombia. *Cities*. Vol. 66. pp. 34–43.
- Martinez, L., Short, J. & Estrada, D. (2018): The diversity of the street trading: A case study of street vending in Cali. *Cities*. Vol. 79. pp. 18-25.
- Matutinovic, I. (1998): Quality of Life in Transition Countries: Central East Europe with Special Reference to Croatia”, *Social Indicators Research*, Vol. 43, pp. 97-119.
- Mazumdar, D., (1975): *The Urban Informal Sector*, World Staff Working Paper No. 211, World Bank, Washington D.C.
- McGee, T. G. & Yeung, Y. M. (1977): *Hawkers in Southeast Asian cities: Planning for the bazaar economy*, IDRC, Ottawa, ON, CA.
- McKay, F.H., Singh, A., Singh, S., Good, S. & Osborne, R.H. (2016). Street vendors in Patna, India: Understanding the socio-economic profile, livelihood and hygiene practices. *Food Control*, Vol. 70, pp. 281-285.
- Milgram, B.L. (2011): Reconfiguring Space, Mobilizing Livelihood Street Vending, Legality, and Work in the Philippines. *Journal of Developing Societies*. Vol. 27(3-4), pp. 261-293.

- Mishra, L. (1999). *Unorganized Labor: Deprivation and Emancipation*, Manak Publications Pvt. Ltd. New Delhi.
- Moser, C. (1978): Informal sector or petty commodity production: dualism or dependence in urban development? *World Development*, Vol. 6 (9–10), pp. 1041-1064.
- Muiruri, P. (2010): *Women Street Vendors in Nairobi Kenya: A Situational and Policy Analysis within a Human Right Framework*, Ossera Publication, Addis Ababa, Ethiopia.
- Naik, A.K. (2009): Informal Sector and Informal Workers in India,
- Namugumya, B. & Muyanja, Ch. (2011): Contribution of street foods to the dietary needs of street food vendors in Kampala, Jinja and Masaka districts, Uganda. *Public Health Nutrition*. Vol. 15. pp. 1503-1511.
- Nandal, S. (2006): Women workers in unorganized sector: A study on construction industry in Haryana, *International Journal of Development Issues*, Vol. 5(2), pp. 119-132.
- National Commission for Enterprises in the Unorganised Sector (2007): *Report on Conditions of Work and Promotion of Livelihoods in the Unorganised Sector*, Dolphin Print Graphics, New Delhi.
- National Commission for Enterprises in the Unorganised Sector (2008): *Report on Definitional and Statistical Issues Relating to Informal Economy*, National Commission for Enterprises in the Unorganized Sector, Government of India.
- National Commission for Enterprises in the Unorganized Sector (2007): *Report on Conditions of Work and Promotion of Livelihood in the Unorganized Sector*, NCUES, Government of India.
- National Commission for Enterprises in the Unorganized Sector (2008): *Report on Definitional and Statistical Issues Relating to Informal Economy*, National Commission for Enterprises in the Unorganized Sector, NCUES , Government of India.
- National Commission for Enterprises in the Unorganized Sector (2008): *The Challenge of Employment in India: An Informal Economy Perspective*, NCUES , Government of India.

- Nelson, N. (1997): How Women and Men get by and still get by, only not so well: The Sexual Division of Labour in the Informal Sector of a Nairobi Squatter Settlement, *Cities in the Developing World: Issues, Theory, Policy*, Gugler, J. (ed.) Oxford University Press, pp. 141-165.
- Nerurkar, A. & Vyas, N.B. (2016). Study of Quality of Life of the Tea-Vendors -. *International Journal of Therapies and Rehabilitation Research*, Vol. 5, pp. 63-71.
- Nicoletti, G., Scarpetta, S. & Boylaud, O. (2000): *Summary Indicators of Product Market Regulation with an Extension to Employment Protection Legislation*, Economics Department Working Papers No. 226, OECD.
- Nirathron, N. (2006): *Fighting Poverty from the Street A Survey of Street Food Vendors in Bangkok*, Bangkok : ILO.
- Noll, H. (2002): Towards a European System of Social Indicators: Theoretical Framework and System Architecture. *Social Indicators Research*. Vol. 58, pp. 47-8.
- Noll, H. (2004): Social Indicators and Quality of Life Research: Background, Achievement and Current Trends, *Advances in Sociological Knowledge Over Half a Century*, Genov, N (ed), Wiesbaden, pp. 151-181.
- O'Connor, B.P. (2000): SPSS and SAS Programs for Determining the Number of Components using Parallel Analysis and Velicer's Map Test, *Behavior Research Methods, Instruments, & Computers*, Vol. 32(3), pp. 396-402.
- O'Boyle, C. A. (1997): Quality of life assessment: A paradigm shift in healthcare? *The Irish Journal of Psychology*, Vol. 18, pp. 51-66.
- Ojeda, L. & Pino, A. (2019). Spatiality of street vendors and socio-spatial disputes over public space: The case of Valparaíso, Chile. *Cities*, Vol. 95, 102275.
- Onwe, O.J. (2013): Role of the Informal Sector in Development of the Nigerian Economy: Output and Employment Approach. *Journal of Economics and Development Studies*, Vol. 1(1), pp. 60-74.
- Organisation for Economic Co-Operation and Development (2008) *Handbook on Constructing Composite Indicators: Methodology and User Guide*, OECD.
- Pachau, R. (2009): *Mizoram: A study in comprehensive geography*, Northern Book Centre.

- Panda, D. (1999): *Labour in Unorganized Sector: The Devalued and the Deprived*, Manak Publication.
- Panwar, M. & Garg, V. (2015): Issues and challenges faced by vendors on urban streets: a case of Sonipat City, India. *International Journal of Engineering Technology, Management and Applied Sciences*. Vol. 2, pp. 71-84.
- Papola, T.S. (1981): *Urban Informal Sector in a Developing Economy*, Vikas Publishing House, New Delhi.
- Parveen, N. & Patil, N. H. (2010). Women in informal sector: A case study of construction industry. *International Research Journal*, Vol. 1(11), pp. 83-86.
- Petrucci, A. & D'Andrea, S. S. (2002). Quality of Life in Europe: Objective and Subjective Indicators: A Spatial Analysis Using Classification Techniques. *Social Indicators Research*, Vol. 60 (1/3), pp. 55–88.
- Rakowski, C.A. (1994): Convergence and Divergence in the Informal Sector Debate: A Focus on Latin America, 1984-92, *World Development*, Vol. 22 (4), pp. 501-516.
- Rapley, M. (2003): *Quality of Life Research-A critical introduction*, Sage Publications, London.
- Rawal, K. L. (2006): Review of The Informal Economy: The Growing Challenge for Labour Administration, by A. Sivananthiran & C. S. V. Ratnam. *Indian Journal of Industrial Relations*, Vol. 41(4), pp. 411–420.
- Ray, C. N. & Mishra, A. (2011): Vendors and Informal Sector: A Case-Study of Street Vendors of Surat City. Centre for Urban Equity, CEPT University: Ahmedabad, India.
- Recchi, S. (2021): Informal Street vending: a comparative literature review, *International Journal of Sociology and Social Policy*, Vol. 41 (7/8), pp. 805-825.
- Roever, S. (2011): *Livelihood Profile: Street Vendors*, AAPS Planning Education.
- Roever, S. (2014): *Informal Economy Monitoring Study Sector Report: Street Vendors*. Cambridge, MA, USA: WIEGO.
- Rummel, R. J. (1970): *Applied Factor Analysis*, Northwestern University Press, Evanston, IL.

- Saha, D. (2011): Working life of street vendors in Mumbai, *The Indian Journal of Labour Economics*. Vol. 54, pp. 301-325.
- Saitluanga, B.L. & Pachuau, R. (2015): Spatio-Temporal Analysis of Population Growth in Aizawl City. *Geographic-A Journal of GAM*, vol.10, pp. 40-50.
- Saitluanga, B.L. (2017). *Himalayan Quality of Life: A study of Aizawl City*. Springer International Publishing.
- Sales, L. (2018). The Street Vendors Act and the right to public space in Mumbai. *Articulo: Journal of Urban Research*.
- Sam, E. F., Akansor, J., & Agyemang, W. (2018): Understanding Road traffic risks from the street hawker's perspective. *International Journal of Injury Control and Safety Promotion*, Vol. 26 (1), pp. 1–7.
- Sarala S. (2007): *Social Networks among Women Workers in Unorganized Sector.: A study of Bangalore Slums*, The Indian Society of Labour Economics, 48th Annual Conference, Jan 5-7.
- Sassen, S. (1994). The Informal Economy: Between New Developments and Old Regulations. *The Yale Law Journal*, Vol. 103(8), pp. 2289–2304.
- Satu, S.A. & Chiu, R.L. (2019): Livability in dense residential neighbourhoods of Dhaka. *Housing Studies*, Vol. 34, pp. 538 - 559.
- Schneider, F. (1997): The Shadow Economies of Western European Europe, *Journal of the Institute of Economic Affairs*, Vol. 17, pp. 42–48.
- Schuessler, K.F. & Fisher, G.A. (1985): Quality of Life Research and Sociology, *Annual Review of Sociology*, Vol.11, pp. 129-149.
- Sengupta, A. (2013): Migration, Poverty and Vulnerability in the Informal Labour Market in India, *The Bangladesh Development Studies* Vol. 36(4), pp. 99-116.
- Sethuraman, S.V. (1976): The Urban Informal Sector: Concept, Measurement and Policy, *International Labour Review*, Vol. 114, pp. 69-81.
- Shackman, G., Liu, Y.L. & Xun, W. (2005): Measuring quality of life using free and public domain data. *Social Research Update*.
- Sharma, A. & Konwar, D. (2014): Struggles for Spaces: Everyday Life of a Woman Street Vendor in Delhi, *The Delhi University Journal of The Humanities & The Social Sciences*, Vol.1, pp. 48-59.

- Shibulal, A.L. (2018): *Research report on needs and problems of street vendors: An inquiry*, Kerela Institute of Labour and Employment.
- Shrestha, B., Shrestha, S. & Uprety, S. (2019): Use and Appropriation of Urban Public Space for Street Vending in Kathmandu, *Journal of Advanced Research in Civil and Environmental Engineering*, Vol 6 (3&4), pp. 10-17.
- Simon, C. P. & Witte, A.D. (1982): *Beating the System; The Underground Economy*, Sirgy, M. J., Michalos, A. C., Ferriss, A. L., Easterlin, R. A., Pavot, W. & Patrick, D. (2006): The quality-of-life (QOL) research movement: past, present, and future. *Social Indicators Research*, Vol. 76(3), 343–466.
- Smith, D.M. (1972): Towards a Geography of Social Well-Being: Inter-State Variations in the United States, *Geographical Perspectives on American Poverty*, Peet, R. (ed.), Antipode Monographs in Social Geography, No. 1, pp.17-46.
- Smith, D.M. (1973): *The Geography of Social Well-Being in the United States: An Introduction to Territorial Social Indicators*, McGraw-Hill, New York.
- Smithies, E. (1984): *The Black Economy in England Since 1914*, Dublin: Gill and Macmillan.
- Solomon-Ayeh, B.E., King, R.S. & Decardi-Nelson, I. (2011): Street Vending and the Use of Urban Public Space in Kumasi, Ghana, *Surveyor Journal*, Vol 4 (1), pp. 21-31.
- Soto, H.D. (2000): *The Mystery of Capita: Why Triumphs in the West and Fails Everywhere Else*, New York: Basic Books.
- Srivastava, A. K. (2017). Segregated Data of Urban Poor for Inclusive Urban Planning in India: Needs and Challenges. *SAGE Open*, Vol. 7(1), pp. 1–12.
- State Investment Program Management and Implementation Unit (SIPMIU) & Asian Development Bank (ADB). (2011): *North-Eastern Region Capital Cities Development Investment Program-Aizawl Water Supply and Sewerage Subproject*.
- Stevens, Q. (2009). 'Broken' public spaces in theory and in practice. *Town Planning Review*, Vol. 80, pp. 371-392.
- Streiner, D.L. (1998): Factors affecting Reliability of Interpretations of Scree Plots, *Psychological Reports*, Vol. 83, pp. 687-694.

- Sujatha, T. (2005). Women Labour in the Unorganized Sector of India- An Analysis on the basis of Census and NSS Reports.
- Sundaram, S. S. (2008). National Policy for Urban Street Vendors and Its Impact. *Economic and Political Weekly*, Vol. 43(43), pp. 22–25.
- Swaminathan, M. (1991): *Understanding the informal sector: A survey*, WIDER WP 95. Finland.
- Tabachnick, B.G. & Fidell, L.S. (2013): *Using Multivariate Statistics*, 6<sup>th</sup> Edition, Pearson, London.
- Tanga, P. T. (2009): *Informal Sector and Poverty: The Case of Street Vendors in Lesotho*, Ossera Publication, Addis Ababa, Ethiopia.
- Testa, M. A. & Simonson, D. G. (1996): Assessment of quality-of-life outcomes, *The New England Journal of Medicine*, Vol. 334, pp. 835-840.
- Thanhlira, C. (1983): *Aw! Zawlkhawpui (History of Aizawl)*, D.M Press, Aizawl.
- Timalsina, K.P. (2011): An Urban Informal Economy: Livelihood Opportunity to Poor or Challenges for Urban Governance. *Global Journal of Human-Social Science Research*, Vol. 11(2), pp. 25-31.
- Tiwari, G. (2000): *Encroachers or Service Providers*. Seminar 2000; 491: 26 – 31
- Tucker, J. L. & Devlin, R. T. (2019): Uncertainty and the Governance of Street Vending: A Critical Comparison Across the North/South Divide, *International Journal of Urban and Regional Research*, pp. 1-16.
- Turner, S. & Schoenberger, L. (2011): Street Vendor Livelihoods and Everyday Politics in Hanoi, Vietnam. *Urban Studies*. Vol. 49(5), pp. 1027–1044.
- UN General Assembly, (2015): Transforming our world: the 2030 Agenda for Sustainable Development.
- Vergunst, P. (2003): *Liveability and Ecological Land Use The challenge of localisation*, Department of Rural Development Studies, Swedish University of Agricultural.
- Vinayakam, K. & Sekar, S. (2012): Quality of Life and Impressions of Quality of Life of Migrants to Chennai: A Factor Analysis Approach. *IOSR Journal of Humanities and Social Science*, Vol. 6, pp. 36-45.

- Walsh, J. & Maneepong, C. (2012): After the 1997 financial crisis in Bangkok: The behaviour and implications of a new cohort of street vendors. *Singapore Journal of Tropical Geography*, Vol. 33(2), pp. 255–269.
- Widjajanti, R. (2016): The Space Utilization by Street Vendors Based on the Location Characteristics in the Education Area of Tembalang, Semarang. *Procedia - Social and Behavioral Sciences*. 227. 186-193.
- Widjajanti, R. & Wahyono, Ha. (2018): Space Livability of Street Vendors in Simpang Lima Public Space, Semarang. In *IOP Conference Series: Earth and Environmental Science Vol. 123(1)*, p. 012045). IOP Publishing.
- Williams, C. & Gurtoo, A. (2012): Evaluating Competing Theories of Street Entrepreneurship: Some Lessons from a Study of Street Vendors in Bangalore, India, *International Entrepreneurship and Management Journal*, Vol. 8 (4), pp. 391-409.
- World Health Organization (1997): *Measuring Quality of life*. Available online at [http://www.who.int/mental\\_health/media/68.pdf](http://www.who.int/mental_health/media/68.pdf) accessed it on 24th November 2020.
- Yang, Y. (2008): A Tale of Two Cities: Physical Form and Neighborhood Satisfaction in Metropolitan Portland and Charlotte, *Journal of the American Planning Association*. Vol. 74(3), pp. 307-323.
- Zhao, B., Heath, C. J. & Fogue, R. E. (2005). Quality of life and use of human services among households. *Consumer Interest Annual*, Vol. 51(1), pp. 83-106.
- Zothanmawia, R. (2017): A study of urban poverty in Mizoram with special reference to Aizawl Municipal Corporation (AMC) area. *Senhri Journal of Multidisciplinary Studies*, Vol. 2(2), pp. 117-141.
- Zwick, W.R. & Velicer, W.F. (1986): Comparison of Five Rules for Determining the Number of Components to Retain, *Psychological Bulletin*, Vol. 99, pp. 432-442.



## **BIO-DATA**

Name : Lalnghakmawia Thangluah  
Father's Name : T.Zirliana  
Date of Birth : 15/07/1988  
Sex : Male  
Marital Status : Unmarried  
Address : 38, Zodin, Tlabung, Lunglei Dist. 796751  
Contact : 9862655646/7005611817  
Email : [nghaka1230@gmail.com](mailto:nghaka1230@gmail.com)

### **Educational Qualification:**

Master of Science (Geography), Bachelor of Education (B.Ed), Post Graduate Diploma In Disaster Management (PGDDM)

### **Educational Records (from Matriculation Onward)**

<b>Sl. No</b>	<b>Class</b>	<b>Subject</b>	<b>%</b>	<b>Year of passing</b>	<b>Board or University</b>
1	HSLC		52.40	2006	MBSE
2	HSSLC	Arts	50.40	2008	MBSE
3	B.A	Geography	53.75	2011	M.Z.U
4	M.Sc	Geography	66.00	2014	M.Z.U
5	Post Graduate Diploma in Disaster Management (PGDDM)	Disaster Management	63.00	2015	IGNOU
6	B.Ed		70.40	2017	M.Z.U

### **Others:**

<b>Sl. No</b>	<b>NET/SLET</b>	<b>Year</b>
1	UGC NET	2014 & 2018
2	SLET	2017

**Journal Publication:**

SN	Title	Year of Publication	Volume & Page No.	Name of Journal	ISSN	Remarks
1	Women Vegetable Vendors in Small towns of Northeast India: A case study of Moreh, Manipur and Tlabung, Mizoram	2019	Vol. 14, Pp.40-48	Geographic: A Journal of Geography Association of Mizoram	0975-4121	Refereed Peer reviewed journal
2	Vulnerability of Street Vendors in Aizawl City, India	2021	Vol. 96(1), Pp. 31-44	The Indian Geographical Journal	0019-4824	UGC - CARE Journal

**Paper Presentation:**

SN	Title of paper	Name of Seminar	Date of Seminar	Name of organizer
1	A Customers Satisfaction Level on Street Food Vending in Aizawl City, Mizoram	Urbanisation and its Impact on Environment	25 <sup>th</sup> -26 <sup>th</sup> March, Year	Department of Geography, Government Aizawl North College
2	Analysis of Socio-economic Vulnerability of Informal Economy: Street Vendors in Aizawl City, Mizoram	Problems and Prospects of Socio-economic Development and Demographic Issues of Scheduled Tribes of North-East India	30 <sup>th</sup> -31 <sup>st</sup> July, 2021	Department of Geography, Bodoland University

### **Particulars of the candidate**

NAME OF CANDIDATE : Lalnghakmawia Thangluah  
DEGREE : Doctor of Philosophy (Ph.D)  
DEPARTMENT : Geography and Resource Management  
TITLE OF THESIS : Livability of Informal Street Vendors in Aizawl City  
DATE OF ADMISSION : 11<sup>th</sup> August, 2017

#### **APPROVAL OF RESEARCH PROPOSAL:**

1. DEPARTMENTAL RESEARCH COMMITTEE : 5<sup>TH</sup> APRIL, 2018
2. BOARD OF STUDIES : 13<sup>TH</sup> APRIL, 2018
3. SCHOOL BOARD : 27<sup>TH</sup> APRIL, 2018

MZU REGN. NO. : 5874 of 2012

Ph.D REGN. NO. & DATE : MZU/Ph.D./1088 of 27.04.2018

EXTENSION : NIL

Head  
Department of Geography and Resource Management

**ABSTRACT**

**LIVABILITY OF INFORMAL STREET VENDORS  
IN AIZAWL CITY**

**A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS FOR THE DEGREE**

**OF**

**DOCTOR OF PHILOSOPHY**

**LALNGHAKMAWIA THANGLUAH**

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**DEPARTMENT OF GEOGRAPHY &  
RESOURCE MANAGEMENT**

**SCHOOL OF EARTH SCIENCES & NATURAL RESOURCE  
MANAGEMENT**

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**LIVABILITY OF INFORMAL STREET VENDORS IN AIZAWL CITY**

**BY**

**LALNGHAKMAWIA THANGLUAH**

**DEPARTMENT OF GEOGRAPHY AND RESOURCE MANAGEMENT**

Under the Supervision of

**Dr. Benjamin L.Saitluanga**

Submitted

In partial fulfilment of the requirement of the Degree of Doctor of Philosophy in  
Geography and Resource Management of Mizoram University, Aizawl.

## **ABSTRACT**

### **Livability of informal street vendors in Aizawl City**

Urbanisation in developing countries is mostly characterized by rural-urban migration. The rural-urban migrants ended up in the informal sector due to lack of employment in organised sector. The informal sector provides jobs to the urban poor to earn their livelihood as it suited the less educated rural-urban migrants to enter into the unorganised sector which does not require technical skills and high educational level. It is an important part of economy and played a major role in employment, production and income generation especially in developing countries.

Informal economy is shaped by all types of informal employment comprising of small-scale economic activities which are unrecognized, unrecorded and unregulated. It includes workers like street vendors, domestic workers, casual workers in restaurants and hotels, janitors and security guards, casual workers in construction, agriculture and other sectors. Informal sector is the only means of livelihood for the urban poor and, rapid urbanisation due to poverty is one of the main reasons behind increasing growth of informal sector in urban areas.

In the Global South, informal economy has significant contribution to the growth of economy by playing a major role in employment, production and income generation. Informal sector is the only means of livelihood for the urban poor and, rapid urbanisation due to poverty is one of the main reasons behind increasing growth of informal sector in urban areas. This sector is growing with increasing number of self-employment activities. Thus, the growth of informal sector has positive impacts on the socio-economic status of the urban poor.

Street vending is one of the most important informal economic activities. It is a source of employment for the urban poor and provides services to them. It played an important role for the growth of urban economy by providing services and employment to unskilled, uneducated and poor people. Thus, street vending is an important source of livelihood for the urban poor in both developed and developing countries.

Street vending is not only an economic activity but also a geographical phenomenon as it takes place in a geographic space. However, geographical studies on street vending have been rather less in comparison to other disciplines. The socio-economic condition and livability of street vendors may vary from one place to another within a particular city. Comparison of the socio-economic conditions of street vendors at multiple locations is essential to understand the problems of street vendors. Moreover, the level of quality of life of street vendors and their livability in different locations is hardly studied.

As the only and largest city in Mizoram, many people migrated from rural areas and neighbouring states in search of jobs and better living condition. Due to inadequate employment opportunities in the public sector, the less educated and unskilled labourers have to create their own employment in order to earn their daily needs. Street vending provides an easy income for the urban poor to earn a living as it does not require education, skills and capital. Therefore, it is important to understand the socio-economic characteristics and livelihood practices of the street vendors as well as their livability and quality of life in the streets of Aizawl City. An in-depth examination of the livability and subjective quality of life of street vendors in Aizawl City will not only expand the scope of geographical studies on livability and quality of life but also contribute to better understanding of the geographies of street vending in the Global South.

The main objectives of the study are

1. To examine the socio-demographic and livelihood characteristics of street vendors in Aizawl City.
2. To study the social and physical environment of street vendors in Aizawl City.
3. To examine the spatial pattern of livability of street vendors in vending markets of Aizawl City.
4. To analyse the factors determining quality of life of street vendors in Aizawl City.
5. To measure the composite index of subjective quality of life of street vendors in Aizawl City.

6. To suggest suitable measures to improve the livability and quality of life of street vendors in Aizawl City.

Aizawl is the capital of one of the least populated states of India - Mizoram. It is the administrative, political, commercial, and educational centre. The British Indian Company founded and occupied Aizawl to become their administrative headquarters in the year 1890.

The total geographical area of Aizawl city is 97 sq. km only. According to Census 2011, the population of Aizawl city was 293,416. It comprises 26.89 per cent of the entire population of Mizoram. The density of the population is 1708 persons per sq. km. The city is administered by the Aizawl Municipal Corporation (AMC) under which the city is divided into 19 municipal wards. Each municipal ward is formed by a group Local Council (LC) - the lowest tier of urban local body. Presently, there are 82 Local Councils (LC) within the Aizawl municipal area.

In the present study, five major vending market of Aizawl City such Bawngkawn, Bara Bazar, Treasury Square, Thakthing and Vaivakawn were selected for the present study. The selection of the study sites was done mainly on the basis of size and geographical location.

For collecting data, a stratified random sampling method was adopted to select street vendors from each selected market. Each market was stratified into five sectors – eastern, western, central, northern and southern and, vendors were picked from each sector proportionately.

A questionnaire was developed and face-to-face interviews were conducted to the selected respondents. The questionnaire consists of two parts - the first part contains objective information pertaining to the profile of the street vendors and their livability. The second part contains subjective questions related to quality of life of the street vendors. The first part provides data which could be available to analyse with any statistics. The second part, on the other hand consists subjective questions, the responses of which were measured on Likert-type scale. In these subjective questions, the respondents were asked to tick in any one of the five boxes to indicate their level of satisfaction with each item on a five-point Likert scale. The strong level of



dissatisfaction or 'Highly dissatisfied' was shown by '1' and '5' represent a strong level of satisfaction or 'Highly satisfied'. The interview was usually conducted at the respondent's workplace. The response rate was 84 per cent only as a number of vendors have declined to give interview due to their busy schedule. Altogether, a total of 400 were interviewed through scheduled questionnaire.

The main techniques employed in the study include Chi-square test, Vendors' Livability Index (VLI) and Principal Components Analysis (PCA). Graphical methods like Bar graph, Pie-chart and Radar chart are also employed in the analysis of the study. Choropleth maps were prepared. Chi-square and Principal Components Analysis (PCA) were calculated using Statistical Package for Social Science (SPSS 20).

Analysis of the socio-demographic characteristics show that street vending in Aizawl City is dominated by married female vendors belonging to Mizo tribe. Majority of the vendors are intra-state migrants while inter-state and international migrants constitutes only 5.6 per cent from the total sampled vendors. All of the sampled respondents were literate but majority of the vendors were high school dropout.

Analysis of the housing characteristics shows that majority of the street vendors in Aizawl City were renter. However, only 32 per cent of street vendors from Thakthing were found to be a renter. Majority of the street vendors were lived in Assam type house. Though, 44.8 per cent of street vendors lived in a concrete building but these are usually a rented house and vendors are usually found in the basement of a multi-storey house.

Majority of the vendors relied on piped water supply and few numbers of the street vendors used traditional spring water for their main source of water supply. Those who relied upon spring water were mostly from rural areas who have vended on Saturday market. Although some vendors still relied on firewood for cooking, majority of the vendors used LPG. Among the total sampled vendors, most of the vendors used septic tank type toilet at their home. The highest users of Latrine type

toilet were found in Vaivakawn market (11.5%) of the street vendors and 88.5 per cent of the street vendors used septic tank type toilet.

Analysis of occupational characteristics shows that majority of street vendors in Aizawl City are stationary vendors. Stationary vendors constitute for 82.5 per cent from the total respondents. Vegetables and fruits vendors are the most popular items sold among the vending items followed by cooked food and garments items. It is also found that majority of the vendors have chosen street vending due to unemployment as they failed to get employment in formal sectors due to lack of skills, required education qualification and other necessary qualification.

The study also found that most of the vendors have relatively long experience of vending while more than one-fourth of the sampled vendors have involved in vending for less than 3 years only. Rent paying vendors comprised of 75 per cent of the total vendors. Only a few of them did not paid rent for their vending space. Among the rent paying vendors, one-third of the vendors paid fee to the municipal authority while some of the vendors paid their vending fee to the owner of the shop behind their vending place.

Most of the vendors used their personal saving to start up their business while a few of the vendors were financed by money lenders, private financiers and bank. All of the vendors who have borrowed from banks found in Bara Bazar only. Vaivakawn market has relatively higher number of vendors who have borrowed from private lenders. The average monthly income of street vendors in Aizawl city was Rs. 23,100. More than 45 per cent of the total respondents have earned more than Rs. 20,000 per month. On the other hand, respondents who earned less than Rs. 10,000 per month constituted 15.8 per cent of the total vendors.

Chi-Square tests were employed to test the relationship between income levels and socio-economic variables. The result showed that there is no significant relationship between income and marital status; income and gender; income and educational level; income and type of vendors; income and type of vending items and, income and experience of street vendors.

Livability of the street vendors in Aizawl City is measured with the help of indicators relating to social, economic and physical environment of street vendors in their workplace. Three dimensions such as workplace environment, safety and security and, economic dimensions were developed. Workplace environment dimension was formed by seven indicators, safety and security dimension was composed of six indicators and economic dimension was made up by 2 indicators.

The study reveals that more than half of the vendors travelled more than 4 kilometres to reach their workplaces. The average distance covered by street vendors in Thakthing and Treasury Square were longer than those in other markets. Majority of the street vendors reported that they do not have accessed to toilet and drinking water facilities in their vending areas. The study found that only 11 per cent of street vendors have access to drinking water in their vending areas. Regarding the type of toilet in their vending place, it is observed that 28.4 per cent have access to septic tank which are usually paid toilets. Vendors in Bawngkawn, Treasury Square and Thakthing markets have relatively poor access to proper toilet in their vending areas. Access to electricity in vending units is quite poor among the vendors in Aizawl City. Only 10.2 per cent from the total respondents used electricity in their vending place. Out of the total sampled vendors, only 45.3 per cent have reported availability of dustbin in their vending area. The study also found that vendors having storage facility in Aizawl City is only 34.8 per cent. In Vaivakawn, all the vendors have storage facilities in their vending area.

In Aizawl City, majority of the street vendors did not report robbery or harassment while vending. The highest reported incidence of robbery and harassment occurred in Bara Bazar which is the largest market in the city. Environment related health problem and street flood and road accident are the problems faced by the street vendors. Although majority of the sampled street vendors reported that they did not contract any health-related problems due to pollution or rain, all the vendors from Vaivakawn markets have experienced either cold, cough or fever due to rain or pollution. The study also revealed that most of the vendors reported they suffered from street flood mainly due to improper drainage. The study revealed that 89 per cent did

not report injury due to traffic accident. The main reasons are due to proper sidewalks equipped with railing and the traffic flow in the city is properly managed by the authorities that effectively prevent road accidents. Bara Bazar has the highest number of road accidents as it is the busiest market and incidents happened frequently than in other market areas. The study found that majority of vendors have reported that they do not have problems with their fellow vendors. Conflicts between vendors arose mainly due to snatching of customers, conflict for vending spots and different pricing of vending items.

The average monthly income of to the total respondents in Aizawl city was Rs. 23,100. Majority of the respondents earned more than the average income of the total respondents. Among the vending markets, majority of the vendors from Treasury Square and Thakthing have earned more than the monthly average income. It is also found that some vendors have received assistance from the government. The government provided financial assistance in the form of cash to some vendors through government flagship schemes like New Land-use Policy (NLUP) and Mizoram Intodelh Project (MIP). The study found that majority of the vendors did not receive any assistance from the government. Among those who received benefits from the government, 60.3 per cent received cash benefits and 39.7 per cent received vending stalls from the government authorities. All the respondents from Treasury Square received assistance from the government through municipal authorities.

With the help of Chi-square, it is found that there was significant differences among vending markets in terms of distance of workplace from home, availability of toilet facility, availability of drinking water facility, presence of roofed vending stall, availability of dustbin, availability of storage, injury faced by the street vendors due to accident, problems with fellow vendor, health problems, and street flood. On the other hand, no significant association was observed between location of vending market and availability of electricity, incidence of robbery, assistance received from government, and, income level of the street vendors.

Vendors' Livability Index shows that Treasury Square market is the most livable market for vendors in Aizawl City. This market is surrounded by important

government offices. All the street vendors were given vending license as well as assistance in the form of financial aid or equipment by the Aizawl Municipal Corporation (AMC) through Local Council. The road traffic system was altered by turning two ways into one way in Saturday market in order to give more space to the vendors as well as to the customers. The Local Council also involved in seating arrangement and allocation for the vendors. The average income of vendors in Treasury Square market was also relatively higher than those in other markets.

On the other hand, Thakthing market is the least livable market in Aizawl City. The market is located in the southern part of Aizawl City and most of the vendors and customers are from the southern part of Aizawl City. In this market, sidewalks are not allowed for vending and most of the vendors have to take permission from the owner of the shop nearby to use vacant space. Alteration of road traffic on Saturday weekly market is impossible as there is no alternative bypass road for the traffic from the main road which connects the central area of the city from the southern part of the city.

Subjective quality of life is measured with 12 indicators. The selected indicators consists of satisfaction on street vending as means of livelihood (livelihood), satisfaction on safety from robbery (robbery), satisfaction on safety from road accident (accident), satisfaction on crowdedness of vending space (crowdedness), satisfaction on cleanliness of vending place (cleanliness), satisfaction on safety from disaster and calamities (hazard), satisfaction on distance of workplace from home (distance), satisfaction on location of vending spots (location), satisfaction from municipal services (municipal), satisfaction with workload of street vending (workload), satisfaction with cooperation from local authorities (cooperation) and Satisfaction on relationship with fellow vendors (relationship). These indicators are composed of a wide range of variables relating to satisfaction of vendors towards their livability.

Majority of the sampled street vendors were satisfied with street vending as a means of livelihood. It seems that a number of vendors were contented with their jobs. The same pattern is observed in other subjective indicators like satisfaction level towards incidence of robbery, congestion, location of vending place and workload. On

the other hand, in case of indicators like cooperation and relationship, majority of the vendors have reported high dissatisfaction. The percentage of vendors who were 'highly dissatisfied' is also relatively high in case of indicators like municipality, hazard.

Using Principal Components Analysis (PCA), the selected subjective quality of life indicators were reduced into three components which are labeled as municipal service and cooperation, locational and, safety and health components. Out of these three components, 'municipal service and cooperation' is the most important one as it explains the highest variance. It is thus the most important determinant of subjective QoL of street vendors in their vending place. Locational component is the second most important factor followed by 'safety and health'.

Subjective quality of life of composite index is calculated again using PCA. The composite index shows the higher quality of life of street vendors is found in markets such as Bara Bazar, Treasury Square and Thakthing. These markets are found along the main road of Aizawl City and vendors were more satisfied with various aspects of their quality of life. On the other hand, vendors in fringe markets such as Bawngkawn and Vaivakawn have low composite score of quality of life.