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Performance predicting effect of factors residing in a firm: Evidenced from small scale manufacturing enterprises in Ethiopia

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Abstract

Performance of an enterprise is the function of multifaceted factors linked to a person who start and run firm, to the firm itself, and to external environment. This article aimed to describe and explain the effect of factors residing in a firm itself on its performance. In order to carry out this, personal data of 359 owner-managers of enterprises in six subsectors of small scale manufacturing sectors were planned to collect data using self-administrated questionnaire. 306 of the sampled owner managers have properly filled the questionnaire and returned. The association between predictors and the outcome variable was explained using ordinal logistic regression model. The significance level of their association was tested using Wald test statistics embodied by default in ordinal regression model. The finding shows that age of the firms has no significant effect in predicting enterprise performance difference. Sole owned firms perform better than collectively own firm. Internal process capacity, customer handling ability, and absorptive capacity create performs difference among targeted firms. The better capable in these dimensions, the higher the performance. Location also plays a significant role in predicting the higher performance. From these results, it is recommended to those under-performers that enhancing the stated capabilities help them to be competent. Location of a firm which is appropriate for production and commercialization is the other factors that low performers need to recognize to survive or to compete. Age of the firm may create performance difference if there is a wider age gap among firms under consideration in a given research. In this article, the age gap does not show a significant performance difference.

Keywords: Entrepreneur, Entrepreneurship, factors residing in a firm, Enterprise performance, and small scale enterprise

Chapter One: Introduction

Background of the study

Today, economic and social development role of small-scale enterprises is highly acknowledged by policy makers, institutions and researchers elsewhere in the world. MSMEs play the pivotal role in employment opportunity creation, GDP growth, economic transformation through industrial development and restructuring, supporting larger firms with inputs and services, and many more (Brixiova and Asaminew, 2010; Armington & Acs, 2002; Miller *et al.* 2003; OCED 2012; UNIDO 2007; etc.) [7, 1, 39, 43, 52].

Enterprise is providing goods and services involving financial and commercial ends. An enterprise is an undertaking engaged in production and/ or distribution of goods and services for commercial benefits. It might be owned and operated by person or a group. Enterprise, according to Federal Negarit Gazeta of Ethiopia (2012) [22], is an "undertaking established for profit-making". Based on a matrix of variables, enterprises are labelled as micro, small, medium, or big levels. These variables include number of employees, assets, turnover, capital and investment. They can be differentiated by industry in some cases. Such classification is similarly experienced in many countries. However, the difference may happen in setting the threshold requirements that serve to start with in each level. These threshold requirements are often different in different institutions and agencies within an economy. This implies there is more than one definition in one country. In Ethiopia,

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according to the report of FeMSED (2015) [23], an enterprise is Micro size Enterprise when the number of its employees (including the owner) is not greater than 5, and total asset is less than or equal to ten thousand Ethiopian birr (100,000 ETB = 5000 USD) for industrial sector and less than or equal to fifty thousand Ethiopian birr (50,000 ETB = 2500 USD) for service. In similar way, an enterprise called small if total number of its employees (including him/herself) is with in inclusive range of 6-to-30 and total asset of 100,000 ETB (5000USD)-to-1,500,000 ETB (7,5000 USD) for industrial sector and 50,000 ETB(2500)-to-500,000 ETB (25,000 USD) for service sector.

Enterprise performance is largely explained by enterprise growth is the function of many factors. This is the other researchable dimension of entrepreneurship that results in controversial outcomes. A number of factors have been identified in research literatures as being associated with the enterprise growth. These factors are related to an individual who started and run the business, the firm itself, and environment outside of the firm which are farther classified as task environment and general environments. At the enterprise level, factors such as the firm's age, its location, nature of ownership, quality of resource, and the internal process capability are said to influence enterprise performance dynamics (Afenyadu *et al.* 1999; Figueiredo 2002; Lorentzen 2005; Cohen & Levinthal 1990)[2, 24,35,10].

Almost all of these researchers have conducted their studies about these factors in the context of advanced countries. No study has yet been conducted in Ethiopia context. Decision making based on such information on firms in countries of low economies could be missing the context. Thus, this article intends to reconcile such information setbacks. In order to examine easily whether these assumed variables have relationship with small firms' performance, the statement was connoted in objective and testable hypothesis ways as follows.

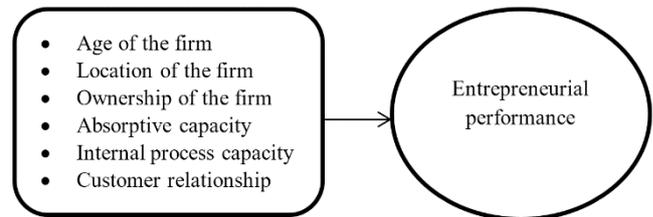
Objective of the study

The objective of this study is to explain performance predictive effect of factors residing in a firm with particular reference to small scale enterprise in Ethiopia.

Conceptual Framework

A conceptual framework represents the researcher's synthesis of literature on how to explain the relationship between the predictors and the outcome variables (McGahie *et al* 2001) [36]. The predictors are traditionally called 'independent variables', and the outcome is called 'dependent' variable. Predictor variables related to an entrepreneur are age of the firm, location of the firm, resources of the firm, ownership, absorptive capacity, internal process capacity, and Customer relationship management(Afenyadu *et al.* 1999; Figueiredo 2002; Lorentzen 2005; Cohen & Levinthal 1990; Giuliani 2002; Camisón & Forés 2010) [2, 24, 35, 10, 25, 9]. The outcome variable is entrepreneurial performance.

The proposed relationship between firm factors and entrepreneurial performance is put in the following contextual framework and testable research hypotheses.



Source: Compiled from literatures

Research Hypothesis

HA1: Firms' age significantly predicts entrepreneurial performance.

HA2: Firms' location significantly determines entrepreneurial performance.

HA3: Firms' absorptive capacity (related to up-to-dated technical information) significantly determines entrepreneurial performance.

HA4: Firms' internal process capacity significantly determines entrepreneurial performance.

HA5: Firms' customer relationship management capacity significantly determines entrepreneurial performance.

HA6: There is significant performance difference between individually owned firms and collectively owned firms (nature of ownership influence).

Significance of the study

As the researcher of this study shares others' idea, a certain number of basic ideas are expected to be shared by other researchers in the field of entrepreneurship too. Thus, the study can partly help them access information about the association between personal factors and entrepreneurial performance in Ethiopia, particularly in small scale manufacturing sector, and carry out more effective empirical research to make good quality predications about the future entrepreneurship growth. Benefits of research also liked to academics and students. Currently, the sense of being self-employed becomes a choice because of relinquished conventional job opportunities. Students of every field of study keen for entrepreneurship education and training. Thus, the study can partly help them know how personal factors are associated with entrepreneurial performance. It helps potential entrepreneurs enhance their intention to engage in activities of entrepreneurship by showing how factors internal to the firm help to being ready to be an entrepreneur. It helps the existing small firms by providing information how success is registered mainly from factors residing within the firm itself.

Scope of the Study

Determinant of entrepreneurial performance is multifaceted construct. It is composed of variables in the individual level, in firm level, in micro level, and in macro level. This article focuses only on factors liked to the firm itself. The target population are small scale manufacturing firms in Ethiopia. Sample of these firms were selected from sampled major cities of the country. The cities are Addis Ababa, Dire Dawa, Bahir Dar, Hawasa, Jimma, and Adama. The sector encompasses textile and garment, leather products, wood works, and metal works, food processing, and agro processing. One owner manger was representing each firm

to respond. The conclusion goes to small scale firms in this sector. Cross-sectional design was used to collect data from owner manager of the firm using self-administrated questionnaire.

Limitation of the study

The first critical limitation is that the entrepreneurial performance was assessed based on subjective measure that was prepared in the form of likert-scale. This is due to the fact that there is lack of quantitative financial data with small scale enterprises. Some of them do not have quantitative recorded data while others do not want to reveal their financial data. Lack of prior contextual empirical research on the topic that could serve as a source of factual information in the context of in Ethiopia is also other challenges that limit study to rely on empirical literatures which are not in the context of Ethiopia. The other challenge that minimizes the validity of the study was the reluctance of the respondents in responding their perception which is approaches to the facts on the ground. Some of the responses given to the survey seem carelessly responded.

Chapter Two: Literature Review

In this part, the relationship between firm related factors and performance is reviewed from different theoretical and empirical investigations.

Age of an enterprise: According to Evans (1987)^[21], age can predict the structure, behaviour and growth propensity of a firm. Regardless of economies of countries, according to empirical observation of Liedholm (2002)^[34] & Parker (1995)^[44], employment growth of an enterprise decreases with age. This implies that younger firms tend to upgrade through increasing human power more than older enterprises. Such observation leads to link with different theoretical learning model like the model of Jovanovich (1982)^[27]. His theory has explained that older enterprises grow more slowly because managers have learnt their efficient size of operation overtime. Younger enterprises face efficiency and financing problems in the beginning of their operations, which results in slower growth in the very outset. Such constraints are tending to decrease gradually when the start-up starts to increase efficiency and gain better access to financing. Banerjee & Duflo (2000)^[4] stated that older firms increase benefits from reputation effects, stable contracts, and high productivity. The other way of looking at age and performance relationship is that older firms are not necessarily growing larger when they become older. This is true in many countries of low economies. Older enterprises do not show significant different from their beginning stage in terms of the nature of the business and its productive performance. Most MSEs in these countries do not seem to follow a developmental business path that starts simple and eventually develops much more complicated and sophisticated processes of production. Rather, older enterprises share many characteristics with start-ups, but they have proven to have more explanation and better business networks than their younger business peers. A major explanation could be that owners of older and larger enterprises may lack further motivation to grow their businesses or hire more workers once they achieve their original objectives and goals. Consequently, according to Burki & Terrell (1998)^[8], older entrepreneurs may be reluctant to risk their current accomplishments by following other growth and investment strategies. Also, businesses

may lack the strategic know-how for improving and developing their businesses further. This would also involve the lack of information on how to structurally transform the traditional production of manufactured goods or the provision of simple services into modern economic activities. Accordingly, as revealed by Mead (1994)^[37] & Liedholm (2002)^[34], empirical evidence in developing countries suggests that it is rather the ability of firm owners to modernize their businesses rather than the age of the firm that drives employment and productivity growth.

Notion of ownership: Group composition, according to Pfeffer (1983)^[45] & Williams and O'Reilly (1998)^[56], has linked to group performance in two ways: through its implications for conflict and coordination in the group, and through its effects on diversity of ideas and group creativity. One way through which working in group influences entrepreneurial outcomes is through its effects on group cohesion and conflict, and the resulting effects of cohesion and conflict on group behaviour. Research in organizational demography (Williams and O'Reilly 1998)^[56] generally supports the conclusion that group cohesion declines, and conflict increases when diversity of group members increases. This relationship has been demonstrated for diversity in a variety of individual characteristic, such as age, education, race, sex, and work experiences. Group cohesion and conflict in turn have implications for group processes such as decision speed, decision quality, and task implementation (Birley and Stockley 2000)^[5] Groups whose members have a stronger sense of belongingness and higher moral have lower levels of reported affective conflict (personally oriented disagreements) between group members. Affective conflict between group members lowers venture performance, perhaps through its effects on decision speed and task implementation, as these are likely difficult for people who dislike each other (Ensley and Pearce 2001)^[18]. This suggests that group cohesion indirectly improves performance. Along these lines, Eisenhardt and Schoonhoven (1990)^[15] found, in start-ups, that founding teams with greater previous joint work experience had higher growth rates. However, too much group cohesion can also be a problem, since it also lowers cognitive conflict in the group, or disagreements over what to do and how; cognitive conflict increases new venture performance, presumably because it improves decision quality (Ensley & Pearson, 2005)^[17].

Customer relationship management capacity: Customer relationship management, according to Berndt *et al.* (2009)^[6], is a broad-wide enterprise commitment to recognise the individual customer of a firm, and to create a relationship between the firm and customer as long as the relationship benefits both. CRM aims at helping an enterprise to acquire new customers, retains existing ones, set up and maximize value from the relationship. The benefits of CRM, according to Ndubusi (2007)^[41], is to develop proper relationship with customers to create long-term profit. This requires firm level communication and conflict handling ability. Ndubuisi further noted that CRM helps an enterprise create an opportunity of frequent buying through providing the right offer, right price, through right channel, at the right time. Such relationship can be reinforced and retained through timely communication and effective handling of conflicts between the customer and the firm. It can thus be inferred that communication and conflict management are very

important dimensions of CRM. Customers recognize that a relationship as valuable when their demands are met. Needs or complaining of customers are known to the enterprise through information gathering. Such information can be gathered through formal or informal methods. The interaction between employees and customers can prevent service problems before they are occurred and minimized (Zeithamal *et al.*, 2006; Rostman, 2006) [61, 46].

Absorptive capacity: Absorptive capacity of a firm, according to Cohen & Levinthal (1990) [10] and Zahra & George (2002) [60], means the ability of a firm to find, check, and exploit external knowledge for commercial ends. In contrast to dynamic capability, absorptive capacity of a firm is clearly emphasizing on gaining of technical knowledge. Dynamic capability uses a broader understanding of knowledge like financing and marketing (Wetter & Delmar 2007) [55]. Against to the rapidly changing macro environments like economic, technology and business rules, the capacity to integrate and make use of up-to-date technical knowledge and market information has become crucial for success. Particularly, in countries of low economy firms' need to take advantage of already existing innovated technical knowledge. Absorptive capacity is based on a firm's prior knowledge (Lane & Lubatkin 1998) [33]. This means that it encompasses the knowledge of each worker of the firm in addition to the tacit knowledge embodied in a firm's structure. The process of collecting information and building knowledge is cumulative (Schmidt 2005) [48]. The idea is that if a firm stops to absorb external knowledge, it may lose the value of new information and consequently lose out on profitable business opportunities. Consequently firms with low absorptive capacity will lag behind of competitors.

Location: Many studies in the field of entrepreneurship evaluate location of business in terms of its proximity to raw materials, suitability for production and market. It is true that nature of business location creates performance difference among firms of the same nature, produce the same products, and share the same customer. Location in terms of space for the equipment required to producing products and service is one of the competitive tools for success. Particularly, for manufacturing company, extensive space for equipment and inventory is mandatory. Location also affects sales opportunities of a firm. A firm with proper place to market its product can do better. Location is also associated with availability of raw materials. Its proximity to where raw materials are available contributes to cut of costs of transportation and inventory. This in turn increases profits. The other advantage is nearness to the market. Firms in the nearby market can use the available demand in that market with very low-cost. It is also possible to show the products to large number of potential customers. Appropriate location also explained by amenities and infrastructure such as water supply, power supply, good road network, and security.

Internal process capability: Internal process management and entrepreneurial performance: Researches indicates that capability of small manufacturing firms in internal process management is a significant predictor of firm performance. Internal process in this aspect is represented by capacity to manage work-in-process(WIP) relates to the product or components that are no longer raw materials but have yet to

become finished products.; product quality development, and lead time management. Lead time is the time between placement and receipt of an order.

Chapter Three: Research Design and Methodology

Research Design: In general, there are two forms of research designs (Kumar, R. 2005; & Tharenou, Donohue, & Cooper 2007) [31, 50]. These are exploratory research design and conclusive research design. Conclusive research design is further classified as descriptive research design and explanatory research design. This study has used conclusive research design. In this article, conclusive research was design was used to describe, explain, and test the association between or among variables based on the underlying hypothesis. It is more likely to use quantitative, rather the qualitative techniques (Nagundkar, 2008) [40].

Sampling Design: In order to select the representative sample from a given target population, sampling design has to come first. Sample design, as defined by different literatures (Davis, 2000; Zikmud, 2000; and Kothari, 2004) [15, 61, 29], is a plan for obtaining a sample from a given population.

Target Population of the Study: Target population is subjects to be conceptualized in a given study. It is from which sample is selected. The target population of this study are small scale manufacturing firms that manufacture textile and garment, leather products, food processing and beverage, metal works, wood works, and agro processing. They are situated in randomly selected cities of the country. They are 3523 firms from Addis Ababa, Dire Dawa, Hawasa, Bahir Dar, Adama, and Jimma.

Determination of the Sample Size: There are many approaches to determine sample size such as imitating samples from similar studies, using published tables, and applying formulas to calculate a sample size. This research employed sample size determination formula provided by Yamane (1967) [59] cited by Israel (1992) [26] through considering level of precision, confidence level, and degree of variability. The formula is called simplified formula for proportions. A 95% confidence level and 0.5 proportions were considered. Proportion of 0.5 indicate the maximum variability in a population and, therefore, used in determining a more conservative sample size.

$$n = \frac{N}{1 + N(e)^2}$$

Where n is the sample size, N is the target population size, and e is the level of precision (0.05). When this formula is applied to this study, the sample size is 359 firms.

$$\begin{aligned} n &= \frac{3523}{1 + 3523(0.05)^2} \\ &= 359 \text{ small scale manufacturing firms} \end{aligned}$$

This size of sample can fit the required size because the required sample size, according to Israel (1992) [26], for descriptive statistics, multiple regression, analysis of covariance, or log linear analysis is between 200-500 individuals or items.

Sampling method: Subjects of this study are small scale manufacturing firms in selected major cities of Ethiopia. These firms are categorized by FeMSEDA (2015) [23], as Textile and Garment, Leather products, Food processing and Beverage, Metal works, Wood processing, and Agro-processing. Although they are under the umbrella of manufacturing category, there is heterogeneous nature of operations among them. Such behaviour of a given population demands stratified random sampling treatment. Based on these natural strata of the target population, sample size for each stratum was proportionally computed. The final selection from each homogenous stratum was done using systematic random sampling method. The first unit from orderly arranged each stratum was selected with the help of simple random number and then every 10th elements in the frame was automatically selected. Since the sample size of each stratum was proportionally computed, their sampling interval is equal. That is 10. One owner manager was taken to represent each sample firm each stratum to respond the questionnaire.

Variables and their measurement scales

Firm's age: time duration in which each small scale manufacturing firm have been in operation. Respondents were asked to write their business start-up years. The measurement was ratio scale.

Location: Location refers to where the firm specifically situated for production and commercialization. Respondents were asked to the overall appropriateness level of their firms' locations relative to their counterparts. Six-point ordinal level likert scale was used to collect data. The scale are 'exceptionally appropriate=6', 'appropriate=5', 'somewhat appropriate=4', 'somewhat inappropriate=3', 'inappropriate=2', 'exceptionally inappropriate=1'. Finally the choices are recoded into two categories for analysis.

Ownership: Ownership here refers to being owned by a single owner or collectively owned. Respondents were provided with binary nominal level choices: 'single owner' and 'collective owner'.

Absorptive capacity: absorptive capacity here refers to the relative capability of firms in acquainted with updated business information. Respondents were provided with Six-point ordinal level likert scale response categories: 'Very capable=6', 'capable=5', 'somewhat capable=4', 'somewhat incapable=3', 'Incapable=2', 'Very incapable=1'

Customer relationship capability: This independent variable is represented by the following three likert type items which finally combined into a single composite score. These are resolution of customer complaints capability, customer loyalty/retention capability, and handling Product returns rate capability. The response categories of these items is five point ordinal level likert scale (1= very low to 5= very high).
Internal Process capability: the operational definition given to internal process capability in this thesis represented by the following three items: Work in process inventory time management, order fulfilment lead-time management, and product quality development process management. The response categories for these items are five-point ordinal level ranging from '1=very low capability' to- '5=very high capability'.

Designing Data Collection Method: Self-administrated questionnaire was used as the instrument for data collection since the subjects are large in number which is not feasible

to address all these respondents at once using other method. However, choice of this method was not made without noticing its limitations. Experiences of past researchers show that self-report method has many advantages, but it also suffers from specific disadvantages such as low response rates, exaggerated response, questions can be misunderstood, language and literacy issues, etc. In order to manage these limitations, questionnaire organization and administration remedies proposed by (Colton and Covert 2007) [11] was applied.

Methods of data analysis: Data analysis is the computation of certain indices or measures along with searching for patterns of relationship among the data groups. It is defined by Kothari (2004) [29] as a practice in which raw data is ordered and organized so that useful information can be extracted from it. In this article, the researchers have used explanatory analysis methods. Because of ordinal nature of outcome variable and the nature of the objective, ordinal logistic regression model was used. Computations was done using SPSS version 20.

Chapter Four: Results and Discussion

This part of the study is about the analysis and interpretation, and discussion of the data that were collected from small scale manufacturing firms. Relevant outputs of ordinal regression analysis are model fitting information, measure of strength of association, test of parallel lines, and parameter estimate.

Model fitting information

The model fitting information table displays statistical terminologies of model and their respective outcomes. The model indicates the parameters for which the model fit is calculated. 'Intercept only' describes a model that doesn't control for any predictor variables and simply fits an intercept to predict the outcome variable. 'Final' describes a model that includes the predictor variables and has been arrived at through an iterative process that maximizes the log likelihood of the outcomes seen in the outcome variable. By including the predictor variables and maximizing the log likelihood of the outcomes seen in the data, the final model should improve upon the intercept only model. -2 (Log Likelihood) is the product of -2 and the log likelihoods of the null model and fitted final model. The likelihood of the model is used to test of whether all predictors' regression coefficients in the model are simultaneously zero and it tests of nested models.

The following table gives the overall test of the model and test the null hypothesis that 'all of the regression coefficients in the model are equal to zero'. It determines whether the model improves the ability to predict the outcome. This can be based on the change in -2log-likelihood when the variables are added to a model that contains only the intercept.

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	665.534			
Final	425.523	240.012	6	.000

Link function: Logit. P-value < 0.05

This means that the probability of obtaining the chi-square result if there is in fact no effect of the predictor variables. The chi-square result is 240.012 at the P-value (0.000) of

less than the specified alpha level for this thesis (0.05). This indicates that the final model gives a significant improvement over the baseline intercept-only model because of the inclusion of explanatory variables. Thus, the null hypothesis is rejected. This leads to conclude that at least one of the regression coefficients in the model is not equal to zero.

Measuring strength of Association - Pseudo R-Square

As indicated in the following table, three alternatives Pseudo R-Square statistics that summarizes the proportion of the variance in the outcome that can be accounted for by explanatory variables. They are produced by SPSS. The researcher cannot control them.

Cox and Snell	0.544
Nagelkerke	0.613
McFadden	0.360

Link function: Logit.

These are Cox and Snell (0.544), McFadden (0.613), and Nagelkerke (0.360). Nagelkerke is often used to explain the variance. Accordingly, 61.3% of the outcome variance is strongly explained by the explanatory variables.

Goodness-of-Fit test

This table contains Pearson’s chi-square statistic for the model and another chi-square statistic based on the deviance. The Null hypothesis is ‘the fit is good’. We reject the null if P-value is less than the critical value (in this study case 0.05), and then we conclude that the data and the model predictions are not similar and that the model is not good. However, the null is not rejected if P- value is larger than the critical value (in this study case 0.05), then we conclude that the data and the model predictions are similar and that the model is good.

	Chi-Square	df	Sig.
Pearson	632.830	595	0.137
Deviance	424.137	595	1.000

Link function: Logit.

As displayed in the table Chi-Square (χ^2) = 632.830, and P-value = 0.137 which is greater than the critical value. Based on the aforementioned justifications, the null is not rejected. This leads to conclude that the model is good fit the data.

Test of parallel Lines (proportional odds)

It tests the null hypothesis that states that the regression coefficients are not significantly different across level of the response (dependent) variable. The test compares the ordinal model which has one set of coefficients for all thresholds (the null) to a model with a separate set of coefficients for each threshold (general). The assumption is not violated if this test has a finding of non-significance.

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Null Hypothesis	425.523			
General	420.326	5.197	6	.536

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

If the general model gives a significantly better fit to the data than the ordinal (proportional odds) model (i.e. if $p < .05$) then we are led to reject the assumption of proportional odds. However, as displayed in table the assumption of proportional odds is not violated because this test has a finding of non-significance (P=.536). Therefore, the hypothesis remains valid.

Parameter Estimates of ordinal regression

The parameter estimates show specifically about the relationship between the explanatory variables and the outcome. It primarily displays the estimates labelled ‘Thresholds’ and the estimate labelled ‘Locations’.

	Estimate	Std. Error	Wald χ^2	df	Sig.	95% Confidence Interval	
						Lower Boundary	Upper Boundary
Threshold(intercept only)							
[Low Level =1.00]	6.211	.776	64.058	1	.000	4.690	7.732
[Middle Level = 2.00]	8.753	.877	99.568	1	.000	7.034	10.472
Location(predictors)							
Age of the firm	-.119	.077	2.403	1	.121	-.269	.031
Internal Process	1.401	.166	71.609	1	.000	1.076	1.725
Customer Relation	.710	.117	36.652	1	.000	.480	.940
[Single owner=.00]	.788	.268	8.653	1	.003	.263	1.314
[Group owners=1.00]	0	.	.	0	.	.	.
[Absorptive=.00]	1.026	.265	14.959	1	.000	.506	1.546
[Absorptive=1.00]	0	.	.	0	.	.	.
[Locations=.00]	.892	.267	11.206	1	.001	.370	1.415
[Locations=1.00]	0	.	.	0	.	.	.
Link function: Logit.							
This parameter is set to zero because it is redundant.							

As displayed in the above table, the threshold estimate for (Low level entrepreneurial performance =1.00) is the estimated cut point is used to differentiate low performance from middle and high performance when values of the predictor variables are evaluated at zero. Subjects that had a value of 6.211 or less on the underlying variable that gave rise to the entrepreneurial performance variable would be classified as low performance given that values of predictor

variables are zero. The threshold estimate for (middle level entrepreneurial performance =2.00) is the estimated cut point on the variable(entrepreneurial performance) used to differentiate low and middle from high level performance when values of the predictor variables are evaluated as zero. Subjects that had a value of 8.753 or greater on the underlying variable that gave rise to the performance level would be classified as high level given that values of

predictor variables are zero. Subjects that have a value between 6.211 and 8.753 on the underlying latent variable would be classified as middle performance.

Age of firms and entrepreneurial performance: The Null hypothesis: Age of the firm is not statistically significant predictor of entrepreneurial performance.

The order log estimate of the predictor age of the firm is -.119. The Wald test statistic is 2.403 with an associated P-value of 0.121, which is by far greater than the considered alpha value for this thesis (0.05) while other explanatory variables are constant. This means if the null is rejected with this evidence, there is 12.1% chance of committing an error. Therefore, the null is not rejected and conclude that the regression coefficient for this variable has not been found statistically significant in estimating entrepreneurial performance. The finding is supported by Empirical evidence from developed and developing countries have repeatedly shown that firm growth rates not related with age (Liedholm 2002; Parker 1995)^[34,44]. On the contrary, others argue with evidence that with increasing age, firms go through intense process of organizational learning, and therefore their performance. Some said older firms grow slowly because managers have learnt their efficient size of operation overtime.

Customer relationship management capability and enterprise performance: The Null hypothesis: Customer relationship has no statistically significant association with entrepreneurial performance in small scale manufacturing sector.

The order log estimate (coefficient) of the customer relationship management capability of the firm is .710. The Wald test statistic for this predictor is 36.652 with an associated P-value of 0.000, which is less than the considered alpha value for this thesis (0.05) when other predictors are constant. The null hypothesis was rejected. Thus, it was concluded that the regression coefficient for this variable has been found statistically significant in estimating the relationship between CRM capacity and entrepreneurial performance. The higher capability in CRM the more an entrepreneur became successful. CRM is aimed at helping business enterprises to acquire new customers, retain existing ones, establish and maximize (or at worst maintain) value from the relationship between the business enterprise and the customers (Berndt *et al.*, 2009)^[6].

Internal process management capability and entrepreneurial performance: The Null hypothesis: Internal Process management capability has no statistically significant association with entrepreneurial performance in small scale manufacturing sector.

The order log estimate (coefficient) of the Process management capability of the firms is 1.401. The Wald test statistic for this predictor is 71.609 with an associated P-value of 0.000, which is less than the critical alpha value for this thesis (0.05) when other predictors are constant. The null hypothesis was rejected. Thus, it was concluded that the regression coefficient for this variable has been found statistically significant in estimating the relationship between process capability and entrepreneurial performance.

Ownership (single vs. collective) of firms and entrepreneurial performance: The Null hypothesis: There

is no statistically significant performance difference between single ownership and collective ownership in small scale manufacturing sector.

Nature of business ownership was categorized as 'collective owner and single owner'. Group owner was considered as a reference variable and the coefficient was estimated to single owner variable. The ordered logit for business of single owner category of being in a higher entrepreneurial performance is 0.788 more than business of collective owner category when other IVs are constant. This can be interpreted using odd ratio (OR). The odd ratio is the exponent of the estimated coefficient (.788) with collective ownership as a base: $\exp(.788) = 2.2$. This Means businesses of single ownership is 2.2 times more likely be in the high level performance than business of collective owners. The odd ratio of business of collective owners with single ownership as a base: $\exp(-0.788) = 0.455$. This means that business of collective owners is 0.455 times less likely be in the high level performance than business of single owner. The Wald (χ^2) test statistic value (8.653) with associated P-value of 0.03 which are less than the critical alpha level (0.05) tells significance level. This statistical information became strong evidence to reject the null hypothesis and conclude that the regression coefficient for business of single owner is found statistically significant in estimating the difference in performance between these business categories. Many have been said about the outcome of working in group and working individually. Currently, a growing experience shows that many new small firms are founded by group. However, majority of them are not as effective as firms of individual owners. Theoretically, group composition has been shown to be linked to group performance because of synergy effect (Pfeffer 1983; Williams and O'Reilly 1998)^[45, 56]. Group work can be worse if individual with different goal and interest come together. This creates conflict that jeopardizes cohesiveness.

Absorptive capability of firms and entrepreneurial performance: The Null hypothesis: Absorptive capacity of a firm is not statistically significant predictor of entrepreneurial performance in small scale manufacturing sector.

Absorptive capacity of the firm was coded for analysis as 'high=0, and Low=1. Low absorptive capacity was considered as a reference variable and the coefficient was estimated to the high absorptive capacity. The ordered logit for firms of high absorptive capacity category of being in a higher entrepreneurial performance is 1.026 more than firms of low absorptive capacity. The odd ratio (OR) of high absorptive capacity business: $\exp(1.026) = 2.79$. This means that firms of high absorptive capacity is 2.79 more likely to achieve high level success than low absorptive capacity firms. The Wald (χ^2) test statistic for the predictor is 14.959 with associated P-value of 0.000 which are less than the conventional level (0.05). This statistical information became strong evidence to reject the null hypothesis and conclude that the regression coefficient for high absorptive capacity is found statistically significant in estimating higher level entrepreneurial performance. Absorptive capacity describes the ability of a firm to identify, evaluate, and exploit technical and up-to-date information (Zahra & George 2002)^[59]. One has confident to predict better performance of firms with better absorptive capacity.

Location of firms and entrepreneurial performance: The Null hypothesis: Location of a firm is not statistically significant predictor of entrepreneurial performance in small scale manufacturing sector.

Locations of the firm was coded for analysis as 'appropriate =0, and Not appropriate=1. The later was considered as a reference variable and the coefficient was estimated to the former. The estimated coefficient is 0.892. The OR is 2.44. The ordered logit for firms of having appropriate location is 0.892 more than firms of having inappropriate location to be successful, or the former is 2.44 times more likely to be successful than the later. The Wald (χ^2) test statistic for the predictor is 23.276 with associated P-value of 0.000 which are less than the conventional level (0.05). This statistical information became strong evidence to reject the null hypothesis and conclude that the regression coefficient for high absorptive capacity is found statistically significant in estimating higher level entrepreneurial performance.

Chapter Five: Conclusion and Recommendations

The finding about the causal relationship between firm level factors and the level of entrepreneurial performance was clearly revealed.

- Firm's age and entrepreneurial performance: This study found that firm's age has no statistically significant relationship with performance.
- Location and entrepreneurial performance: The study found that firm's location has statistically significant contribution for entrepreneurial performance. Thus, it is recommended for those low-performer entrepreneurs that they should consider their firm performance is associated with proper location.
- Absorptive capacity and entrepreneurial performance: The study found that there is statistically significant association between absorptive capacity and entrepreneurial performance. Those who are relatively better in absorptive capability are in better positions in performance. Firms with low absorptive capacity were lag behind other firms and never catch up with competitors. These firms should improve their weakness in this dimension.
- Internal process management and entrepreneurial performance: The study found that capability of small manufacturing firms in internal process management is a significant predictor of performance. In order to cut cost of inventory and produce quality product firms should work on the improvement of internal process.
- Customer relationship management and entrepreneurial performance: The finding of the study shows that Customer relationship management is statistically significant predictor of entrepreneurial performance. To emphasize the importance CRM, Kotler and Keller (2006)^[30] argue that on the average, satisfied customers will tell three people of their good experience, while dissatisfied customers will tell eleven people their dissonance. Firms should work more on development of customer relationship management.
- Nature of firm's ownership and entrepreneurial performance: the study found that single ownership firms perform better than group owner firms. Many have been said about the outcome of working in group and working individually. In principle group work is better than individual. However, group work can be worse if individual with different goal and interest

come together. This creates conflict that jeopardizes cohesiveness. In order to make use of the benefits of business set-up in group, members should develop a group norm that leads group cohesiveness to firm's objective, not personal objective.

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