

Determinants of microenterprise performance in Nepal

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Abstract Although the literature on entrepreneurship studies has contributed significantly in improving our insights regarding the factors determining the enterprise performance in a broader sense, there has been a little research concerning the factors determining the microenterprise performance. Using primary data enumerated from 501 micro-entrepreneurs randomly sampled across different strata—gender, caste/ethnicity, enterprise category and ecological belts in Nepal in 2013 for the years 2068 BS (April 2011–March 2012) and 2069 BS (April 2012–March 2013) and executing the multiple linear regression models, the study primarily focused on identifying the factors determining the microenterprise performance. The study revealed that the entrepreneur-related factors, particularly gender, managerial skills, need for achievement, need for autonomy, creative tendency, internal locus of control and managerial foresight; enterprise-related factors, particularly enterprise age, enterprise size and initial financial constraint; and environment-related factor, particularly social network, were the key factors determining the performance of microenterprises in Nepal.

Keywords Development · Entrepreneur · Microenterprise · Performance · Poverty

JEL Classifications O2 · L26

1 Introduction

Microenterprise is a relatively novel field of study. Like large-scale enterprise, medium-scale enterprise and small-scale enterprise, microenterprise does not have much long recognition in the academia. The concept of microenterprise in the academia and practice became popular after the success of the microcredit programs of Grameen Bank to support the rural poor to run their family-based enterprises in Bangladesh in the late 1970s. It is believed that the idea of access to small loans could help poor families build businesses, increase their income and escape poverty triggered the model of microenterprise development all around the world since 1980s and thereafter flourished into a global movement to combat poverty.

Microenterprise is quite often categorized under small-scale businesses. However, it has some peculiar features that are different from other businesses. It has varied definitions across the countries and organizations. For instance, the Commission of the European Communities (2003) defined a microenterprise as “an enterprise which employs fewer than 10 persons and whose annual turnover and/or annual balance sheet

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total does not exceed EUR 2 million.” In the same way, World Bank (2005) defined microenterprise as an enterprise that has up to 10 employees, total assets of up to \$10,000 and total annual sales of up to \$100,000 (cited in Ayyagari et al. 2005). U.S. Small Business Administration (2010:22) defined microenterprise as an enterprise that has “a sole proprietorship, partnership, limited liability corporation or corporation that has fewer than 5 employees, including the owner, and generally lacks access to conventional loans, equity, or other banking services.” In the context of Nepal, microenterprise has been defined as the enterprise that has the fixed investment of maximum NRs. 200,000 except the house or land, involves the entrepreneur himself/herself in management, employs up to nine workers including the entrepreneur himself/herself, has less than NRs. 2,000,000 annual financial transactions, uses less than ten kilowatt power/energy and does not necessitate a license or permission to operate (Nepal’s Industrial Policy 2010).

Microenterprise development as an antipoverty strategy has been adopted in Nepal since 1998. The main goal of microenterprise development was to increase income through self-employment and consequently to reduce poverty in the country. Until now, the microenterprise development programme has been implemented in 36 districts, creating over fifty thousand micro-entrepreneurs across the country (MEDEP).

Microenterprise development strategies, apart from some success stories (Ajibefun and Daramola 2003; IDB 2003; Thapa 2007), have also suffered from criticisms. Scholars have also noted that not all MEs are as successful as purported to be; do not have uniform positive impacts; some are undercapitalized and inefficient, and so on (Ehlers and Main 1998; Mueller 2006; Pandey 2007). In the context of Nepal, there are limited studies in the field of microenterprise. Most of the available studies are also focusing on the impacts of microenterprises. Some of the studies have observed positive impacts of microenterprises in improving the livelihoods of the people (Binayee et al. 2004; Pandey 2006; Thapa 2007). However, some other studies reported that some microenterprises, such as bio briquettes enterprises, have not created much employment opportunities; some are not able to repay loans (Khanal 2007), and some other microenterprises such as beekeeping, due to the lack of enough knowledge and skills, are unable to achieve the

optimum performance (Pandey 2007). The difference in the performance among the microenterprises triggers scholars and policymakers to think why some microenterprises are more successful than others are, or, in other words, why some microenterprises have performed better than others. Therefore, this paper aims to explore the level of performance and identify the factors determining the microenterprise performance in Nepal.

2 Literature

The field of entrepreneurship study is very wide-ranging. Scholars have adopted different theories and approaches such as resource-based view of the firm, traits theory, role theory, network theory, population ecology theory, behavioral theory of the entrepreneurs, and so on, to explain the characteristics, nature and determinants of enterprise performance. A brief review of the theories and previous findings related to the factors determining the microenterprise performance is presented below. The factors are categorized as entrepreneur-, enterprise- and environment-related factors.

2.1 Entrepreneur-related factors

Entrepreneur-related factors are some of the key determinants of firm performance. The essential thesis is that successful entrepreneurs may have common personal background characteristics with regard to their gender, age, education, previous experiences, managerial skills, motivation and entrepreneurial traits and managerial foresight determining the enterprise performance. According to the resource-based view of the firm (Barney 1991), valuable, rare, imperfectly imitable and non-substitutable resource combinations serve as a source of competitive advantage for firms. From the perspective of the behavioral theory of the entrepreneur, the ability of an entrepreneur or manager to search and gather information, identify opportunities, deal with risks, establish relationships and networks, make decisions under uncertainty and ambiguity, lead the organization and learn from experiences is the vital behavior that has a significant influence on the enterprise or business performance (Veciana 2007:53). Similarly, trait theory assumes that “successful entrepreneurs have a

psychological profile different from the less successful ones” (Veciana 2007:42).

Studies have reported significant effects of age (Box et al. 1994; Stam et al. 2008), education and experiences (Praag et al. 2005; Segal et al. 2010), gender (Liedholm 2002, Kim and Zhan 2011), managerial skills (Industry Canada 2003; Cooper et al. 1994) and managerial foresight (Amsteus 2011a, b) on enterprise performance. Moreover, need for autonomy, need for achievement, internal locus of control, risk-taking propensity and creative tendency are some of the key entrepreneurial traits (Caird and Johnson 1988; Veciana 1989, cited in Veciana 2007) that tend to influence enterprise performance.

2.2 Enterprise-related factors

Enterprise-related factors are widely considered as the direct determinants of enterprise performance. Whittington (1980) noted the claim of economic theories that increasing size of enterprises has an advantage on the economics of scale, thus obtaining a greater profitability. Penrose (1959) argued that the larger firms tend to have diverse capabilities and abilities to generate superior performance relative to smaller firms (cited in Majumdar 1997). Studies have reported significant effects of firm size (Hall and Weiss 1967, cited in Ramasamy et al. 2005; Gebreyesus 2009) on firm performance. Moreover, age can help firms become more efficient (Mengistae 1998), as over the period, firms observe and gain experiences and learn from the observations and their experiences. Furthermore, Praag et al. (2005) argued, “Financial capital constraints might prevent entrepreneurs from creating buffers against random shocks, thereby affecting the timing of investments negatively.” Empirical studies have reported a significant influence of the amount of initial financial capital on firm performance (Cooper et al. 1994). Moreover, access to finance also affects the capability of the self-employed people (Evans and Jovanovic 1989, cited in Burke et al. 2002).

2.3 Environment-related factors

Literatures suggested that environment-related factors such as family environment, social network and task environment tend to influence the enterprise performance. Understanding the family environment, particularly in the context of micro-entrepreneurship, as

microenterprises are family-based enterprises, is very essential. According to the role theory of entrepreneurship, the entrepreneurship culture plays a vital role in the creation and success of new entrepreneurs or enterprises (Veciana 2007). The family that lives within a business environment provides an opportunity for family members to learn the knowledge and skills needed to run an enterprise. Empirical studies have reported that the businesses owned by the entrepreneurs who involve in the family business before starting their own (Fairlie 2009) or who continue parental profession (Lentz and Leband, cited in Parker 2004) are likely to be more successful.

Similarly, entrepreneurship is something that, usually, begins with creating relationships with others. According to network theory, “The entrepreneurial function exists and develops in a network of social relations” (Veciana 2007: 46). The network success hypothesis in the business states, “Those entrepreneurs who can refer to a broad and diverse social network and who receive many supports from their network are more successful” (Bruderl and Preisendorfer 1998:213). Likewise, population ecology theory which is also often known as organizational ecology theory assumes that “the environment determines the birth, growth, and death of new organizational forms or enterprises” (Veciana 2007: 49). The environment surrounding the firms tends to be dynamic, heterogeneous and hostile. These factors can encourage the innovativeness (Awang et al. 2009) of the entrepreneurs. The environment-related variables—dynamism, and heterogeneity, hostility—are expected to relate positively to innovation (Miller and Friesen 1982) and entrepreneurial activity (Miller 1983) and consequently affect firm performance.

2.4 Research hypothesis

From the above theoretical and conceptual framework, the following multivariate research hypotheses are proposed for the purpose of the study: the entrepreneur-related factors: being male, older, having higher educational attainment, more experience and greater managerial skills, greater need for achievement, greater need for autonomy, higher calculated risk-taking behavior, higher internal locus of control, greater creative tendency and managerial foresight; enterprise-related factors: higher age, bigger size, having lesser financial constraints; and environment-

related factors: having family business environment, wider networks, more dynamic, hostile and heterogeneous task environment have positive effects on the microenterprise performance: profit, sales and asset growth rates.

2.5 Models specification

To examine the effect of the entrepreneur-, enterprise- and environment-related factors on microenterprise performance, this study has run the following equations:

$$\begin{aligned} \text{PROFITGROWTH} = & \beta_0 + \sum (\beta_j \text{Entrepreneur}_j) \\ & + \sum (\beta_k \text{Enterprise}_k) \\ & + \sum (\beta_l \text{Environment}_l) + \varepsilon_i \end{aligned} \quad (1)$$

$$\begin{aligned} \text{SALESGROWTH} = & \beta_0 + \sum (\beta_j \text{Entrepreneur}_j) \\ & + \sum (\beta_k \text{Enterprise}_k) \\ & + \sum (\beta_l \text{Environment}_l) + \varepsilon_i \end{aligned} \quad (2)$$

$$\begin{aligned} \text{ASSETGROWTH} = & \beta_0 + \sum (\beta_j \text{Entrepreneur}_j) \\ & + \sum (\beta_k \text{Enterprise}_k) \\ & + \sum (\beta_l \text{Environment}_l) + \varepsilon_i \end{aligned} \quad (3)$$

where PROFITGROWTH refers to the growth rate of the profit of microenterprises between 2011–2012 and 2012–2013. SALESGROWTH refers to the growth rate of the sales of microenterprises between 2011–2012 and 2012–2013. ASSETGROWTH refers to the growth rate of asset of microenterprises between 2011–2012 and 2012–2013. Entrepreneur refers to the vector of entrepreneur-related factors that include socio-demographic, personality traits and motivation-related and entrepreneur-related factors: gender, age, educational attainment, experience, managerial skills, need for achievement, need for autonomy, internal locus of control, calculated risk-taking and creative tendency and managerial foresight. Enterprise refers to the vector of enterprise-related factors that include enterprise age, enterprise size and initial financial constraints. Environment refers to the vector of environment-related factors that include the family

business environment, the network and the task environment. $\beta = \beta_0$ is a statistical symbol representing the intercept or constant. β in other cases represents the regression beta weight or coefficient for the respective independent variable. ε_t refers to a random error term that represents the influence of other variables not included in the respective model.

3 Methods

3.1 Data and instrument

The microenterprises initiated under Micro-Enterprise Development Programme (MEDEP) in Nepal were the subjects for this study. A list of the total micro-entrepreneurs in three districts—Sindhupalchok, Parbat and Nawalparasi, representing three ecological belts—mountain, hill and terai, respectively, were obtained from the MEDEP Office, Kathmandu, Nepal. The subjects were further stratified into different strata based on enterprise categories, caste/ethnicity and gender. Finally, probability proportional to size (PPS) sampling method was adopted to identify the sample respondents (total sample size = 501), and survey questionnaires were administered to enumerate the data for purpose of this study.

The data were analyzed in two steps—a descriptive analysis and multivariate analysis. Multiple linear regression models were run to identify the key factors determining the microenterprise performance. The performance of microenterprises was assessed in four dimensions—employment, profit, sales and assets. The data on the measures of performance were collected in 2013 for the years 2068 BS (April 2011–March 2012) and 2069 BS (April 2012–March 2013). The data were collected in Nepalese Rupees. The growth rates were computed using the following formula.

$$G_r = \left[\frac{X_t - X_{t-1}}{X_{t-1}} \right] \times 100 \quad (4)$$

where G_r refers to the growth rate; X refers to the variables particularly employment, profit, sales and asset, and t refers to the time (year).

All the assumptions of the multiple linear regression such as the normal distribution, linearity, multicollinearity, homoscedasticity and independence of error terms were carefully examined, and non-

violations of these assumptions were confirmed before running the final regression models. Considering the larger standard deviation value than the mean value and the violation of the basic assumption of normality by the original growth rate variables, the employment growth rate, profit growth rate, sales growth rate and asset growth rate were further adjusted for the purpose of the study. The variables were transformed into LOG or SQRT or INVERSE so that they could be used in the multiple regression models. Due to the nature of the variables, including negative growth rate or zero growth rate, the direct transformation was mathematically unacceptable. Therefore, the variables were adjusted with a minimum value plus one on the original data, for example, $X = X + (X_{\text{Min}}) + 1$. Therefore, all of the data could be in positive numbers; thus, further transformation if necessary was possible.

After the adjustment, the variables, except for employment growth rate, were found to have a normal distribution. The employment growth rate even after adjusting was found to be highly skewed toward the right. None of the data transformation technique (LOG, SQRT, and INVERSE) could solve the problem of the basic normal distribution of the employment growth variable. The outlier analysis showed that all of the values other than zero were extreme values or outliers and therefore had to be replaced with the closest value, that is, the zero itself. If the outliers were replaced with a zero, the employment variable would not vary anymore. Therefore, the employment variable was dropped from the list of dependent variable in the regression analysis.

The conceptual variables used in this study such as managerial foresight (Amsteus 2011a, b), need for achievement, need for autonomy, creative tendency, calculated risk-taking and internal locus of control (Caird and Johnson 1988), managerial skills (Veciana 2007), social network (Veciana 2007) and perception toward task environment (Miller and Friesen 1982) were adapted from the works of the respective authors.

3.2 Measures of the microenterprise performance

There are different firm performance metrics used in the literature. For instance, scholars have used survival of the enterprises, number of employees and its growth, sales turnover and its growth, capital stock growth, profit and its growth, geographical range of markets, VAT registration, the ability of the business

to meet business and domestic needs (Brush and Vanderwerf 1992; Rosa et al. 1996; Lerner et al. 1997; Dunn and Arbuckle 2001; Praag et al. 2005; Musso and Schiavo 2008) to assess the enterprise performance.

Moreover, measuring performance of microenterprises is even a more challenging task. Most of the microenterprises, since they are acting in an informal economy, do not keep the records of their business transactions. For the purpose of this study, considering the feasibility to obtain the data in performance and the multidimensionality of performance measures, the data on the level and growth of employment, profit, sales and assets were collected.

4 Results and discussion

The data were analyzed in two steps—a descriptive analysis and multivariate inferential analysis. Descriptive analysis includes basic demographics of the respondents and the level and growth of the measures of the microenterprise performance. Multivariate inferential analysis includes the results of the multiple linear regressions and test of hypotheses.

4.1 Demographics of the respondents

In this study, more than two-third of the total samples (67.90 %) were female respondents. Similarly, a large majority of the respondents were in the 30–49 year age-group (68.8 %), followed by 50–59 years (14 %), <30 years (12.80 %) and 60 years and above (4.40 %). Of the total sample, the respondents belonging to Janajati consisted the highest percentage (49.70 %), followed by Brahmin (24.94 %) and Dalit (21.15 %) and Muslim and others (4.20 %).

Similarly, the great majority of the respondents were from the manufacturing sector (82.0 %). The share of business or service-sector enterprises consisted of less than one-fifth of the total sample (18.0 %). Regarding the distribution of the samples according to ecological belt, among the total respondents of the study, the highest percentage of the respondents were from the mountain region (40.12 %) followed by the terai (31.74 %) and hill region (28.14 %) (see Table 1).

Table 1 Demographics of the respondents

Variables	Categories	Percent
Gender	Female	67.90
	Male	32.10
Age-group	<30 years	12.80
	30–39 years	36.30
	40–49 years	32.50
	50–59 years	14.00
	60 years and above	4.40
Caste/ethnicity	Dalit	21.15
	Janajati	49.70
	Brahmin/Chhetri	24.95
	Muslim and Others	4.20
Enterprise sector	Service/business	18.00
	Manufacturing/production	82.00
Ecological belt	Mountain	40.12
	Hill	28.14
	Terai	31.74

Source: Field Survey 2013

$N = 501$

4.2 Growth of profit, sales and asset of microenterprises

To examine the growth of employment, profit, sales and asset of microenterprises over the period (2011–2012 to 2012–2013), paired-samples t test was conducted. The employment variables even after data transformation were found to violate the normal distribution, which is the most basic assumption of t test; therefore, they were excluded from the test. Other variables such as profit, sales and asset growth were transformed into log using LOG10() to ensure the normal distribution of the variables. The skewness and kurtosis statistics being within the range of plus or minus two ensures an acceptable range of the normal distribution of the variable (Table 2).

The paired mean differences for profit, sales and assets being positive and the t test being highly significant for all the variables confirmed that the microenterprises included in this study exhibited significant growth in performance (see Table 2). This means that the average microenterprises increased their level of profit, sales and assets significantly over the period.

4.3 Factors determining the microenterprise performance

Three multiple regression models were run to identify the key factors determining the microenterprise performance in Nepal. Since the study aims to identify the factors determining the microenterprise performance, an effort has been made to include the multidimensional factors such as entrepreneur-, enterprise- and environment-related factors. Furthermore, multiple regression is the main method used in this study to estimate the parameters or assess the effects of the predictors on the microenterprise performance. Multiple regression estimates are likely to be influenced by omitted variable bias (OVB). A large number of variables that have been discussed in the related theories and/or identified in the empirical studies to determine the firm performance have been included in this study, thereby reducing OVB.

The study revealed that the entrepreneur-related factors—gender, managerial skills, need for achievement, need for autonomy, creative tendency and internal locus of control; enterprise-related factors—enterprise age, enterprise size and initial financial constraint; and environment-related factors—social network are the key determinants of the microenterprise performance. The regression models did not recognize other factors that were considered to have significant effects on the microenterprise performance. The explanation concerning entrepreneur-, enterprise- and environment-related factors and their association with the microenterprise performance are discussed below.

4.3.1 Gender as a determinant of the microenterprise performance

Male-owned microenterprises, compared with female-owned ones, were hypothesized to have higher performance. However, this study has revealed a contrasting association between gender and microenterprise performance and has rejected the hypothesis. The study observed that the microenterprises owned by females, although marginally significant, had a relatively higher sales growth rate than those owned by their male counterparts (see Table 3). This result nullified the conventional thinking about male-owned enterprises performing better than female-owned enterprises (Liedholm 2002; Kim and Zhan 2011). In

Table 2 Growth of profit, sales and asset of microenterprises

Pairs	Variables (log)	Mean	SD	Skew	Kurt	Paired mean difference	T
Pair 1	Profit 2069	4.4809	.51878	-.179	.658	.14279	13.380***
	Profit 2068	4.3381	.50201	-.423	.772		
Pair 2	Sales 2069	4.7554	.50693	-.118	.677	.12139	11.921***
	Sales 2068	4.6340	.48825	-.261	.891		
Pair 3	Asset 2069	4.2984	.41940	.369	1.562	.10009	8.842***
	Asset 2068	4.1983	.44781	.373	1.549		

$N = 501$

*** $p < .001$, *Skew* skewness statistics, *Kurt* kurtosis statistics

the context of this study, the reason behind the better performance of female-owned microenterprises in Nepal could be the hardworking nature of the female micro-entrepreneurs, the focus of the microenterprise development program and the favorable intersection of family- or household- and agro-based enterprises for females. The intersection of agro- and family-based enterprises might have offered a suitable space for women to utilize their knowledge and experiences, thus leading to a relatively higher performance.

4.3.2 *Micro-entrepreneur's age as a determinant of the microenterprise performance*

Age of micro-entrepreneurs was hypothesized to have a positive association with the microenterprise performance. However, this study revealed that there was no such significant association between the age of micro-entrepreneurs and the microenterprise performance (see Table 3). This result rather supported the findings of Davidsson and Honig (2003), who argued that the insignificant association between age and enterprise performance might be because of providing fewer incentives for entrepreneurs older than 50 years to grow their business over this period. Moreover, in the context of this study, the reason behind such insignificant difference could be the nature of the business and some common characteristics between older and younger micro-entrepreneurs. The income from the microenterprise is very small. The young entrepreneurs are more ambitious than the older ones. Young entrepreneurs want to work for a better standard of life in the future, and therefore, they always look for better opportunities, for example, going abroad for work therefore do not put their full

effort into the microenterprise. On the other hand, the older micro-entrepreneurs do not want to take risks. They want to be involved in some easygoing businesses; hence, the age of the entrepreneur does not appear to have a significant effect on the microenterprise performance.

4.3.3 *Educational attainment as a determinant of the microenterprise performance*

Educational attainment is a kind of valuable human capital resource that tends to influence firm performance (Barney 1991). Educational attainment was hypothesized to have positive effects on the microenterprise performance. However, the study did not observe sufficient evidences to confirm the hypothesized association and the findings of the previous studies (Praag et al. 2005; Segal et al. 2010) (see Table 3). It implies that the education does not appear to make a significant difference in the microenterprise performance. There could be several reasons behind the insignificant effect of educational attainment on the microenterprise performance. Microenterprises are family-based businesses that are based on local resources and local market. Higher level of education may not matter much in exploiting the local resources and local market for microenterprises, therefore having no such significant effects on the microenterprise performance. Similarly, people that are more educated also seem to have higher ambitions. They may look for other opportunities from where they could earn more. Microenterprise is just a part-time business for them, therefore resulting in no significant effects on the microenterprise performance.

Table 3 Factors determining the microenterprise performance

Predictors	Profit growth rate			Sales growth rate			Asset growth rate		
	(β)	<i>t</i>	Sig.	(β)	<i>t</i>	Sig.	(β)	<i>t</i>	Sig.
<i>Entrepreneur-related factors</i>									
Gender	-.064	-1.459	.145	-.088 ⁺	-1.925	.055	-.059	-1.232	.219
Age	.018	.369	.712	.013	.262	.794	.018	.348	.728
Educational attainment	.020	.403	.687	.030	.591	.555	.061	1.124	.262
Previous experience	.014	.289	.773	-.044	-.844	.399	-.036	-.668	.505
Managerial skills	.411***	8.559	.000	.405***	8.115	.000	.019	.352	.725
Need for achievement	-.058	-1.027	.305	-.114 ⁺	-1.939	.053	.013	.207	.836
Need for autonomy	-.215***	-4.437	.000	-.160**	-3.183	.002	.042	.789	.430
Creative tendency	.319***	6.687	.000	.111*	2.234	.026	.118*	2.254	.025
Calculated risk-taking	.011	.207	.836	.077	1.420	.156	-.052	-.915	.361
Internal locus of control	-.146*	-2.508	.012	-.066	-1.089	.276	-.035	-.549	.583
Managerial foresight	.032	.732	.465	.113*	2.527	.012	.194***	4.097	.000
<i>Enterprise-related factors</i>									
Enterprise age	.049	1.102	.271	.096*	2.074	.039	.184***	3.761	.000
Enterprise size	-.036	-.831	.406	-.126**	-2.819	.005	-.347***	-7.348	.000
Initial financial constraint	.115**	2.857	.004	.080 ⁺	1.919	.056	-.036	-.824	.410
<i>Environment-related factors</i>									
Family environment	-.044	-.809	.419	-.053	-.927	.354	-.035	-.588	.557
Social Network	-.039	-.747	.456	.123*	2.284	.023	.139*	2.435	.015
Environmental dynamism	-.067	-1.173	.241	-.059	-1.002	.317	.056	.894	.372
Environmental heterogeneity	.002	.030	.976	-.019	-.309	.758	-.075	-1.167	.244
Environmental hostility	-.012	-.226	.821	.041	.771	.441	.070	1.239	.216
<i>Control variables</i>									
Hill	-.155**	-2.888	.004	-.250***	-4.505	.000	-.207***	-3.534	.000
Terai	.047	.871	.384	.064	1.154	.249	.049	.825	.410
Enterprise sector	.029	.736	.462	-.024	-.594	.553	.048	1.137	.256
Dalit	.000	-.007	.995	-.023	-.537	.592	-.017	-.374	.708
Brahmin/Chhetri	-.034	-.755	.451	-.025	-.529	.597	-.033	-.677	.499
Muslim and others	-.074 ⁺	-1.851	.065	-.048	-1.150	.251	-.061	-1.385	.167
R ²	.336			.284			.202		
Adjusted R ²	.301			.246			.160		
F	9.623			7.539			4.813		
Sig.	.000			.000			.000		
Durbin-Watson	1.815			1.879			2.026		

N = 501

⁺ $p < .01$, * $p < .05$, ** $p < .01$, *** $p < .001$

4.3.4 Previous experience a determinant of the microenterprise performance

Previous experience was hypothesized to have a positive effect on the microenterprise performance. However, this study did not find ample evidences to

support the hypothesized association and the previous findings (Praag et al. 2005; Segal et al. 2010). In other words, the results did not demonstrate the significant effects of previous experience on the microenterprise performance (see Table 3). This might be due to the unique characteristics of the enterprises.

Microenterprises are very small and family-based, use mostly local resources and local raw materials, and their market is based locally. Additionally, the micro-entrepreneurs selected for this study were rural people living below the poverty line and selected for the microenterprise development program. They might not vary much in terms of previous experience. Most of the micro-entrepreneurs might have had similar experiences, and therefore, their previous experience might not have had a significant influence on the microenterprise performance.

4.3.5 Managerial skill as a determinant of the microenterprise performance

Managerial skill is also one of the valuable human capital resources that affect enterprise performance. Managerial skill was hypothesized to have a positive effect on the microenterprise performance. In line with the hypothesis or the results of previous studies, the results of this study also confirmed that the managerial skills of micro-entrepreneurs have significant positive effects on the microenterprise performance, particularly on the profit and sales growth rates (see Table 3). The findings supported the explanation of Newton (2001) and Krizner's theory (cited in Veciana 2007) that have claimed the crucial role of managerial skills on enterprise performance.

4.3.6 Entrepreneurial traits and motivation as determinants of the microenterprise performance

Initially, the entrepreneurial traits and motivational factors were mostly used in relation to the study of the start-up of the businesses. However, in the later days, these factors have also been widely used with respect to the entrepreneurial success (Rauch and Frese 2000). Need for achievement, need for autonomy, creative tendency, calculated risk-taking and internal locus of control were hypothesized to have positive effects on the microenterprise performance. However, very surprisingly, this study revealed, although marginally significant, a negative effect of need for achievement on the microenterprise performance (particularly on sales growth rate) and significant effects of need for autonomy particularly on profit and sales growth rates (see Table 3). This result nullified the previous findings. It might be due to the special nature of these entrepreneurs.

The persons motivated in business for greater achievement are more of hardworking type and tend to like more challenges, but microenterprises are very small and low return business. They might have given less priority to microenterprises, and rather involved in other businesses. In the case of need for autonomy, as they seem to be more oriented toward self-interest and have individualistic characteristic, they may not care much about the effects of surrounding environment and network. They may not get the support from the local people. Microenterprises are mostly based on local resources, local raw materials and local market. Access to local resources, local raw materials and local market in the rural settings in Nepal seems to be highly dependent on the relations with the local people such as relatives, neighbors and local business houses.

Creativity helps entrepreneurs to develop ideas to create new products and process. Creative tendency was hypothesized to have a positive effect on the microenterprise performance. The results of this study also confirmed the hypothesized relationship. The creative tendency appeared to have a significant positive effect on all the measures of the microenterprise performance (see Table 3). It suggests that the microenterprises owned by the micro-entrepreneurs who are versatile, tryout new ideas, and so on tend to have higher performance.

Entrepreneurs seek information and expertise to assess whether a particular risk is worth taking or not. They test boundaries and get into the areas where few have worked before, invest time and money for their good ideas, do new things even if there is no guaranteed payback. Calculated risk-taking was hypothesized to have a positive effect on the microenterprise performance. However, the study did not find any significant effect of calculated risk-taking on the performance (see Table 3). The result of this study rejected the hypothesized association between calculated risk-taking and microenterprise performance. The reason behind this could be explained by the lack of risk-taking tendency among the micro-entrepreneurs. Financial soundness is critical for taking a risk. Micro-entrepreneurs are the people living below the poverty line, and a large majority of them might have initial financial constraints. They may not like to take a risk. They rather prefer to seek supports by microenterprise development program.

Enterprising persons "seek to exert control over life, draw on inner resources and believe that it is down to them if they succeed through their own efforts and

hard work” (Caird and Johnson 1988). Internal locus of control was hypothesized to have a positive effect on the microenterprise performance. However, results of this study nullified the hypothesized effect and the findings of the previous studies. The study observed a significant negative relationship between internal locus of control and the microenterprise performance (particularly on profit growth rate, see Table 3). The negative association between internal locus of control and microenterprise performance might be because the internal locus of control-oriented persons seem to be more self-confident, practical and hardworking. They might have given less priority to microenterprise as it is a very small business, which have a very low return. They might be doing several other works from where they could get higher returns.

4.3.7 Managerial foresight as a determinant of the microenterprise performance

Managerial foresight refers to the behavior of managers in analyzing present contingencies, desired future states and courses of action a degree ahead in time to arrive at the desired future (Amsteus 2008). Managerial foresight in this study was hypothesized to have a positive effect on the microenterprise performance. The results of this study also confirmed the hypothesized association and the findings of previous studies (Amsteus 2011a, b). The study revealed that managerial foresight has a significant positive effect on microenterprise performance (particularly on sales and asset growth rates, see Table 3). It implies that the microenterprises owned by the entrepreneurs with higher managerial foresight have higher performance.

4.3.8 Enterprise age as a determinant of microenterprise performance

Literally, enterprise age refers to the years of the microenterprise operating since establishment. Enterprise age for the purpose of this study was hypothesized to have positive effects on the microenterprise performance. The results of this study also confirmed the proposed hypothesis and some of the previous findings (Stinchcombe 1965; Mengistae 1998), meanwhile rejected some others (Loderer and Waelchli 2009; Gebreeyesus 2009; Wiklund et al. 2009; Masakure et al. 2009). This study revealed a significant positive effect of enterprise age on the microenterprise

performance (particularly on sales and asset growth rate, see Table 3). It means that the performance of older microenterprises is higher than that of their younger counterparts. With reference to the positive effects of enterprise age, pointing to Stinchcombe (1965), Majumdar (1997) argued that due to the long experiences, the older firms tend to enjoy the benefits of learning and thus enjoy superior performance.

4.3.9 Enterprise size as a determinant of microenterprise performance

Enterprise size in this study was hypothesized to have positive effects with the microenterprise performance. However, the study revealed negative effects on the microenterprise performance (particularly on sales and asset growth rates, see Table 3), and thereby rejecting the hypothesis and the findings of many previous studies (Majumdar 1997; Mengistae 1998; Lee 2009) and supporting some others (Liedholm 2002; Ramasamy et al. 2005; Gebreeyesus 2009). This means that the bigger enterprises compared with the smaller ones have relatively lower performance. The reasons behind such contrasting results might be explained by the kind of enterprises used in the study. These microenterprises used as the subjects of this study were initiated by the microenterprise development program to increase self-employment and income among the people living below the poverty line in Nepal. The bigger microenterprises might not be supported by the microenterprise development program as much as the smaller microenterprises are supported by it, therefore leading to lower performance. In other words, the smaller microenterprises might have been supported more by the microenterprise development program as the microenterprise development program is a program of poverty reduction; thus, smaller microenterprises end up with higher performance.

4.3.10 Initial financial constraints as a determinant of the microenterprise performance

Financial capital is one of the key resources that tend to determine the emergence and success of microenterprises. For the purpose of this study, having initial financial constraint was hypothesized to result in a relatively lower microenterprise performance. Surprisingly, the results of this study revealed significant

positive effects of initial financial constraint on the microenterprise performance (particularly on profit and sales growth rates, see Table 3), thereby nullifying the hypothesis and findings of the previous studies (Praag et al. 2005; Cooper et al. 1994; Boermans and Willebrands 2012). It implies that the microenterprises that had the financial constraints in the beginning had higher performance than those that did not have such financial constraint. There might be several reasons behind such result of this study. For instance, many of the micro-entrepreneurs have borrowed a loan to start a business. The loan though seems a little amount but has a significant burden for the rural poor. Due to the fear of the loan, they might have been more careful and put greater efforts on the business, thus leading to higher performance.

4.3.11 Family environment as a determinant of the microenterprise performance

In this study, having traditional or parental enterprise with reference to a completely new enterprise was hypothesized to have a higher performance. However, this study did not find enough evidences to support the hypothesized effects and the results of the previous studies (Lentz and Leband, cited in Parker 2004; Fairlie 2009). This study did not find a significant effect of family environment on the microenterprise performance (see Table 3). It means that there is no such significant difference in the performance between the traditional microenterprises or family businesses and completely new microenterprises. Such insignificant difference could be because, either an enterprise is traditional or a completely new one, it is based on local resources and local market. Moreover, traditional occupations are also given a new form and adopt new technologies, therefore not having much significant difference between the traditional occupation or family enterprises and completely new enterprise.

4.3.12 Social network as a determinant of the microenterprise performance

Social network of micro-entrepreneur in this study was hypothesized to have positive effects on the microenterprise performance. The results of this study also confirmed the hypothesized effects and findings of the previous studies (Veciana 2007; Bruderl and

Preisendorfer 1998). This study revealed positive effects of social network on the microenterprise performance (particularly on sales and asset growths, see Table 3). It means that the microenterprises owned by the micro-entrepreneurs having a greater and stronger social network tend to have a higher performance. In this regard, Sanders and Nee (1996) noted, “the social relations may increase entrepreneurial success by providing instrumental supports, such as cheap labor and capital, productive information such as knowledge about customers, suppliers and competitors and psychological aid, such as helping the entrepreneur to weather emotional stress and to keep their business afloat” (as quoted in Parker 2004:74).

4.3.13 Task environment as a determinant of the microenterprise performance

In this study, environmental dynamism, heterogeneity and hostility were hypothesized to have a positive association with the microenterprise performance. However, the results of the study did not find sufficient evidences to support the hypothesized effects of perceived task environment on the microenterprise performance and the findings of the previous studies (Miller and Friesen 1982; Miller 1983). The study did not find significant effects of environmental dynamism, heterogeneity and hostility on the microenterprise performance (see Table 3). The reasons behind such results could be explained by the nature of the market environment. Microenterprises are mainly based on the rural market, which is less diversified, less dynamic and less threatening. The customers’ buying habit and nature of the competition may not vary much, therefore resulting in no significant effects on the microenterprise performance.

4.3.14 Control variables

Ecological belts, enterprise sector and caste/ethnicity were included as control variables in the study. These variables were transformed into dummy variables before inserting into the multiple regression models. The study revealed that the microenterprises in the hill region with reference to the mountain region have relatively lower performance. However, the study did not find a significant difference in the performance of microenterprises between terai and mountain regions. The study did not find significant difference in the

performance of microenterprises across enterprise sectors. It means there is no significant difference in profit, sales and asset growth rates between the microenterprises operating in manufacturing/production and business/service sectors. Regarding the difference in the performance of microenterprises across caste/ethnic groups, except a relatively lower performance of the microenterprises that belong to Muslim and others caste/ethnic groups with reference to Janajati, the study did not find a significant difference in the performance among other caste/ethnic groups (see Table 3).

5 Conclusions and implications

Using the primary data enumerated from 501 randomly sampled micro-entrepreneurs across three ecological belts in Nepal, the study examined the microenterprise performance and the effects of entrepreneur-, enterprise- and environment-related factors on the microenterprise performance. The study found that the level of profit, sales and asset that were used as measures of the microenterprise performance have increased significantly over the time. The study also revealed that gender, managerial skills, need for achievement, need for autonomy, creative tendency, internal locus of control and managerial foresight, enterprise age, enterprise size and initial financial constraints and social network are the key factors determining the microenterprise performance in Nepal. Other factors, particularly educational attainment, previous experience, calculated risk-taking, family environment and task environment do not appear to have significant direct effects on the microenterprise performance in Nepal.

The findings of this study, apart from confirming various hypotheses of related theories and approaches, and the findings of previous researches have also rejected several other hypotheses and previous findings. In particular, the findings have supported resource-based view of the firm, behavioral theory, trait theory and network theory of entrepreneurs to some extent and therefore established a significance of resource-based view of the firm, behavioral theory, trait theory and network theory in micro-entrepreneurship, as well. Meanwhile, the findings also rejected the assumptions of role theory and population ecology or organizational ecology theory to some extent. It

implies that the role theory and population ecology theory despite being widely used in explaining many aspects of large or small-scale enterprises are not applicable to a great extent in the context of micro-entrepreneurship. The irrelevance of role theory and population ecology theory in the context of micro-entrepreneurship might be due to the nature of the business. As discussed above, microenterprises are tiny family-based businesses that mostly rely on traditional skills, local resources and local market. The environment in a far rural setting is less dynamic, less heterogeneous and less hostile and therefore has no such significant direct effects on the microenterprise performance. However, these factors may still have indirect effects on the microenterprise performance. The indirect effects of these factors need to be further explored. Furthermore, the findings of this study have also nullified the conventional thought on gender and enterprise performance. In the present context of lacking a sound scientific and theoretical foundation for micro-entrepreneurship studies, the findings of this study are expected to be crucial for future researches.

Policymakers are encouraged to take the factors such as gender, managerial skills, need for achievement, need for autonomy, creative tendency, internal locus of control and managerial foresight, enterprise age, enterprise size, initial financial constraints and social network into consideration while making policies related to improving the performance of microenterprises.

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