

## EXPENDITURE PATTERNS OF SOME INFORMAL SECTORS IN BANGLADESH: AN EMPIRICAL EVIDENCE OF DHAKA CITY

Basanta Kumar Barmon<sup>1</sup>

### ABSTRACT

The present study estimated the marginal propensity to consume (MPC) and the marginal propensity to save (MPS) of the businesses in informal sectors around Dhaka city by using the Keynes consumption function. Primary data is collected from 150 vendors from selected areas of Dhaka city during June -July, 2011. The findings indicated that MPS of most of the vendors of the informal sector was relatively small and their MPC was relatively very high. The MPC of 150 vendors was estimated to be 0.697 and their MPS was estimated to be 0.303. Thus it can be concluded that these vendors of informal sector in Dhaka city spent about 70% of their small income. The coefficients of consumption functions for all types of vendors are statistically significant at 1% level. The values of  $R^2$  for vegetable vendors, tea vendors, fukha vendors, fruit vendors, mixed vendors and all vendors together are 0.77, 0.87, 0.79, 0.82, 0.92 and 0.85 respectively. The estimates of the multiple regression shows that the family size, saving, gender and family have significant impact on the expenditure along with income of the households in informal sectors of Dhaka city in Bangladesh.

### I. INTRODUCTION

Economic activities can be categorized into two distinct segments, namely formal sector and informal sector<sup>2</sup>. Both sectors refer to dynamic economic activities and the processes are subject to regular aspects of economic and social theories. Economic activities can be referred to as informal sector as opposed to formal sector also when it is not taxed or monitored by any form of government and most importantly when it is not incorporated in any form of national accounting such as the calculation of GDP or GNP.

The concept of 'informal sector' was first introduced by Hart (1971) describing it as a part of the urban labor force taking its place outside the structure of formal labor market. Later in 1972 International Labor Office (ILO), in its mission to Africa and Kenya, formally recognized the concept of the 'informal sector' and added detail to illustrate it as activities that are unrecognized, unrecorded, unprotected or unregulated by public authorities, was not only confined to marginal activities but also included profitable enterprises. ILO also reported that, regretfully these activities of the informal sector were mostly overlooked, rarely

---

<sup>1</sup> Associate Professor, Department of Economics, East West University, Dhaka-1212, Bangladesh Email: bkbarmon@yahoo.com

<sup>2</sup> A proper way to define the informal sector would be to characterize it as a set of units engaged in the production of goods and services without maintaining proper registration and complying with the existing industrial and labor laws (Maiti and Sen, 2010).

supported and sometimes actively discouraged by policy makers and governments. As a consequence the economic developments were to some extent compromised, therefore were comparatively unsuccessful to create adequate amount of contemporary jobs to counterbalance the mounting unemployment.

This 'informal sector' is also referred to as 'informal economy'. It is the over-regulation of government and government bureaucracies which results to increased cost of operation forcing the micro-entrepreneurs in favor of its most rational response with minimization of cost by establishing informal arrangement of work (Soto, 2000). The informal economies are principally characterized for its low entry requirements in terms of capital and professional qualifications. This characteristic also distinguishes the informal sector from the formal sector. Relatively smaller scale of operations and the skills needed could be easily acquired from outside formal education, unskilled labor-intensive methods of production, and the different types of adapted technologies (Becker, 2004).

The informal sector is allied with developing countries as it forms a large part of the economy. This sector flourishes as economy develops, becomes modernized and industrialized. As this sector grows it absorbs surplus labor both from rural and urban segments. The size and share of the informal sector is significant as it was measured by Becker (2004); that the non-agricultural employment share of the informal labor force is about 78% in Africa, 57% in Latin America and the Caribbean, and 45-85% in Asia. The informal sector contributed more than 40% to the total gross value added (VGA) of Bangladesh in 2010, with the highest in the agriculture, fishery, trade and industrial sectors. There are more than 48 million informal jobs in Bangladesh that captured about 80% of the total labor force. The informal sector contributed about 43% to the GDP in 2010. In the service sector it had a contributed the highest at 18%, agriculture at 15%, and the industry sector at 10%. Among the sectors of informal economy, the non-agriculture sector contributed more than (63%) those engaged in agriculture sector (37%) (ADB, 2010). The economy of Bangladesh is growing and the larger share of the informal sector implies that it is playing a major role on employment, poverty reduction, and there are positive impacts on household welfare.

A good number of researches were conducted in developing countries on many of these significant roles of informal sector like poverty reduction, household income, employment and reduction, risk of borrowing money from moneylenders (Cox, 1990; Cox and Jimenez, 1998; Cox *et al.* 1998a; Morduch, 1995; Townsend, 1994; World Bank, 2001; Ravallion and Dearden, 1988; Paulson, 2000; Cox *et al.* 1997; Cox *et al.* 1998b; Cox, 2002; Zeller, 1994; and Schoeni, 1997). Several other studies also proved the positive impacts of informal sectors relating women empowerment issues with poverty reduction and income generation (Charboneau, 1981; Hisrich, 1989; Hisrich, and Brush, 1984; Hisrich, and O'Brien, 1981 and 1982; Humphreys and McClung, 1981; and Welsh, 1988). In Bangladesh quite a few researches have been conducted measuring the effect of informal sector on women (Sayeed and Nusrat, 2008; Sayeed *et al.* 2009 and Huda, *et al.* 2009), informal sector's impact on financial sector (McKernan, *et al.*, 2005); and the role of informal sector in economic development of Bangladesh (Amin, 2001). However, the socio-economic activities such as consumption patterns as well as saving rate of vendors of the informal sectors in Bangladesh has been given lesser attention. Therefore, the present study estimates the marginal propensity

to consume (MPC) and marginal propensity to save (MPS) of the vendors of the informal sectors in Dhaka city. The present study also explores the socioeconomic behavior of the informal sectors. The findings will help policymakers, researchers and the government of Bangladesh for further development of this sector.

The nature and the importance of informal sectors of Bangladesh have been briefly discussed in the introduction section. Section two discusses the methodology and the analytical technique with a brief explanation of socio-economic characteristics of vendors. The results and discussions are made in section three. The final section summarizes the important findings and policy options.

### **1.1 Nature of Sampled Informal Sectors in Bangladesh**

Vendors offer goods and services for sale to the consumer in small roadside stands, public transit hubs and stalls that are easily accessible. This saves time and transportation cost. Demand for relatively inexpensive, readymade foods has increased as people, especially women, have less time to prepare meals. Vendors can often provide items at lower prices than other retailers since they have lower rent and capital equipment expenses. Many poor and marginal families would be worse off if there were no vendors to serve fast and inexpensive goods. There are large numbers of people engaged in various informal sectors for their livelihood in Bangladesh. The nature of sampled informal sectors is briefly described below:

#### **Vegetable Vendors**

Being a tropical country with its favorable climatic conditions, Bangladesh is blessed with plenty of vegetable production throughout the year. Starting from its cultivation process, channels of marketing and distribution, to wholesaling and retailing, a massive number of people are engaged and employed in it. Vegetable now-a-days finds its way to the dining tables as a very common item both in rural and urban life style. Vegetable vendors in Dhaka city can broadly be divided in to two types, temporary and permanent. The temporary vendors include hawkers usually with no permanent establishment for business. Permanent vendors include retailers with a bit more formal establishment like a permanent shop or a designated place in market sites and therefore it's a bit more costly establishment resulting in comparatively higher retail price than the hawkers. Retailers, permanent or temporary, usually collect vegetables from wholesalers and seldom directly from the producers.

#### **Tea Vendors**

Tea by far is the single most popular drink in Bangladesh. Starting from being a part of breakfast, evening snacks, entertaining guests, or just as a simple refreshment drink at any time of the day; tea finds its place in almost every family and individuals. A typical tea vendor is a tiny micro-entrepreneur that can be found from early in the morning to midnight in every nook and corner of the country – busy urban street corners, remote villages, bus stands, railway platforms, footpaths, outside corporate houses, schools and colleges, universities, market places, commercial zones, stadiums, theaters, and every other possible human gathering places. Two types of tea vendors are found in Dhaka city – permanent and moving. Permanent tea vendors are the ones with small but stable established shops, usually very small

and of very little capital investment. Along with tea sometimes cookies, breads and bananas are found to be sold as snacks. The moving tea vendors keep hot tea in thermo-flasks and walk around into social gatherings of people to sell tea.

### **Fuchka Vendors**

Fuchka is a delicatessen of Bangladesh. Preparation of fuchka requires some procedure, involving quite a few different ingredients cooked and mixed in a certain method. Fuchka vendors usually complete some part of this procedure beforehand and rest after customers order to serve it fresh. It is considered as a part of tradition and is a must during any type of festivals. Fuchka being a very popular snack is most commonly found outside schools and colleges, in parks and lakes, in front of theaters and cinema halls, in different fairs and market places, and in some formal established restaurants. The price and sale depends on the type place of it is being sold and the time of the day, therefore it varies.

### **Fruit Vendors**

A major share of informal business is in fruit market. Being a humid tropical country, fruit is a very preferable item in the food menu. Even though the selling and consumption of fruit goes around the year, May, June and July are especially treated as fruit festival months in Bangladesh. It is because these months are the time of year to harvest the major varieties of popular local fruits. They are a type of informal sector business that can be named as permanent vendors, with permanent shops or a place to sell and do business all the year round, selling local varieties as well as imported fruits. Other types of vendors can be ascribed as seasonal fruit vendor. These are groups of people that engage themselves in fruit retailing only during the peak seasons of fruit harvesting. They mostly concentrate on selling local variety of fruits like lichi, jackfruit, watermelon, green palm, black berry, guava, pineapples, banana, custard apple etc. Permanent vendors are found to sell all these local varieties along with imported fruits like apple, pomegranate, orange, grape etc. Fruit vendors can be found in almost all places starting from street corners, major roads, hospitals, market places, bus stands, and railway stations to supermalls.

### **Mixed Vendors**

The term here refers to informal business setup that does not focus on any particular type of products rather they sell a wide range of goods depending on its location and demand. A single store can sell tea, cookies, snacks, cigarettes and medicines. Mainly they operate their tiny business in the areas around a hospital, amusement parks and gardens, and roads and riversides. They usually charge comparatively higher price than the normal shops.

## **II. METHODOLOGY OF THE STUDY**

### **2.1 Sources of data**

This study is based on primary data. A total sample of 150 informal business setups (vendors) were randomly selected from Dhanmondi, Kalabagan, Malibag, Mokbazar and Shantinagar areas of Dhaka city. The study considered 30 samples from vegetables, tea, fuchka, fruit, and mixed vendors each. Dhaka city was purposively selected because large numbers of people migrate from rural areas in pursuit of better options and living standards than other urban areas of Bangladesh. Moreover, behaviors and socioeconomic characteristics of the vendors

are almost similar in other cities of Bangladesh. Information in relevance to the study objective was collected through a comprehensive questionnaire. The respondents answered the questions to the best of their abilities. The survey was conducted in the months of June and July, 2011.

## 2.2 Theoretical basis of analytical techniques

The Keynesian consumption model (Keynes, 1936) was used to estimate the marginal propensity to consume (MPC) and marginal propensity to save (MPS) from the collected data, of the vendors of informal sector of Dhaka city. The linear regression equation shaped from Keynesian consumption theory is as follows:

$$Y = \alpha + \beta_1 X \quad ; \quad 0 < \beta_1 < 1$$

Where, Y = consumption expenditure and X = income; the parameters  $\alpha$  and  $\beta_1$ , represents the intercept and the slope of the function respectively.

In the Keynesian consumption function consumption (expenditure) is the dependent variable and income is the explanatory variable. The slope, coefficient  $\beta_1$ , measures the MPC.

## 2.3 Estimation of multiple regression model

The expenditure of a family depends not only on income but also on other socio-economic factors such as family size, saving, age, family type (nuclear or joint family), gender, education, and so forth. Estimating the effects of these variables, both quantitative and qualitative in nature, on monthly consumption expenditure of the people engaged in informal sector requires multiple regressions models for different set of data for different types of business. The study used the following multiple regression model to capture the effect of the above mentioned explanatory variables on the chosen dependent variable:

$$Y_i = \alpha + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \delta_1 D_{1i} + \delta_2 D_{2i} + \mu_i$$

Here, Y denotes the per month expenditure of the vendors and is used as a dependent variable. The explanatory variables are age of the vendors ( $X_1$ , measured in years), family size ( $X_2$ , measured in number), monthly income ( $X_3$ , measured in taka), monthly saving ( $X_4$ , measured in taka), a dummy variable for gender ( $D_1$ , dummy takes a value of 1 if the respondent vendors is male and 0 if otherwise), and the second dummy variable to capture the affect of family type ( $D_2$ , dummy takes a value of 1 if the respondent vendors live in nuclear family and 0 if otherwise).

Vendor's age ( $X_1$ ) can either increase or reduce confidence in business over time and therefore can make the vendor a risk-taker or less risk-averse. This would affect decision making regarding per month expenditure for their livelihood. Thus, the expected sign on vendor's age can be either positive or negative in the estimated empirical model.

The variable denoting the size of the family ( $X_2$ ) has a positive effect on the expenditure of a household. This implies that an increase in the family size is expected to lead to an increase in the family expenditure. Therefore, it is hypothesized that the sign on this variable in the empirical model would be positive.

It is customary to imagine that income ( $X_3$ ) and saving ( $X_4$ ) has positive and negative effect respectively on family expenditure. Income and expenditure therefore moves in the same direction and saving and expenditure moves in the opposite direction. Thus, the expected sign of income is positive and that of saving is negative.

To see the impact of gender and family type on expenditure two dummy variables are added in the empirical model. The expected effect and therefore the sign of dummy variable for gender are uncertain. It could be both positive and negative.

Consumption expenditure is likely to depend on the family type. Usually, household expenses are more for joint families than for nuclear families. This is because a joint family is typically larger in size and comes with the requirements of bigger infrastructural facilities. For example a bigger place to live means larger fixed expenditures and therefore a joint family is likely to affect the linear model by increasing its value of intercept. Since dummy takes a value of 1 for a nuclear family, it is expected to reduce the magnitude of the intercept and for that we expect a negative sign.

Finally, this study also tries to estimate the distributions of income, expenditure and savings of the vendors of the informal sector of the Dhaka city.

### III. RESULTS AND DISCUSSION

#### 3.1 Socio-economic Characteristics of Respondent Vendors

The present study considered five different types of vendors which we have discussed earlier (vegetable vendors, tea vendors, fuchka vendors, fruit vendors and mixed vendors). All the vendors were selected from Dhaka city. The socio-economic characteristics of sampled vendors are briefly discussed in this section.

##### Distribution of age

The distribution of age of the sampled vendors is presented in Figure 1. Figure 1 shows that most of the vendors' age lies between 25 to 40 years. This implies that younger people are engaged into informal trading in Dhaka. About 30%, 26% and 24% of the respondents' age varies with 26 to 30 years, 31 to 35 years and 36 to 40 years respectively. Only 20% of respondents' age was below 25 years and above 40 years. The mean age of the respondents was about 33 years with a standard deviation of 5.9 years (Table 1).

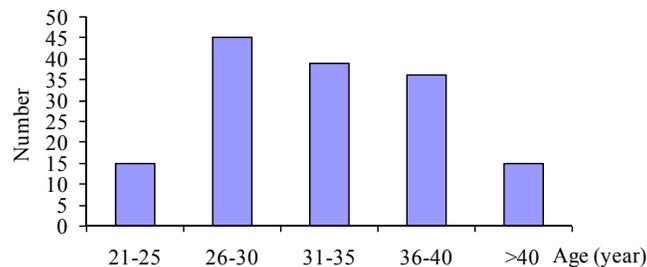


Figure 1: Distribution of age of the sampled vendors of Dhaka city.

**Distribution of gender**

Gender is an important issue in the aspect of social, economical, and institutional aspects of the developing countries, especially in South Asia. Female participation in informal sector of the economy in urban areas is relatively smaller compared to rural areas. This is because of two reasons. Firstly, in cities the competition is characteristically tougher than in rural areas due to higher number of participants. Secondly, female entrepreneurs, in numerous cases, are reported to have faced many difficulties while conducting business primarily because of social and religious taboos, weak legal system and execution, and etc. As a result, in urban areas competition of female participants becomes too difficult to run any business profitably. Usually male dominate the business in urban areas and cities. However, some female participation still exists. The distribution of gender of the sampled vendors is shown in Figure 2. About 84% of the respondents were male and the rest were female vendors.

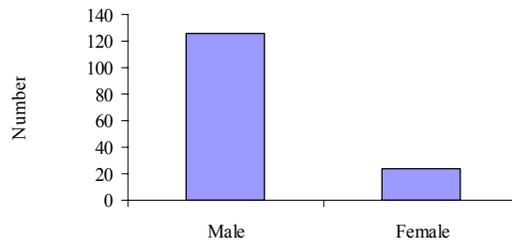


Figure 2: Distribution of gender of the sampled vendors in Dhaka city.

**Educational level**

Education creates knowledge, makes a person more confident, and enables him/her to think better. Better judgmental capabilities and the capacity to make good use of information gives an educated person some edge in decision making in all types of businesses along with some competitive advantages. The educational level of the respondents is shown in Figure 3. About half of the sampled vendors were found to be either illiterate (no education-20%) or have education below primary level (30%). Only 16% of the sampled vendors acquired primary education, 20% had achieved education above primary level but below secondary level. Only 6% respondents had formal education of secondary school certificate (SSC).

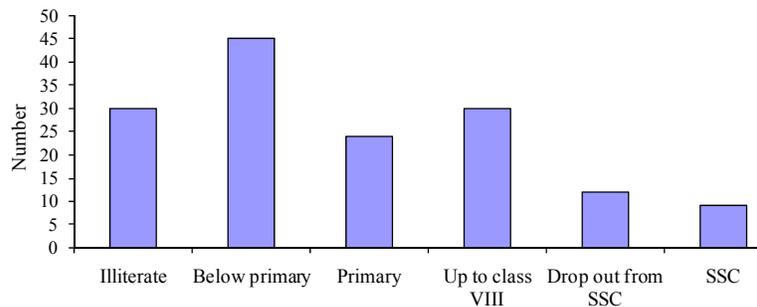


Figure 3: Distribution of educational level of the sampled vendors in Dhaka city

### Distribution of family types and family size

Now-a-days nuclear families are becoming more common. Traditionally joint family was the major component of the social structure of our culture where a large number of people used to live under the same roof and eat together like a single household. The distribution of family types of the respondents is presented in Figure 4. The figure shows that about 80% of the respondents live with their wife and children, and the remaining 20% live in a joint-family in Dhaka city. The main reason is that the living cost in Dhaka is very high.

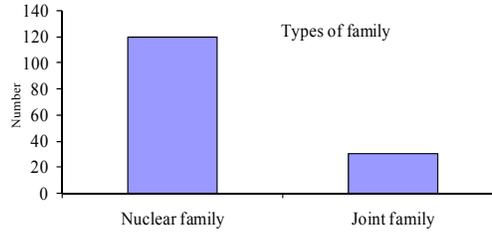


Figure 4: Types of family of the sampled vendors of Dhaka city.

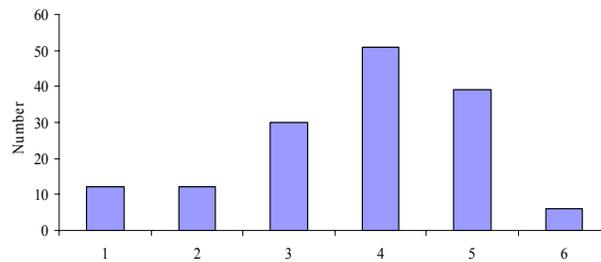


Figure 5: Distribution of family size (number) of the sampled vendors in Dhaka city.

For a given level of income, larger the size of the family more difficult it is to maintain an acceptable living standard in this expensive Dhaka city. The distribution of the family size of the sampled vendors is presented in Figure 5 and in Table 1. The average family size is about 3.98 (varies between 1 and 8) with a standard deviation of 1.48. National statistics shows that the average family size in rural and urban area is 5 and 4.8 respectively and in the entire country the average family size is 4.9 (BBS, 2011). In our study the average family size of the sampled vendors is about four. Among the 150 vendors, most of the families have large number of family members (shown in figure 5). In the study, 51 vendors reported to have a family size of four members, 39 vendors have five members in their family, and 30 vendors each have a family of three members and so on.

Table 1: Descriptive statistics of family size, initial investment, per month income, expenditure and saving of the sampled vendors.

Particulars	Mean	Standard deviation	Minimum	Maximum
Age (year)	33.04*** (39.57)	5.9	22	45
Family size (No.)	3.98*** (15.05)	1.48	1	8
Initial investment (Tk.)	10,222*** (18.69)	3,867	5,000	20,000
Income (Tk.)	11,600*** (25.39)	3,231	8,000	21,000
Expenditure (Tk.)	9,374*** (27.28)	2,430	4,600	15,900
Saving (Tk.)	900*** (9.04)	703.6	0	3,000

Source: Authors' calculation.

Note: (i) Sample size was 150.

(ii) The figures in parentheses indicate t-statistic.

(iii) \*\*\* indicates statistically significant at 1% level.

#### Place of birth and marital status distribution

Being a centralized economy, the capital city of Dhaka is a lucrative center for many formal and informal job opportunities. It is open for all types of businesses starting from poor and marginal to ones with large industrial scale. Lack of jobs in rural area pushes a large number of people to migrate to Dhaka city for opportunities. In our study all the sampled vendors moved to Dhaka in the hope of better living status. Marital status is also an important social factor for selecting a job in informal sectors. The distribution of marital status of the respondents is presented in Figure 6. It shows that about 76% of the respondents were married, 16% were unmarried and remaining 8% were widowed. The birth place of the respondents is presented in Figure 7. Out of the 150 respondents, 24 people were from Rangpur, 24 from Bhola, 21 from Gaibandha, 18 from Dinajpur, 15 from Borguna, 12 from Mymensing and 6 each from Barisal, Cox's Bazar, Faridpur, Nawabganj, Pabna and Rajshahi district.

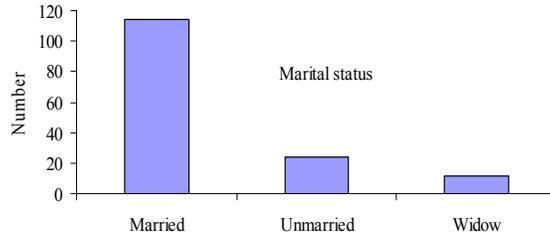


Figure 6: Marital status of the vendors in Dhaka city.

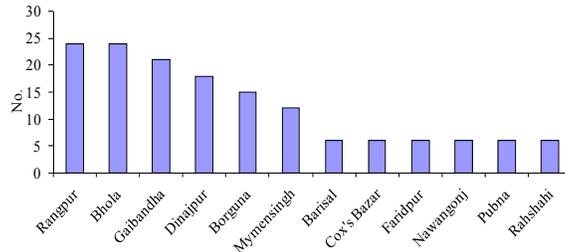


Figure 7: Distribution of vendors based on of their birth places.

**Distribution of initial investment in business**

Initial investment is one of the major scales to classify and analyze any business activities. The amount of initial investment depends and defines the types and size of a business. A formal business usually requires larger amount of money compared to the amount needed for an informal business. The distribution of the initial amount of investments that has been used to start a business by our sampled vendors is depicted in Figure 8 and shown in Table 1.

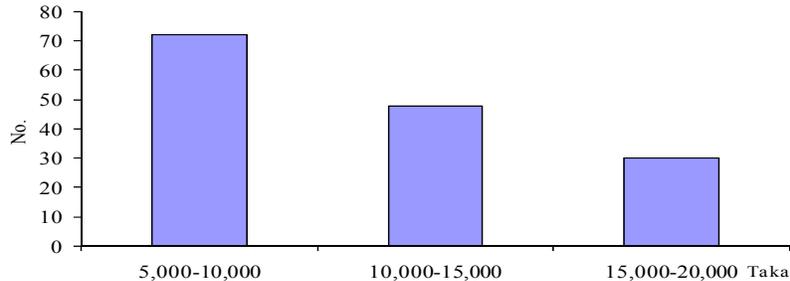


Figure 8 : Distribution of vendors based on initial investment in business.

The overall average initial investment was Tk. 10,220 that varied from Tk. 5,000 to Tk. 20,000. Most of the vendors, (72 out of 150) reported that their initial investment lied between Tk. 5,000 to 9,000, 48 vendors reported that their initial investment was in the range of Tk 10,000 to Tk. 14,000, and the other 10 vendors' initial investment were above Tk. 15,000 but below Tk. 20,000. So, it implies that a small amount of money is required to enter the informal sector.

### Distribution of savings

Saving is one of the key factors for growth in any business as well as for a country as a whole. If the accumulation of saving is large the growth of capital is also large, defining how well and how much the business would expand. The distribution of savings of the respondents is shown in Figure 9 and Table 1. The average saving per month of the sampled vendors was about Tk. 896 which varied from below Tk. 500 to Tk. 3,000. This wide variation of saving rate among the sampled vendors was found to be dependent on the family size. Vendors with larger number of family members saved comparatively smaller amount of money. About 16%, 34%, 28% and 22% of the respondents on an average saved money starting from below Tk. 500, Tk. 500-1,000, 1,000-1,500, and Tk. 1,500-3,000 respectively.

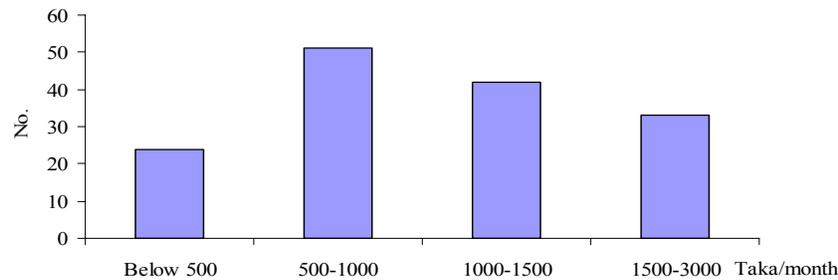


Figure 9: Distribution of vendors based on the monthly saving.

### 3.2 Marginal Propensity to Consume (MPC) and Marginal Propensity to Save (MPS)

This section describes the regression estimations of expenditure on income of different types of vendors. These results are presented in Table 2. The coefficients of regression equation for vegetable, tea, fuchka, fruit, mixed and all other vendors are about 0.70, 0.63, 0.82, 0.69, 0.68 and 0.70, respectively. All these results are statistically significant at 1% level.

The coefficient of fuchka vendors is comparatively higher than other vendors, indicating that fuchka vendors expenses more of their income compared to others. On the other extreme is the coefficient for tea vendors. According to established economic theories income and expenditure move in the same direction for normal goods. That in simpler words means that the consumption of normal goods increases as income increases. This is reflected by the positive signs of the coefficients of the regression. Since the magnitude of income is small for the vendors of informal sector, most of their income is spent on consumption of food, lodging, clothing and other daily necessities.

Table 2: Estimates of the regression equations for various type of vendors in Dhaka city.

Estimate	Type of Vendors					
	Vegetable (n = 30)	Tea (n = 30)	Fuchka (n = 30)	Fruit (n = 30)	Mixed (n = 30)	All (n = 150)
Intercept	1055.31 (0.73)	2336.88* (2.04)	175.00 (0.10)	1037.08 (0.83)	1494.62* (1.85)	1291.87** (2.63)
Coefficient	0.699*** (5.29)	0.627*** (7.33)	0.823*** (5.49)	0.692*** (6.06)	0.676*** (10.56)	0.696*** (17.05)
R <sup>2</sup>	0.78***	0.87***	0.79***	0.82***	0.93***	0.86***
F-statistic	27.97	53.78	30.15	36.68	111.45	290.78

Notes: (i) \*\*\*, \*\* and \* indicate statistically significant at 1%, 5% and 10% level, respectively.

(ii) The figures in parentheses indicate t-statistic.

(iii) n indicates the sample size of vendors.

The slope, coefficient of consumption function, is known as marginal propensity of consumption (MPC). The sum of MPC and MPS is equal to 1, where MPS is defined as marginal propensity to save. The calculated MPC and MPS for vegetable, tea, fuchka, fruit, mixed and all vendors of Dhaka city are presented in Table 3.

It shows that the average value of MPC for all types of vendors in Dhaka city is about 0.70 with a variation from 0.63 to 0.82 and has a standard deviation of 0.073. This indicates that vegetable, tea, fuchka, fruit, mixed and all vendors spend 70% of their income on an average on their daily livelihood and these are statistically significant at 1% level. The findings also show that MPC widely varies among the different types of vendors. The tea vendors spent relatively less (MPC = 0.62) than other vendors on their daily livelihood, whereas fuchka vendors used a large portion (MPC = 0.82) of their income on consumption purposes. The vegetable, fruit, and mixed vendors spent almost the same percentage of their income for consumption.

Table 3: Marginal propensity to consume (MPC) and marginal propensity to save (MPS) of vendors in Dhaka city

Types of vendors	MPC	MPS = 1- MPC
Vegetable	0.699	0.301
Tea	0.627	0.373
Fuchka	0.823	0.177
Fruit	0.692	0.308
Mixed	0.676	0.323
All types	0.697	0.303
Mean	0.7034***	0.2964***
Standard deviation	0.0725	0.0724
t-statistic	2.1.69	9.15

Source: Authors' calculation.

Note: (i) \*\*\* indicates statistically significant at 1% level.

### 3.3 Determinants of Family Expenditure

The results of the multiple regression model estimated empirically are presented in Table 4. It shows that all the coefficients in the regression model are statistically significant except the age variable. The coefficient of the age of vendors is found to be negatively related with expenditure. Even though this result is not statistically significant, it deduces that the expenditure increases along with an increase in the age of vendors.

Table 4: Estimates of regression equation of expenditure for vendors in Dhaka city.

Estimate	Coefficients	t-statistic
Constant	170.4	0.25
Age ( $X_1$ )	-17.09	-1.04
Family size ( $X_2$ )	296.65***	3.44
Income ( $X_3$ )	0.734***	18.79
Saving ( $X_4$ )	-0.82***	-5.97
Gender dummy ( $D_1$ )	517.3**	2.18
Family type dummy ( $D_2$ )	464.60*	1.78
$R^2$	0.95	

Notes: (i) Sample size was 150.

(ii) \*\*\*, \*\* and \* indicate statistically significant at 1%, 5% and 10% level, respectively.

The coefficient of family size is positively related to expenditure and is significant at 1% level. It indicates that expenditure increase along with the increase in the size of the family. The coefficients of the explanatory variables, income and saving are positive and negative

respectively with statistical significance at 1% level. This means that if income increases the family expenditure will also increase. And more the expenditure less is the extent of saving. The value of the coefficient of saving is -0.82 indicating that the vendors of the informal sector of Dhaka only saves 18% of their income.

The coefficient of dummy variable indicating the effect of gender is positive and significant at 5% level. This means if the owner of the business is a male then his expenditure from his income is significantly more than a female vendor's expenditure. The coefficient of dummy variable for a family type is also positive and significant at 10% level indicating that the vendors having a joint-family spends more compared to the vendors having a nuclear family.

The coefficient of multiple determinations ( $R^2$ ) is about 0.95, which is quite high and statistically significant at 1% level. So, the model is a good fit in explaining the data. The explanatory variables, age, family size, per month income, per month saving, gender and family type, explains 95% variation of the dependent variable consumption expenditure.

#### **IV. CONCLUSION AND POLICY OPTIONS**

The informal sectors are a dynamic phenomenon of any developing country. It significantly impacts the expansion of the economy. It affects by allowing opportunities for large number of business activities and employment prospects and poor and marginal people to earn their livelihood. The findings of this study showed that the informal vendors of vegetable, tea, fuchka, and fruits of Dhaka city have mostly migrated from rural areas in pursuit of better options and living standards. All different vendors of all different types of businesses have more or less some amount of savings according to the study. It proves that the earnings from this sector are sufficient enough to provide a daily livelihood for the engaged people, informal businesses are profitable, and these businesses are able to generate surplus income. This surplus income helps the economy in two ways. Firstly, this surplus income of the vendors channeled to the banks contributes to the overall accumulation of capital that is available for more formal types of businesses and industries and their expansions. Secondly, it helps the consumption side of the economy by improving overall welfare, poverty reduction, and generating employment to the large number of people with their families involved in this sector.

Using the Keynesian theory of consumption a simple regression model of expenditure on income was constructed and estimated. Therefore, it was used to observe the consumption and saving patterns of the small informal businesses like vegetable, tea, fuchka and fruit vendors. Although with observed wide variation, it can be said that on an average 70% of the income of the people engaged in informal businesses are spent on consumption expenditure. This also automatically implies that with variation among them on an average 30% of the income is saved by the different types of businesses. Exploring deep into the pattern of consumption using regression model leads to the findings that the amount of expenditure of a family depend positively on its family size, income level and negatively on saving rate. If the gender of the owner is male then the expenditure on consumption becomes significantly higher and if the owner is a member of a nuclear family as opposed to a joint family then their expenditure is significantly lower.

Therefore it can be concluded from the findings of the study that the informal sectors have been contributing to the economy in different ways and have played a significant role in the development of the economy of Bangladesh. This sector has the potential to contribute more if proper policies are implemented. Thus, the government should provide easy loan system with lower interest rates to start a business and other infrastructural facilities.

## REFERENCES

- ADB, (2010). The Informal Sector and Informal Employment in Bangladesh, Country Report, *Asian Development Bank*.
- Amin, A.T.M.N., (2001). The Role of Informal Sector through the Stages of Development and Cycles of Economic Growth: The Asia Evidence? Presented to the ILO Technical Workshop on Old and New Facets of Informality, Geneva, pp. 36.
- Becker F.K., (2004). Fact finding Study, The Informal Economy. *Swedish International Development Cooperation Agency*, SIDA.
- Charboneau, F.J., (1981). The Woman Entrepreneur, *Am. Demograph.*, 6(3): 21-23.
- Cox, D., (1990). Intergenerational Transfers and Liquidity Constraints, *Quarterly Journal of Economics*, 105:187-217.
- Cox, D., (2002). Private Inter-household Transfers in Vietnam in the Early and Late 1990s. Boston College, Department of Economics, Boston, Mass.
- Cox, D., and Jimenez, E., (1990). Achieving Social Objectives Through Private Transfers: A Review, *The World Bank Research Observer*, 5(2):205-18.
- Cox, D., Jimenez, E., and Okrasa, W., (1997). Family Safety Nets and Economic Transition: A Study of Worker Households in Poland." *Review of Income and Wealth*, 43(2):191-209.
- Cox, D., Eser, Z., and Jimenez, E., (1998a). Motives for Private Transfers Over the Life Cycle: An Analytical Framework and Evidence for Peru." *Journal of Development Economics*, 5(1):57-80.
- Cox, D., Fetzer, J., and Jimenez, E., (1998b). Private Transfers in Vietnam. In *Household Welfare and Vietnam's Transition*, edited by D. Dollar, P. Glewwe, and J. Litvack. Washington, D.C., World Bank.
- Hart, K., (1971). Informal Income Opportunities and Urban Employment in Ghana, *Journal of Modern African Studies*, 11(1):61-89.
- Hisrich, R., (1989). *Women Entrepreneurs: Problems and Prescriptions for Success in the Future*. In: Women-Owned Businesses. Hagan, O., Rivchun, C. and Sexton, D. (Eds.). Praeger, New York, NY.
- Hisrich, R. and Brush, C., (1984). The Woman Entrepreneur: Management Skills and Business Problems, *Journal of Small Business Management*, 22(1): 30-37.
- Hisrich, R. and O'Brien, M., (1981). *The Women Entrepreneur from a Business and Sociological Perspective*. In: Frontiers of Entrepreneurship Research. Vesper, K. (Ed.). Babson College, Wellesley, MA.
- Hisrich, R. and M. O'Brien, (1982). *The Women Entrepreneur as a Reflection of the Type of Business*. In: Frontiers of Entrepreneurship Research. Vesper, K. (Ed.). Babson College, Wellesley, MA.
- Huda, S.S.M., Alam, M. S., and Khan, M. Y., (2009). A Comparative Study of Women Entrepreneurs in Formal and Informal Economy: A Study of Dhaka City *Asian Journal of Business Management*, 1(1):19-23.
- Humphreys, M. and McClung, J., (1981). Women Entrepreneurs in Oklahoma. *Rev. Region. Economic Business*, 6(2):13-20.
- International Labor Office (ILO), (1972). Employment, Income and Equality: A Strategy for Increasing Productivity in Kenya. Geneva.
- Keynes, J. M. (1936). *The General Theory of Employment, Interest and Money*, Harcourt Brace Jovanovich, New York, pp. 96.
- Maiti, D., and Sen, K., (2010). The Informal Sector in South Asia: Introduction, *The Indian Journal of Labour Economics*, 53(2):195-210.

- McKernan, S.M., Pitt, M.M., and Moskowitz, D. (2005). Use of the Formal and Informal Financial Sectors: Does Gender Matter? Empirical Evidence from Rural Bangladesh, *World Bank Policy Research*, Working Paper 3491.
- Morduch, J., (1995). Income Smoothing and Consumption Smoothing, *Journal of Economic Perspectives*, 9:103–14.
- Paulson, A. L., (2000). Insurance Motives for Migration: Evidence from Thailand. Kellogg Graduate School of Management, Northwestern University Working Paper. Evanston, Ill.: Northwestern University.
- Ravallion, M., and Dearden, L., (1988). Social Security in a Moral Economy: An Empirical Analysis for Java." *Review of Economics and Statistics*, 70(1):34–44.
- Sayeed, M.A. and Nusrat, C.A., (2008). *Women Entrepreneurs in Dhaka* : Some Barriers to Success, First International Conference on Social Sciences and Humanities at University of Sains Malaysia, pp.18-28.
- Sayeed, A., Kohinoor, B., and Faruki, F., (2009). *Challenges in Women Owned Small and Medium Sized Retail Business: A Perspective of Globalization*, Contemporary Issues In Management Research, Center for Contemporary Management Research, Bharatidasan Institute of Management, India. Excel Books Trichi, India. pp: 169-79
- Schoeni, R. F., (1997). Private Inter-household Transfers of Money and Time: New Empirical Evidence, *Review of Income and Wealth*, 43(4):423–48.
- Soto, de, H., (2000). *Mystery of Capital: Why Capitalism Triumphs in the West & Fails Everywhere Else*.
- Townsend, R. M., (1994). Risk and Insurance in Village India, *Econometrica*, 62:539–91.
- Welsh, M., (1988). *The Corporate Enigma: Women Business Owners in New Zealand*, G P Books, Wellington.
- World Bank, (2001). *World Development Report 2000/2001*. New York, NY: Oxford University Press. pp. 140.
- Zeller, M., (1994). *Determinants of Credit Rationing: A Study of Informal Lenders and Formal Credit Groups in Madagascar*. FCND Discussion Paper No. 2, Washington, D.C., International Food Policy Research Institute.