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The Growth Correlates of Urban Informal Micro Entrepreneurship in Sri Lanka

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Abstract
The micro enterprise approach has been seen as one of the most acomplishable pathways to achive prospected economic growth through innovation and creativity which in turn bring market development, productivity and social cohesion in the global south. Enterprise growth is the nutshell of the suggested expansion. Informal microenterprises are ubiquitous in urban Sri Lanka serving as the major income, employment source, but record no or least graduation. This paper aims at examining the determinants of micro enterprise growth in order to support policies for encouraging growth oriented micro entrepreneurship. Data collection was done from multi stage cluster sampled 300 micro entrepreneurs under non experimental and survey research design using questionnaire and interview instruments. Dichotomous dependent variable on growth was regressed on prospected demographic, socioeconomic, firm and institutional independents by utilizing binary logistic model. It was found that gender, favorable change in education, administrative issues, availability of credit, tradition or parents' occupation, previous employment, infrastructure availability and two psychological measures: entrepreneurial self-efficacy, locus of control play a crucial role for positive enterprise growth while parent's occupation or previous employment have no predicting power over the growth performance. Policy implications drawn from the findings of this study recommend a multipronged approach for improving micro entrepreneurship in the sector.
Keywords: micro entrepreneurship, growth determinants, logistic models, urban informal sector, Sri Lanka

1. Introduction

The crucial role provided by microenterprises in achieving the economy's inclusive growth by promoting market development, productivity and social cohesion in developing as well as developed world is well acknowledged (Green, Kirkpatrick, & Murinde, 2006). It includes a wide range of development objectives such as creation of income, wealth and employment (Daniels, 1999); income distribution and reduction of poverty (Liedholm & Mead, 1999); production and supply of goods and services that meet the basic needs of the poor (Cook & Nixson, 2005); and creation of seed beds of industrialization (Grosh & Somolekae, 1996; World Bank, 2004). Moreover, the growth and competitiveness of enterprises of the informal sector are positively related to the growth of the formal sector through production linkages (Pieters et al., 2010). Despite some of the contradicted challenges, microenterprises' contribution of its potential role in the process of development has been significant in many countries (Levy & Bradbury, 1995; Mullei, 2002; WB, 2013). Therefore, the microenterprise approach has been accepted as a policy based approach to the informal sector which takes micro entrepreneurs as the core of the informal sector that need help to become growing, self-sustaining businesses in order to contribute significantly to foster economic growth, generation of productive employment and poverty reduction (Gunatilaka, 2008; Mead & Liedholm, 1998; Pisani & Patrick, 2002; WB, 2013).

The informal sector is a major source of employment which accounts for 50 to 60 per cent of the labor force and about 30 to 40 percent of gross national product in many Asian countries (ILO, 2012; ILO & WTO, 2009; UN-HABITAT, 2006). 62 percent of Sri Lanka's workforce is in the informal economic sector out of which 65 percent accounts for the micro and small enterprises sub sector, including self-employees (CBSL, 2013; Gunathilake, 2008). Further, it has been reported that more than 40 percent of the urban population are employed in the informal sector while 45 percent of them are in microenterprises (Arunatilake & Jayawardena, 2005; Ebert, 1999; Gunathilake, 2008; Hettige, 1989; Nanayakara, 2006; Relocation of Underserved Settlements Project-RUSP, 2009). A large part of the increase in employment in the last couple of decades is due to self-employment and unpaid family workers (*i.e.* informal sector) amounting to 41 percent of the total employment in 2012 while the share of self-employment in the microenterprise sector remained high at around 30 percent throughout (CBSL, 2013; Kelegama & Thiruchelvam, 2001). Even though informal microenterprises are ubiquitous in the urban sector, serving as the major source of employment in Sri Lanka, a majority of them reported to have no growth or the growth projection of them is far from satisfactory (Arunatilake & Jayawardena, 2005; Ebert, 1999; Gunathilake, 2008; Hettige, 1989; Nanayakara, 2006). Therefore, this study was initiated to examine what factors impede microenterprises to move forward.

2. Literature Review

This section selectively reviewed the relevant theoretical and empirical studies on the factors affecting micro enterprise growth under several themes.

2.1 Demographic and Socioeconomic Factors

Demographic factors: Demographic characteristics of an individual are found to be significant in determining the entrepreneurial activity in most developing countries (WB, 2013). Age and gender are more widely used demographic variables in literature. Gender impact on the growth of small businesses is well documented and the common premise is that female micro entrepreneurs perform worse than male counterparts. In this respect, De Mel, McKenzie, & Woodruff, (2008) found that the rate of return on investment is lower for women-owned microenterprises in Sri Lanka. Similarly, Daniels and Mead (1998), Daniels (1999), Loscocco, Robinson, Hall, and Allen, (1991), Mead and Liedholm (1998) presume that female-owned enterprises perform worse than male-owned ones in terms of sales revenue, assets, profit margins and likelihood of survival. The literature suggests that female entrepreneurs and male entrepreneurs face different constraints in the operation of their businesses, which in turn result in the differential impact on business outcome. According to Chirwa (2008), Daniels and Ngwira (1993), Lee and Yang (2013), Liedholm and Mead (1999), Mayoux (1995), poor performance of female-operated enterprises is attributed to many factors: inaccessibility to credit from the formal financial system, lack of capital, poor technical and managerial know-how, poor access to markets and raw material procurement problems, unfavorable legal systems, competition from state enterprises, diversion of business capital to men, poor government policies and an inadequate institutional framework. Agreeing with these findings generally, Chirwa (2008) further claimed that female entrepreneurs are more successful in some sectors like textiles and leather products.

Given a stock of human capital, Levesque and Minniti (2006) introduce a theoretical model that focuses on an individual's risk aversion and time discounting over the lifetime where the propensity to become an entrepreneur decreases with age. They argue that the opportunity cost of time increases with age as every individual lives only a certain length of time. Following this, Bonte Falck, and Heblich (2009) and taking into consideration advantages of accumulated human capital in terms of tacit or explicit knowledge (Polyanyi, 1967 as in Davidsson & Honig, 2003) most of the studies claimed that age has a considerable impact on entrepreneurial intention and venture success (Mazzarol, Volery, Doss & Thein ,1999).

Level of education: Accumulated human capital in terms of knowledge, experience or relationships has been identified as an influential predictor in the entrepreneurial activity level. Following Polyanyi (1967), Davidsson and Honig (2003) posit that knowledge can be gained as either tacit or explicit. Tacit knowledge refers to "knowhow" while explicit knowledge refers to "know-what". The need of interacting both of these for effective decision making in the entrepreneurial process is obvious. However, individuals are different in acquiring and increasing their knowledge from formal and informal education, work experience, social and cultural relationships. Since formal education is only one form that provides useful skills to entrepreneurs by way of explicit knowledge, its impact on entrepreneurial activity can be largely varied (Davidsson & Honig, 2003). For instance, Thapa (2007) found a positive association between education and small business success. Blanchflower, Oswald and Stutzer, (2001) also support this finding. According to Boden and Nucci (2000) likelihood of failure is negatively associated with the owner/manager's education. They have found that businesses where the owners had four or more years of college/university education were less likely to fail. According to Sluis, Paag, & Vijverberg (2005) a marginal year of schooling in developing economies raises enterprise income by an average of 5.5 percent. Further, they pointed out that the size of this return varies according to the gender, residential sector (rural or urban) and the share of agriculture in the economy. Numerous studies have found non-linear effects of education on the success of entrepreneurship. Cooper & Dunkelberg (1986), Robinson & Sexton (1994) found a negative up to some level of education and positive thereafter showing an inverse U shape relationship. Many other studies confirm non-linear relationships between formal education and the level of entrepreneur activity especially in developed countries (Bellu, Davidsson & Goldfarb, 1990; Davidsson, 2006; Evans & Leighton, 1989; Gimeno, et al., 1997; Reynolds, 1997). Davidsson and Honig (2003) also presumed that formal education is significant in the entrepreneurial discovering stage but it has no prediction power over success in the exploitation process.

However in the context of developing countries formal education and its spillover effects have been identified as a factor that gives many advantages to micro businesses for their success in many aspects. An entrepreneur with low level of education may run a successful business in micro scale for many years provided that they get income to sustain the entrepreneur or with the spillover effect of educated children (Roy & Wheeler, 2006). Morrisson, Lecomte and Oudin (1994) report that those with the lowest levels of education are found predominantly in the smallest businesses and that the number of employees increases with the level of education of the owner.

Experience and training: According to Becker (1975) the other part of the human capital consists of experience, trainings, social and family relationships which raise tacit knowledge. Although empirical results have been mixed (Davidsson, 1989) there are studies showing formal or informal labor market experience, management experience, and previous entrepreneurial experience as significantly related to entrepreneurial activity, particularly when controlling for factors such as industry and gender (Cho & Honorati, 2013; Bates, 1995; Gimeno, et al., 1997; Roy & Wheeler, 2006; Robinson & Sexton, 1994). Professional training, previous experience or previous job from the related field is unarguably beneficial to an entrepreneur in order to identify opportunities, market strategies, market places, networks, resource and information sources and so on (Chiliya & Lombard, 2012; Davidsson & Honig, 2003; Roy & Wheeler, 2006; Toohey, 2009). Due to these advantages, an entrepreneur with previous work experience is in a better position than an entrepreneur with more limited experience even before starting the business. Therefore, prior employment is found as the source of most start-up ideas as described by Lumpkin and Marvel (2007). Supporting this finding Chiliya and Lombard (2012), Cant and Lightelm (2003), Wanigasekara and Surangi (2011) indicate that previous experience is another vital factor that drive the performance of firms. Further, it was found that the level of formal planning and thereby future vision among microenterprises considerably depends on education and training which in turn impacts firm growth. In contrast, previous experience and previous occupation can negatively impact the performance of small firms if the entrepreneurial decision is taken in a wrong manner with a misunderstanding of the market or the customer base, when the acquired ability and required ability is mismatched with firms' environment (Khan and Butt, 2002). If micro entrepreneurship arises as a natural progression of life, the relationship between previous occupation and firm performance will tend to be positive conditional on the objectives of the person. Otherwise, the expected impact is insignificant or tends to be negative especially in the context of developing countries (Cunningham & Maloney, 2001). Other than previous occupation and experience of being hard working or having long business hours has been identified as a significant factor by many researchers (Chu, Kara, Gok, & Zhu, 2011; Williams, 2004).

2.2 Resource access and enterprise related factors

Access to credit: Financial access and constraints are widely examined and often evaluated on the basis of wealth or capital assets and capital market access. In this respect, lack of access to credit has been identified as one of the major constraints hindering the development of micro businesses and therefore, the supply of entrepreneurial activities in developing as well as developed countries (Aboudha, 1996; Bosma, Praag, & Wit, 2000; De Mel et al, 2008; Kuzilwa & Mushi, 1997; Lee & Yang, 2013).

In a study in Tanzania, Kuzilwa (2005) found that credit has been instrumental to the success of enterprises at different stages of the life cycle of these businesses. It is sometimes said that the startups of enterprises have been funded by own sources but further expansion of businesses depends on the availability of credit. It was observed that inadequate credit either hindered or postponed the entrepreneurial activities while increased access to credit significantly contributed to the growth of enterprises as well as employment (De Mel et al, 2008; 2010). Levy (1991) found out that most microenterprises do not have access to loan capital, so they are constrained to expand via retained earnings while Mumbengegwi (1994) and Stein, Goland, & Schiff (2010) found that lack of credit as the major obstacle and first-ranked constraint that impede entrepreneurial activities. Many other researches support these findings (Baliamoune-Lutz, Brixiová, & Ndikumana, 2011; Morrisson et al., 1994). Even though the impact of credit is unarguably positive for micro business' success this should not be overestimated. According to De Mel et al. (2010), WB (2013), credit access itself is not enough to foster micro entrepreneurship in many developing countries. Moreover, it is worthy to notice that many researchers have found a negative relationship between enterprise profit and credit expansion for female micro entrepreneurs (De Mel et al, 2010; Karlan & Zinman, 2009).

Infrastructure facilities: "Even potentially skilled entrepreneurs would have difficulty succeeding without access to basic infrastructure and financial resources. In their absence, managerial capacity alone may not be enough to realize productivity gains and employment expansion. It was stated that the investment climate matters for business performance as well" (WB, 2013, p.114). This clearly indicates that lack of suitable business premises and access to basic infrastructure are other crucial issues of failure especially with regard to micro entrepreneurs in developing economies (Guliyani & Taluhdar, 2010). This factor could be related to property rights in some countries and related to government rules regulations and delays in some other countries like in Africa. Even though some countries have setup alternatives, it cannot be seen in fulfilling graduation purpose on the other hand as well. For instance, Grosh and Somolekae, (1996) point out that although Botswana enterprises development unit made industrial estates and factory shells available for small firms to operate for three to five years expecting they would move on their own after a certain growth, very few firms were able to move as expected. According to Shaw (2004) adequate transport, access to nearby markets and other forms of vital infrastructure facilities may prevent micro entrepreneurs from facing highly elastic demand curves. He further points out the importance of these factors for successful microenterprise operation and expansion.

Specifically, it has been elaborated that infrastructure facilities and other related basic facilities are strongly influential for micro entrepreneurs in underserved settlements. It was found that better microenterprise performance is associated with certain "business-related" factors, such as sales area, time in, and sector of operation while "living conditions"- residential tenure and infrastructure access also strongly influence both creation and success of microenterprises. Interventions that improve infrastructure and reduce tenure insecurity and rent-induced pressures to move may be crucial for incubating microenterprises and reinforcing their contribution to poverty alleviation (Guliyani & Taluhdar, 2010). Other than very basic facilities such as water, transport or electricity development of telecommunication and related E- commerce internet and also mobile network development have been identified as more effective factors for small business owners in most of the developing countries (Rasheed, 2009; Donner, 2006).

2.3 Entrepreneurial skills

According to the World Bank (2013), entrepreneurship combines innovative capacity and managerial capacity to put new ideas into effect in order to increase a firm's efficiency within the limits of known technology. Specific psychological traits that are associated with entrepreneurship are personal need for achievement, a belief in the effect of personal effort on outcomes, self-confidence, and a positive attitude towards risk. Entrepreneurship is positively linked to economic performance (Audretsch, Keilbach, & Lehmann, 2006) creating economic development (Nafziger, 1977) and a high level of entrepreneurship capital which is a subcomponent of social capital.

Vast empirical literature suggests that the differences in the expansion, growth and survival of microenterprises is largely due to heterogeneity in the ability, ambition, attitudes, effectiveness and motivation level of the entrepreneurs (Blanchflower & Oswald, 1998; Chiliya & Lombard, 2012; Cho & Honorati, 2013; Cunningham & Maloney, 2001; Daniels & Mead, 1998; De Mel et al., 2008; 2010; Dunn & Holtz-Eakin, 1996; Jamak et al., 2011; Karlan & Zinman, 2009; Lee & Yang, 2013; Liedholm & Mead, 1999 Roy & Wheeler, 2006; WB, 2013). Teng, Bhatia and Anwar (2011) specifically posit that the importance of leadership qualities for the success of small businesses. As Chu et al. (2011) claimed reputation for honesty and having good management skills are necessary conditions for business success.

Entrepreneurial Self Efficacy (ESE) and Locus of Control (LOC) are increasingly concerned in measuring entrepreneurship. Further, there is an increasing emphasis on the role of self-efficacy in the study of entrepreneurship, including areas such as entrepreneurial career preferences, intentionality, and performance in the entrepreneurial process (Boyd and Vozikis, 1994; Chandler & Jansen, 1992; Gartner, 1989). Self-efficacy is a motivational construct that can be used to show an individual's choice of activities, goal levels, persistence and performance in a range of contexts (Bandura, 1977) Chen, Greene and Crick (1998) defined entrepreneurial self-efficacy as an individual's confidence in his/her ability to successfully perform entrepreneurial roles and tasks and found it is positively related to entrepreneurial intentions.

Locus of control has been defined as an individual's perceived ability to influence events in his or her own life. There are two variations of LOC: internal and external. Internal persons believe that fate and fortune is within their own personal control while in contrast, external persons believe that their lives are controlled by external forces such as destiny, luck, or powerful others (Begley & Boyd, 1987). According to Evans and Leghton (1989) a man who believes his performance depends largely on his own actions - has an internal locus of control and has grater propensity to entrepreneurship. According to Harper (2003) entrepreneurship is a function of personal agency belief which depends on the individual's locus of control and self-efficacy.

According to Boyd and Vozikis (1994), Krueger and Brazeal (1994) there can be a wide variety of contextual as well as individual factors that influence the entrepreneurial choice. The role of entrepreneurial self-efficacy has been emphasized as a key antecedent of venture performance and uplifting entrepreneurship. Jain & Ali (2013) explicitly proposed that entrepreneurial self-efficacy affects entrepreneurial career choice and development. Further, they found that ESE has a significant positive impact on a venture's performance.

3. Research Methods

3.1 Research Design, Sampling and Data Collection and Validation

A non-experimental quantitative research was designed as the purpose was to use the variables as it appears in practice. As survey research method allows inclusion of a range of questions related to multiple firm aspects, it was the main data collection technique occupied. It was an essential requirement to gather information through non-verbal cues as well as place observations in order to avoid biases stemming from social desirability, conformity or other kinds of disinterest. Hence semi structured interview method was seen as the best suited data collection method. Within this methodological setting, data were drawn from a multi stage cluster sampled 300 micro enterprises in urban underserved settlements (USS). The original data collections for this study consisted ratio, scale and nominal. They were meaningfully recorded so that the requirements of the statistical models are met. Data cleansing and validation were done using the facilities provided by SPSS 16.0.

3.2 *Variables* .

Dependent variable for the binary logit model was set to represent the growth status of the firm in terms of changes in the number of workers. Independent variables were taken considering entrepreneurship related internal and external factors. Other than demographic variables, the set of explanatory variables used include education, the perception by respondents of administrative issues, of availability of credit, tradition or parents' occupation, previous employment, infrastructure availability and two psychological measures: ESE, LOC. In the setting, except psychological aspects, all the other variables were considered as external. Logit model contains design variables: dichotomous main effect covariates; polychotomous main effect covariates and linear continuous variables. All design variables were dummy coded: dichotomous covariates coded zero to one and polychotomous covariates with zero to n-1 dummies using reference cell coding method. Moreover, reference groups were coded and arranged according to the principle of parsimony in modeling.

3.3 Specification of the Empirical Model

The empirical approach stemming from the research objective is discrete choice based on random utility theory. Since the outcome variable is dichotomous, binary logistic model which specified below is estimated for the odds of being a growing firm. In this framework, two categories are allowed in a choice set to take the values (0, 1) for "no growth" and "with growth" respectively. Thus, dichotomous dependent variable takes value 1 if a firm has increased the number of workers or 0 for otherwise. Then the basic model takes the form of,

$$y_i = \sum_{j=0}^{k} X_{ij}\beta_j + \varepsilon_i \qquad (1)$$

Where y denotes binary dependent variable, β is vector of parameters and the error term Ɛ which has zero mean and logistic distribution. If P_i is the probability that a firm report a growth and it is Bernoulli variable and its distribution depends on the vector of predictors *X*,

$$P_i(X) = \frac{e^{\alpha+\beta X}}{1+e^{\alpha+\beta X}} \qquad (2)$$

The logistic function then is,

$$ln\left(\frac{P_i}{1-P_i}\right) = \alpha + \sum \beta_j X_{ij} \qquad (3)$$

where $ln\left(\frac{P_i}{1-P_i}\right)$ is the natural log of the odds being considered as a grown firm whereas β_j is the measure of change in the logarithm of the odds ratio of the chance of the non-grown to grown firm.

With the logit transformation, equation 3 is nonlinear: P_i is a nonlinear function of all β coefficients. Thus, given that the use of OLS is not statistically appropriate, the maximum likelihood method is the most suited which yield consistent and asymptotically efficient coefficient estimates. Maximum likelihood estimates are obtained by maximizing the probabilistic function with respect to the parameters.

Taking the logarithm of the ratio of probabilities to get the log odds ratio, the full model can be specified from equation 4.7 as follows.

$$ln\left(\frac{P_i}{1-P_i}\right) = \beta_0 + \beta_1 age + \beta_2 gender + \beta_3 martial + \beta_4 dependents + \beta_5 education + \beta_6 admin + \beta_7 Tradition + \beta_8 emp\ Status + \beta_9 Credit\ avail + \beta_{10} pev\ emp + \beta_{11} ses + \beta_{12} loc + \varepsilon$$

4. Results and Discussion

4.1 *Profile of Microenterprises*

The repartition of microenterprises by activity in USS sector is given in Table 5.4. There is a very wide range of microenterprise activities in urban underserved settlements, although not evenly spread across the different wards. It can be seen from the sample survey that commerce is the most popular revenue source or microenterprise activity in the sector of which grocery owners shared almost one third of micro entrepreneurs. Share of food processing was recorded as the second major economic activity whilst communications, stationary shops and unprocessed food sellers are significant proportions as well. Altogether commerce activities constitute more than 75 percent of microenterprises in the urban poverty sector in the country. However, other sectors show much less significant numbers or quantity but constitute an important part of the informal sector, most notably, contributory to the whole economy. Especially, small industry productions like candles, shoes and food preparations like string hoppers; and kind of innovative industrial productions which involve recycling procedures.

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Table 1: Main microenterprise activities

Main category		Enterprise activity	% of microenterprises
Commerce	76.3		
		Groceries	29.7
		Food Processing	14.5
		Communications/stationeries	12.2
		Vegetable/fruits	11.7
		Established traders	6.3
		Mobile traders	1.9
Services	18.6		
		Dress making	6.8
		Tinker/Welding	6.1
		Saloon/Beauty culture	5.7
Manufactures	5.1		
		Innovative products	3.4
		Small industries	1.7

Source: Author's calculations based on sample survey

Traders represent the greatest share of micro entrepreneurs as pointed out from the above data. This might have been attributed to low entry barriers and least skill requirement in relation to the activity. A certain kind of skills are needed for the other activities, even a simple amount of capital and some other production factors like land. Sometimes, some of those activities such as hardware, building materials, necessitate relatively high capital investment which could work as an entry barrier as well. However, commerce which involves an intermediation merely requires products that can be sold. Therefore, it does not require heavy physical or mental effort other than convincing people to buy the products.

Table 2: % of microenterprises by the number of workers employed[a]

Number of workers	At the beginning	At survey year	
	Total workers	Family workers	Rentered workers
0	56.1	57.8	73.0
1	26.4	33.8	10.1
2	10.1	4.7	9.5
3	5.1	2.7	4.7
4	1.0	0.3	2.0
5	0.3	0.3	0.3

Source: Author's calculations based on sample survey
[a] excluding owner

With regard to the firm size, Table 5.5 shows that more than half of the micro entrepreneurs are own account workers employing no workers other than the owner. Majority of them do survival businesses because of many reasons. 26 percent of them have only one worker while the percentage of firms employing more than 4 workers is negligible. It was obvious that the majority of employees in one worker firms are family members. Only a small proportion, 10 percent, of microenterprises has paid workers although the mean age of a microenterprise was 9.5. This clearly shows how they have run the businesses. Despite enthusiasm on the part of many micro entrepreneurs, a large portion of microenterprises seems to get low productivity and very few microenterprises demonstrated certain improvement in terms of objectively measured sales (few micro entrepreneurs felt that

sales were increasing). Very few have added employees. It is obvious that majority of them has no expansion or development of the activities to any level but just survived. Therefore, the concept of firm graduation would not be applicable to urban USS in the country at the existing scenario as shown by these uncontrolled mixed results. Reasons behind this behavior might be attributed mainly to their objectives of starting the activity and other functioning obstacles as well. However, it should be noted that one fourth of the microenterprises are newly established and below two years in operation while another 25 percent is below 5 years in age as shown in Table 5.6. Evaluation of vision and the improving capacity of these young entrepreneurs will mirror the future of their enterprises.

4.2 Robustness of the Model

Robustness of the estimated models was checked using standard model checking criteria for each stage. Being satisfied with the sample adequacy, overall statistical significance was supported by the likelihood ratio test. Pseudo R^2 reported reasonably similar values with relatively decent-sized effects. The benchmark 25 percent improvement over the rate of accuracy achievable by chance alone compared with model predicted accuracy and found that the criterion for classification accuracy is satisfied in the current models. The current models do not produce wildly improbable results, large odds ratios or standard deviations. Therefore, the estimates appear to be accurate and valid confirming that the models are sufficiently robust to interpret results.

4.3 Investigation of Growth Covariates

The coefficients presented in Table 3 describe the effect of the corresponding variable on the odds of the level in interested relative to the base level. In this study, the base is "no growth" firms. A coefficient above unity implies that the corresponding explanatory variable increases the odds of belonging to the level in interested relative to the group "no firm growth." Conversely, a coefficient below unity implies that the variable decreases the odds.

Table 3: Determinants of micro enterprise growth: binary logit estimates

Variable	Coefficient	OR	Wald
Constant	-1.931		3.491
	(1.033)		
Gender(M)	0.678**	1.969	2.058
	(0.463)		
Marital status (single)	-0.88	0.415	2.048
	(0.615)		
Dependents	1.369*	7.689	16.970
	(0.390)		
Secondary Above	0.695*	2.004	2.050
	(0.485)		
Some secondary	1.143**	3.136	7.459
	(0.418)		
Tradition/parent's occup	-0.4	0.961	0.120
	(0.369)		
Emp status (unemployed)	0.807*	2.242	2.442
	(0.517)		
Prev job (salaried)	-0.119	0.887	0.046
	(0.557)		
Prob_admins	-0.833*	0.900	2.592
	(0.517)		
Credit availability	1.635**	5.129	4.352
	(0.784)		
LOC	0.485**	1.625	6.618
	(0.189)		
ESE	0.416**	1.371	2.799
	(0.189)		

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$, (SE), [a] Odds Ratio

Relative to having no growth, grown firms are more likely to be affected by some demographic factors like marital status having more dependents etc. the odds of being a grown firm increased considerably the presence of dependents while married people are also more likely to be in this group. This variable has positive and significant effect of predicting odds of firm growth as well. Male owners show a strong prediction power in relation to firm growth compared to their female counterparts. According to the results recorded, the prominent factor that impacts positively on the odds of being an entrepreneur for both groups is having dependent children.
As pointed out in Table 3, education is positively significant for firm growth with 5 percent level of significance, χ^2 (1) = 2.1, p<.01, χ^2 (1) = 7.4, p<.05. Except some demographic factors education is the most prominent which increasingly effects on enterprise growth. A year change in education will increase odds for the sector by more than 3.5 times. Having secondary education also shows a similar impact but little less than that of higher education. Unit change in secondary education factor leads to increased odds of been nascent by almost three times. This further confirms the reference group is much more likely to be in this group compared to those who have secondary education. Hence, preference of having growth is higher regardless of the level of education. Micro entrepreneurs who are more educated are less likely to have growing firms showing an odds increase only by two compared to low educated firm owners. However, the impact of secondary education is stronger for this group. A year increase in this variable shows an increase of odds of being a grown enterprise by about three times compared to lower education. This growth preference of more educated people could be generalized by their transitory occupational options. Most of the people are in the informal sector attached to microenterprises only until they are absorbed by the formal sector. Secondary level of education has much more preference to young enterprises because the dropouts of O/L and A/L have fewer opportunities in the formal sector unless they are qualified with any other professional experience. They tend to remain in the micro enterprise sector. Overall, this suggests that education is a triggering matter.
Enterprise growth is significantly negatively affected by a perception of administrative complexity $\chi 2$ (1) = 2.6, p<.05. In other words, for those who have such obstacles like tax related matters, permissions, licenses and rules and regulations of local government bodies are less likely to have firm growth. This implies the impact of administrative issues strongly affect to reduce the entrepreneurship supply in the sector.
Financial factors for the current model consider the availability of formal and semiformal financial supports. Regarding how the lack of financial support influences, the important result is that it is one of the more prominent factors that determine firm growth. This variable is considerably significant, $\chi 2$ (1) = 4.4, p<.05 respectively for both. Strong significance of this variable across the groups proved the fact that availability of financial support plays a crucial role in an individual's attitude towards entrepreneurship. Increase in unit of the variable predicts an increase of odds by more than five times. This factor predicts the variability of enterprise growth rate and seemed to be the most encouraging though it takes third place in terms of Wald value. However, this variable is the most crucial one when it comes to odds ratio which gives the policy direction. More importantly, growing entrepreneurs seemed to be more constrained.
Infrastructure is central to many businesses throughout the entrepreneurial process. This variable was constructed incorporating the nature of the business premise, ownership, available facilities of basic infrastructure such as water, electricity, road access etc. Availability of necessary infrastructure seems to encourage an active involvement in entrepreneurial activity more significantly. Regression coefficient is positively significant at five percent level with odds ratio of four.
Previous occupation of the respondent was not significant in predicting firm growth as usual in developing countries. This variable was included to examine whether micro entrepreneurship in USS follow natural life progression. As Cunningham and Melony (2001) claimed "life cycle" behavior where workers enter into salaried work; accumulate knowledge, capital, and contacts; and then quit to open their own businesses may represent a natural life progression. If so, salaried workers must be more likely to have firm growth. However, results of this study do not support any of these statuses and in contrast it has no prediction power over the growth.
Two psychological factors seem more important in predicting enterprise growth. ESE is positively significant, χ^2 (1) = 2.8, at one percent level of significance. Unit change in the value will lead to an increase in odds by more than twice showing the fact that lack of entrepreneurship is a very discouraging factor that hinders entrepreneurship in the sector. Business owners seemed more internally controlled as measured by the Rotter scale. Internal locus of control is significant $\chi 2$ (1) = 6.6, P<0.01 for the groups interested. Favorable change in this factor will lead to an increase in odds by more than one and half times for grown firms. Hence, perceived self-efficacy seems to hinder the microenterprise capacity in the sector while favorable attitude changes likely to expand the supply of entrepreneurs in the informal sector (De Mel et al., 2008; Sumanasena, 2005).

5. Conclusion and implications

By using binary logit model, this study investigated the determinants of enterprise growth in USS micro enterprise sector. Other than demographic variables, the set of explanatory variables used includes education, the perception by respondents of administrative issues, availability of credit, tradition or parents' occupation, previous employment, infrastructure availability and two psychological measures: ESE, LOC. From the reduced

form results it was found that parent's occupation or previous employment have no predicting power over the probability of micro entrepreneur groups while favorable change in all the other factors plays a crucial role in improving the growth performance in the urban informal sector.

Policy implications drawn from the findings recommend a multipronged approach to improve micro enterprises in USS. Firstly, it is suggested to strengthen the financial sector to meet micro entrepreneurs' needs, introducing or expanding retail lending techniques at lower transactions costs. Then it is an essential requirement in forming policies to develop skills and change attitudes complementary to enhancing credit facilities. To become a successful entrepreneur with a growth oriented firm it is essential to overcome issues related to knowledge, skills and attitudes. Changing the mindset beyond the survival level and having high determination to achieve the set goals are crucial in this respect. Secondly, for micro entrepreneurs to become better performers, they need to become aware of the central importance of marketing and entrepreneurial skills. Promotion-based training can be used to achieve this objective. Efforts have to be taken to minimize disturbing factors like administrative issues (licenses, approvals, infrastructure providence etc.) to lessen hurdles to entrepreneurial activity and thereby economic growth.

This work can be extended taking into account suburbs and non-USS micro entrepreneurs, panel data analysis that enables to monitor and ensure the factors behind the success or failures, and can be complemented by in-depth qualitative studies that can capture information about entrepreneur aspirations, survival and expansion rates of businesses.

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