

Business Risk Exposure: Evidence from Informal Market Traders in Ghana

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Abstract

This study explores the factors influencing risk exposure among informal urban market traders in Ghana. Using the number of times of business risk exposure as the outcome variable, the study employed Poisson estimation technique to examine data on 612 respondents drawn from informal urban market traders. The study shows that regulation of business activities, market levy, number of dependents, level of formal education and numbers of economic activities engaged in are the major predictors of business risk exposure among the informal commercial market traders in Ghana. The study recommends enforcement of market regulatory compliance policy among the traders. It is also recommended that the government continue to invest in free universal basic education policy for all citizens to enhance human resource capacity and improve cognitive ability to adopt proactive measures in order to avert the occurrence of business risk exposures among the informal market traders.

Keywords: Risk exposure; Poisson regression; informal market traders; Ghana

1. Introduction

Uninsured risk and its accompanying consequences remain one of the fundamental causes of vulnerability, deprivation, underdevelopment and chronic poverty (World Bank, 2000; Dercon, 2005). In view of this, risk and its impact on sources of income, productive asset and livelihoods has become issue of major concern in recent times. It is believed that uninsured shocks to livelihoods remain a major driver of poverty among informal business owners and the quest to guard against the impact of shocks is known to have serious effect on productivity and saving mobilization (Fafchamps, 2010). Concerns have been raised that globally at least 80% of unforeseen disaster related losses are uninsured and less than one – half of the population in developing countries has access to formal financial markets to cope favourably with risk exposures due to lack of proper identification of the risk (Dlugolecki & Hoekstra, 2006; Arun & Bendig, 2010).

Again, at the global level, concerns have been raised purported to task world leaders to constantly remain focused in fighting the threat of epidemics, provision of social protection and effective risk management strategies to insulate the masses against disaster losses (UN, 2009; UN, 2012). In Africa, substantial number of the working force, particularly the informal market traders stand the threat of wide range of business insecurity and decent work deficits and, they are often drag into poverty due to disaster losses (Ademola and Anyankora, 2012). In view of this, social protection and security are becoming imperative in the wake of growing economic shocks to the livelihoods of the poor, socially unprotected and the vulnerable (Mohanty, 2011). There has been repeated emphasis on the close link between vulnerability to risk and material poverty and thus, the possibility that many people will remain poor for extended period of time after their descent into poverty in poor developing economies is high (Crayen et al., 2013; Alvi and Dendir, 2008; Schindler, 2010).

It has been documented that most frequent and stressful risks in poor developing countries are not illness and untimely death of bread winner in a household but livelihood property loss due to fire, theft, drought and flood of which individuals in the informal sector are the hardest hit (Dercon & Kirchberger, 2008).

Record has shown that the continent of Africa with many infectious diseases, limited infrastructure, predominantly agrarian population; low income and the poor people who derive their livelihoods from informal micro-enterprises are constantly drawn into poverty due to risk exposures (Matul et al., 2010). Studies, however, have confirmed that enhancing the ability of the vulnerable to deal with various forms of risk exposures is increasingly considered an integral part of any poverty reduction strategy (Ahuja-Khasnobis, 2005; Siegel et al., 2001; Holzmann et al., 2000).

In Ghana great number of the economically active population derive their livelihoods from informal market trading activities. The concentration of such informal sector workers in the major urban commercial market centres poses risk challenges to the commercial activities engaged in by the market traders. In recent times, concerns have been raised about the continuous exposure of informal market traders in Ghana, particularly to risk of fire outbreaks, floods and other unexpected shocks to livelihood and income (Armah et al., 2010). Schindler (2010) bemoans lack of effective risk exposing coping strategies among informal market traders in Ghana and this has served as conduit for persistent poverty and vulnerability. Despite this knowledge, the underlying factors influencing frequent risk exposures remain largely unexplored, particularly among the informal market traders in Ghana. This presupposes that vulnerability associated with ravages of risk exposures in Ghana and unbearable property and income loss demands concerted effort to provide sustainable intervention and preventive measures (Oten-Ababio, 2012). This study, therefore sought to explore the factors influencing business risk exposure among informal business operators, particularly informal market traders in Ghana. The rest of the paper is organized as follows: section two provides a review of related literature; the methodology and data are presented in section three; section four deals with the results and discussion, and conclusions and recommendations are delivered in section five.

2. Literature Review

It is argued that one major indicator of pervasive, ever-increasing and severity of poverty in the developing world is lack of innovative approach to combat the detrimental effect of risk exposures confronting poor households and informal small-scale businesses (Mukhtar, 2013). This presupposes that lack of resources to deal with risk has implication for poverty. Esping (1999) perceives societal risk exposures as collective threat to human welfare; therefore, conscious attempt to minimize the frequency of risk exposures provides the basis for social risk management. Slovic et al. (2005) perceived risk as underpinned by two fundamental ways: risk as feeling and risk perceived as analysis. Risk perceived as a feeling brings to bear an intuitive reaction to danger. It is assumed further that risk as analysis propagates reasoning, which degenerates into scientific solution purported to ensure risk management. Thus, in theory, how people perceive risk and respond to it has significant bearing on risk management. Theoretically, risk can be conceptualized as the probability of adverse effect; therefore, risk management is underpinned by the reduction of the probability of risk exposures (Wamsler & Lawson, 2011). Therefore, the strong link between informality and poverty due to lack of inadequate provision of fundamental social protection and risk management policies has been adduced (Henrik & Jutting, 2009).

Empirically, there is growing concern that frequent risk exposures has drawn many into vulnerability and persistent poverty in many emerging economies without clear lasting solution (Cally & Murray, 2004). Brown and Churchill (1999) have argued that there is always a mutually reinforcing causal link between risk, poverty and vulnerability. This presupposes that a source of risk and effective solutions to risk management is the start for sustainable poverty reduction among the poor. Mitullah (2003) examined informal street market vending using synthesis of six case studies drawn from five countries in Sub-Saharan Africa. The author found lack of well-coordinated regulatory measures and unprotected informal business environments to have negative impact on risk exposure. Njaya (2014) used primary data drawn from 60 respondents to investigate the determinants of risk associated with informal street market food vending in Zimbabwe. The study found government regulation and provision of decent basic infrastructure to have reducible impact on risk exposure among the informal market traders. What is not clear, however, is that the study fails to justify infrastructure provision as a solution to business risk mitigation.

Bemoaning lack of effective risk coping among informal commercial market women in Ghana, Schindler (2010) confirms the devastating impact on market women as victims of repeated market fires to have link with absence of sustainable coping strategies to deal with risk exposures.

Building on the impact of risk exposures, Baah-Ennumh et al. (2012) used data drawn from 360 commercial market traders in Ghana to examine the role of market women in the informal economy. The study revealed that limited infrastructure and lack of access to credit facilities was major stumbling block to effective risk management. The study found solution in provision of amenities and removal of structural rigidities to ensure reliable risk mitigation and sustainable business activities. In a related study, Oteng-Ababio et al. (2012) explored the level of vulnerability associated with risk of market fires in Ghana. Using an assessment of past instances of fire outbreaks, analysis of the survey data found frequent risks of fire outbreaks to hinge on human behaviours and perceptions about risk management. What is not clear, however, in this study is perusal of specific human factors and community underlying causes of risk threats on the markets as adduced by this study.

Assessing the impact of flood risk on livelihoods in northern Ghana, Armah et al. (2010) used survey data drawn on 220 randomly selected shop owners. The study found that about 90% of the respondents had no flood risk mitigating arrangements and thus remain vulnerable to impacts of perennial floods. The study suggests diversification of livelihoods both occupationally and geographically. However, the extent to which diversification of livelihoods serves as solution to flood risk exposure and factors that govern flood risk is not clear in this study. Concerned about disaster preparedness, Muttarak et al. (2013) examine data on 557 households in India. The study concludes that formal level of education has high likelihood of reducing business risk exposure due to the capacity to access information and adapt to precautionary measures. However, as to whether formal level of education has significant reducible impact on risk exposure among informal market traders in Ghana needs further empirical scrutiny. Building on the role of awareness creation through education, Twum-Barima (2014) noted in an empirical study involving 95 informal market traders that over 50% of the respondents had no knowledge about basic fire safety measures and had wrong perceptions about safety measures. The study concludes that the fight against frequent fire outbreaks in the major market centres in Ghana will depend on fire-fighting educational interventions. However, the specific target group for this suggested educational intervention is not clear.

3. Method and Data

The study employed cross-sectional study design. The data was elicited from 612 informal commercial market traders in six selected urban commercial market centres in northern, central and coastal Ghana through in-person face-to-face interview. The data collection exercise began in early June, 2014 and ended in the last week of August, 2014. The survey data contains information on features such as the number of times that the respondent's business has been exposed to risk, number of years in business, regulation of commercial activities, level of the respondent's formal education, location of business, market levy, number of economic activities engaged in as at the time of this study and number of dependents.

3.1. Target Population and Sampling

The study targeted the economically active informal commercial market traders who conduct daily trading activities in the markets centres. The justification for the concentration on informal commercial market business operators emanates from the fact that, this group who conduct daily commercial activities in these market centres is relatively more susceptible to hazards, because most of them have their business assets permanently situated in the markets. Moreover, this target group is easily accessible for purposes of information gathering. The study employed multi-stage cluster sampling technique. First the study areas were segmented into three main zones (clusters): northern cluster, central cluster and coastal cluster. Second, two (2) market centres were selected from each cluster based on number of vibrant markets centres in each cluster. The study selected only vibrant urban market centres where predominantly market participants had their business assets permanently situated. Based on this criterion, each cluster was identified with four (4) main major market centres. Then, two (2) most relatively vibrant markets were selected from each zone (cluster). The respondents were selected by convenience from the market centres.

3.2. Model Specification and Estimation Technique

To estimate the factors influencing business risk exposure, the outcome variable; business risk exposure, which is the measure of the number of times that the respondent's market trading business has been exposed to risk; follows Poisson process as a random count variable.

Thus the Poisson model assumes that the underlying outcome variable of interest is discrete taking on only a finite number of values. Generally, a discrete random variable (X) follows a Poisson distribution if its probability distribution is given by:

$$P(Y = y) = f(x) = \frac{\mu^y e^{-\mu}}{y!} \quad (1)$$

Where; Where $Y = 0, 1, 2, \dots$ denotes the frequency of the Poisson process; in this case number of times of business risk exposure, μ is the expected number of risk occurrence during a given interval, y is the number of occurrences of the event (in this case business risk), e is exponential constant and $\mu > 0$. A straightforward solution to Poisson regression model is to model instead the logarithm of the mean by the application of the generalized log-linear model:

$$\text{Log}(E(Y|x)) = x'\beta \quad (2)$$

Thus a linear model is expressed succinctly as:

$$\mu_i = E(Y|x) = x'\beta \quad (3)$$

With this specification, the resultant Poisson regression coefficient estimate β_j represents the expected change in the log of the mean count event per unit change in the predictor variable X_j . Thus, when X_j increases (decreases) by one unit, the log of the mean changes by the coefficient β_j . The associated exponentiated coefficient estimates of the Poisson model for the mean count events are expressed as follows:

$$E(Y|x) = e^{x'\beta} \quad (4)$$

Therefore, an exponentiated Poisson regression coefficient estimate β_j indicates a multiple effect of the j -th predictor variable on the mean. The independent observations of the count response variable Y and its association with a set of observable values on the predictor variable(s) X_j can then be estimated by maximum likelihood.

3.2.1 The Empirical Model

Assuming a likelihood function, which follows ' n ' independent sample observations of risk exposure (RE) such that ($RE_1 \dots RE_n$). Taking the number of times of risk exposure as RE_i , then, following Poisson model specification, we specify the probability distribution of being frequently exposed to risk as follows:

$$P(RE_i) = \frac{\mu^{RE_i} \exp(-\mu_i)}{RE_i!} \quad (5)$$

Thus, the Maximum Likelihood Estimator (MLE) predicts sets of parameters (β) that make this probability as large as possible. To accomplish this, the log-likelihood function is written as follows:

$$\ln L = \sum_{i=1}^n [-\mu_i + RE_i x' \beta - \ln RE_i!] = \sum_{i=1}^n [-e^{x' \beta} + RE_i x' \beta - \ln RE_i!] \quad (6)$$

Thus, estimating the parameters of the empirical model using the maximum likelihood method maximizes this log-likelihood function. Therefore, the empirical model is specified as follows:

$$\begin{aligned} \mu_i = E(RE_i | X_i) = & \beta_0 + \beta_1 \text{Years_Blz}_i + \beta_2 \text{EcoZone}_i + \beta_3 \text{Regul}_i \\ & + \beta_4 \text{Depend}_i + \beta_5 \text{Edulev}_i + \beta_6 \text{MarketLevy}_i + \beta_7 \text{Finedu}_i \\ & + \beta_8 \text{Numbacty}_i + \varepsilon_i \end{aligned} \quad (7)$$

4. Results and Discussion

This section presents the results and subsequent discussion from the Poisson regression model. Table 1 first presents statistics of the major variables used for the analysis.

Table 1: Summary description of Variables used for the Poisson Model

Variables	Description	No. of Obs.	Mean	Std. Dev.
<i>RE</i>	Risk exposure	612	1.688	1.420
Years-Biz	No. of years in business	612	10.982	9.504
EcoZone	Ecological Zone	612	2.282	0.788
Regul	Regulation of Market traders	612	0.792	0.405
Depend	Number of dependents	612	3.717	2.602
Edulev	Level of formal education	612	3.444	1.157
Market Levy	Amount of market levy	612	14.197	7.740
Finedu	Financial education	612	0.790	0.407
Numbacty	No. of economic activities	612	2.054	1.123

Source: Field Survey data, (2014)

The dependent variable (*RE*) is a count dependent variable, which measures the number of times that the respondent's informal commercial market business has been exposed to risk/shock. **Years_Biz** is a continuous variable and it measures the number of years that the respondent has been in market business. The inclusion of this variable enables us to capture the possible effect of years of experience in business on business risk exposure. The variable **EcoZone** is a categorical variable and, the categories include northern, central and coastal zones of Ghana. Respondents in the north are used as the reference category. This variable is expected to capture the locational characteristics of the respondent and how it impacts on business risk exposure among the informal commercial market business operators. The variable **Regul** captures the influence of regulation of commercial activities in the market centres. It is a dummy variable, which assumes a value one (1) the market trading activities should be strictly regulated by the local authorities and zero (0) otherwise.

Also, the variable **Depend** is a continuous variable, which measures the number of dependents under the care of the respondent. It is included in the model as a control variable to examine the influence of number of dependents on business risk exposure. Again, the variable **edulev** is a categorical variable; it measures the highest formal education level of the respondent. The categories include no education, primary school education, Junior High/Middle school education, Senior High/Secondary school education and Post-Secondary school education. Respondents with no education are used as the reference category. Amount of market levy paid per month for occupying a space is denoted by **Market Levy**. It is measured in cedis. Also the variable **Finedu** is a dummy variable, which takes on the value one (1) if the respondent has ever received financial education from any financial service provider and zero (0) otherwise. The variable **Numbacty** is used to capture the number of economic activities that the respondent engages in as at the time of this study. It is included in the model to examine how multiple ownership of business activities influence business risk exposure among the informal commercial market traders. Table 2 presents a summary of distribution of number of times of business risk exposure among the informal market traders.

Table 2: Number of Times of Business Risk Exposure

Number of Risk Exposures	Frequency	Percentage
Not Exposed to risk (0)	137	22.38
Exposed Once (1)	174	28.43
Exposed Twice (2)	140	22.87
Exposed Thrice (3)	100	16.33
Exposed Four Times (4)	36	5.88
Exposed Five Times (5)	16	2.61
Exposed Six Times (6)	5	0.81
Exposed Seven Times (7)	4	0.65
Totals	612	100

Source: Author's computation from field Survey data, (2014)

From the distributions in Table 2 it can be seen that 137 of the respondents (22.38%) have not suffered or been exposed to risk in the informal market business. However, a relatively greater number and proportion of 174 (28.43%) and 140 (22.87%) of the respondents have suffered or been exposed to risk once and twice respectively in the informal commercial market business. 100 (16.33%) have suffered risk thrice, 36(5.88%) have suffered four times, 16 (2.61%) of the respondents have suffered or been exposed to risk five times in their informal commercial market business, 5 (0.81%) of the respondents have been exposed to risk six times and 4 (0.65%) have suffered risk for the seventh time in their market trading business. Thus, the maximum number that a respondent has suffered from risk exposure is 7 and the minimum can be said to be zero (0). Table 3 presents the results from the Poisson regression estimates. As shown, the Incidence Rate ratio (IRR), which is the exponentiated Poisson regression coefficient estimate, is presented. The IRR converts raw Poisson regression coefficient estimates into incidence rate ratio by exponentiation them. Thus, the IRR shows the change in the dependent variable in terms of incidence rates increase or decrease; with the exact rate determined by the IRR.

The Results in Table 3 shows that the number of times of risk exposure (*RE*) is explained by market regulation (**Regul**), **Primary school**, **JHS/Middle school**, **Post-Secondary school** categories of the level of education and **Market Levy**; as all are statistically different from zero at 5% significance level. (*RE*) is again explained by **SHS/Secondary school** category of level of education of the respondent as it is statistically different from zero at 1% significance level. Also, number of dependents (**Depend**) and number of business activities (**Numbacty**) explain risk exposure as all are statistically significant at 10% alpha level.

Table 3: Poisson regression estimates of factors influencing risk exposure

Variables	IRR	Marginal Effects	P-value
Years_Biz	1.014 (0.039)	0.025 (0.065)	0.701
EcoZone: Ref. Category = Northern	-	-	-
Central	0.861 (0.089)	-0.231 (0.164)	0.150
Coastal	1.105 (0.010)	0.175 (0.169)	0.309
Regul	0.856** (0.067)	-0.262 (0.133)	0.049
Depend	1.041* (0.248)	0.067 (0.040)	0.092
Edulev: Ref. Category= No education	-	-	-
Primary School	0.502** (0.027)	-0.054 (0.023)	0.027
JHS/Middle School	0.447** (0.040)	-0.081 (0.030)	0.016
SHS/Secondary School	0.218*** (0.072)	-0.098 (0.044)	0.004
Post-Secondary School	0.139** (0.055)	-0.053 (0.044)	0.020
Market Levy	0.989** (0.004)	-0.017 (0.007)	0.011
Fineduc	0.921 (0.072)	-0.137 (0.133)	0.303
Numbacty	0.921* (0.018)	-0.063 (0.032)	0.053
Constant	2.031*** (0.283)	-	0.000
Robust Std. Errors in Parentheses			
No. of Observations	612		
Waldchi2 (12)	28.40***		0.000
Pseudo R ² = 0.1135			
Hosmer-Lemeshow (Gof): P-value	0.134		
Linktest_hatsq: P-value	0.253		

*= p < 0.10; ** = p < 0.05; *** = p < 0.01

Note: IRR = Incidence Rate Ratios

Gof = Goodness-of-fit

As shown in Table 3, regulation of the markets (**Regul**) has significant influence on business risk exposure as the variable is statistically significant at 5% alpha level. It is inversely associated with incidence of business risk exposure. This implies that, there is less likelihood of individual informal commercial market trader being exposed frequently to business risk when the commercial market activities are regulated. This is possible because any well regulatory intervention does every society good; by guaranteeing desirable positive economic benefits backed by policy (Kwon, 2013). Given the coefficient of 0.144(1-0.856); this means that all other things remaining the same, an informal market trader is 0.144 less likely to be exposed to risk in his or her informal commercial market business if the markets where they conduct their business activities are strictly under well-coordinated regulatory measures by the local authorities. This finding sounds plausible in the sense that, regulation ensures compliance especially about safety measures and avoidance of human behaviours, which either directly or indirectly create room or make them more susceptible to risks suffered in business. This finding again confirms the assertion by Mitullah (2003) and Njaya (2014) who found that, government regulation and introduction of code of practice that go to regulate and/or sanction the operations of informal market trading activities are the fundamental issues that add to the efforts to reduce risk and associated vulnerabilities.

With regard to the nature of impact of dependents on risk exposure, the regression results show that the number of dependent household members (**Depend**) who are under the care of the respondent increases the rate of risk exposure. What it means is that, an increase in the number of dependents by one additional person is associated with 0.041(1.041-1) more likely of being frequently exposed to risk all other things being equal. The possible reason for this finding can emanate from the obvious fact of life that, additional member under the care of the respondent adds to the resource constraint of the care taker because of the compelling demand to commit additional resources to take care of that person. This mean that very limited resource are left to spend on maintenance, precautionary and adaptive measures to prevent and/or mitigate the incident of risk faced by the informal commercial market trader. This finding is in consonance with Cole et al. (2013) who found that, resource constraint reduces extra expenditure on factors that guard against risk exposures due to competing uses for limited funds. This is even more pronounced among poor informal market traders who may not have access to credit markets; and this increases the chance of being frequently exposed to risk in business.

Moving further, the analysis of **the primary school, JHS/Middles school and post-secondary school** categories of the level of education are all statistically significant at 5% significance level and for that matter have risk reducing impact given their coefficients as 0.498(1-0.502), 0.553(1-0.447), 0.861(1-0.139) respectively. Thus, respondents with primary school, JHS/Middle school and post-secondary school education are 0.498, 0.553 and 0.861 less likely of being exposed to risk in business than their counterparts who have no formal education (which serves as a reference category). Again, a respondent in the **SHS/Secondary school** level of formal education category is 0.782(1-0.218) less likely of being exposed to risk compared to their counterparts in the no formal education category. Thus, holding all other factors constant respondent with formal education stand the chance of being less likely to be exposed to risk than respondents with no formal education. As confirmed by Sharma, Partwadhan and Patt,(2013) who found that respondents with primary school, JHS/Middle, SHS/secondary and post-secondary school education are better able to perceive risk and develop adaptive capacity and early precautionary measures to cushion themselves against risk exposure and intensity of risk more than those with no education.

The amount of **market levy** paid by the informal market trader also inversely relates to number of times of risk exposure. In other words, as individual market trader commits financial resources to payment of market levy he or she becomes 0.011(1-0.989) less likely to be frequently exposed to business risk at a significant all other factors held constant. It is possible that, payment of market levies serves as a basis for maintenance and infrastructure development by local authorities at these market centres as confirmed by Baah-Ennumh and Adom-Asamoah (2012). Improvement of infrastructure and other facilities creates space, reduce congestion thus, reducing the potential causes of risk exposures on the markets. This was confirmed by some respondents as they bemoaned the possible outbreak of diseases due to lack of toilet facilities in some of the market centres. They, therefore, called for judicious utilization of levies to revamp infrastructure to avert possible occurrences of risk and its consequences that affect their market businesses activities.

Moreover, the number of economic activities that the respondent engages in (**Numbacty**) is found to have negative association with frequency of risk exposure.

Thus if the number of income generating activity increases by one additional economic venture, the individual commercial market trader is 0.079 (1-0.921) less likely to be exposed to risk in business, holding all other variables constant. The possible explanation to this finding is not farfetched. The motivation to engage in multiples business ventures is to enhance income generation prospects of the market operator. It holds, therefore, that additional income earned from the multiple business ventures can be utilized to maintain existing infrastructure, engage security personnel to take guard of the business in their absence and also invest in precautionary measures to avert possible occurrence of shock to the business; making them less likely of being affected by frequent risk shocks. This finding is strongly supported by that of Ijaiya et al. (2009) who assert that, income diversification via multiple economic ventures acts as a source of income to cushion against risk and prevent the impact of economic hardships emanating from risk. It is also important to emphasize that poor people may inevitably adopt poor risk mitigation strategies, which have negative impact on their business survival and welfare than their non-poor counterparts (Azomahou & Yitbarek, 2014). Therefore, in the face of limited access to the financial market, multiple income generating activities plays major role in providing additional sources of income to finance defensive measures against risk exposures that may affect the informal business ventures owned by the market traders.

5. Conclusions and Recommendations

The study sought to examine the factors influencing business risk exposure among informal commercial market traders in Ghana. The Poisson regression model was employed to examine data on 612 respondents drawn from selected market centres. From the results and findings, the conclusions of the study are that:

Regulatory measures by local authorities have significant and reducible impact on business risk exposure among the commercial market traders. Thus, the market trader stands the chance of being less likely to be exposed to business risk if activities on the market centres are guided by rules and regulations. This is so because well-coordinated regulation of human activities results in positive social and economic benefits. Formal level of education has reducible influence on business risk exposure among the informal commercial market traders in the case of Ghana. Respondents, in the Primary, JHS/Middle school, SHS/Secondary school and Post-Secondary school categories have less likelihood of being frequently exposed to risk than their counterparts with no formal education which is the reference category.

Again, the amount of market levy paid by the informal commercial market trader for occupying market space has significant influence on business risk exposure. It is found to have inverse relationship with number of times of business risk exposure. Also number of income generating activities engages in by the respondent impacts negatively on frequent business risk exposure. This is so because multiple income generating activities provide additional sources of income, which enables the business operator to proactively finance precautionary measures to prevent business risk exposures. This, therefore, has reducing impact on number of times of business risk exposures among the informal commercial market traders in Ghana.

The implication is that, individual market participant who engages in multiple trading activities has additional financial capacity, which provides economic basis for fighting risk induced vulnerabilities. Access to formal education contributes effectively to reducing frequency of risk occurrence. Investing in education improves cognitive development and has the implication of empowering the mind and shapes human perception and behaviour to embrace practices that avert possible occurrence of risks. Again efficient utilization of market levy paid by the traders for the development of the market centre serve a collaborative purpose for effective risk management.

It is, therefore, recommended that given the role of regulation as a conduit to ensure compliance, the local authorities in Ghana, particularly the District Assemblies through their bye-laws should endeavour to come out with “market regulatory compliance policy” to sanction market trading activities. Government should continue to invest heavily in Free Compulsory Universal Basic formal education policy for all. This will surely empower the masses to engage in well informed business activities, generate enough financial resources to expand business activities and be able to settle financial obligations, which lead to possible preventive measures against frequent risk exposures.

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