Relationship between Entrepreneurial Factors and Small Agro-enterprises' Success: Evidence from Bhutan

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ABSTRACT

Successful small agro-enterprises (SAEs) play a vital role in the economy of an agrarian country like Bhutan. Although entrepreneurial factors, amongst others, affect the success of SAEs, there is a dearth of empirical studies on this topic in Bhutan. Such studies will help entrepreneurs and agribusiness promoters understand entrepreneurial factors affecting the success of SAEs. Therefore, we studied the relationship between entrepreneurial factors and the success of SAEs in Bhutan. Using multistage quota sampling, we selected four districts (1), eight sub-districts (2), 32 chiwogs (3), and 320 entrepreneurs of SAEs (4) for the study. We interviewed 320 entrepreneurs using structured questionnaire and analyzed data using IBM SPSS version 23. We found a significant and positive relationship between the success of SAEs and entrepreneurs’ motivation \( r = .44, P = .000 \) and personal entrepreneurial competencies (PECs) \( r = .39, P = .000 \). However, there was no statistically significant relationship between entrepreneurs’ age and success of SAEs \( r = .02, P = .707 \). Overall, entrepreneurs’ motivation and PECs contributed 20.7% to the success of SAEs in Bhutan. We recommend relevant authorities to continue supporting entrepreneurship education and training programs to motivate and build entrepreneurial competencies.

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1. INTRODUCTION

Small and medium enterprises (SMEs) dominate the economy of the world [1]. They improve nation’s economy, particularly in the developing countries [2]. Studies acknowledged SMEs for generating employment opportunities, innovation, and economic growth [3,4]. Enterprise development alleviates poverty in many countries [5] and scholars regarded SMEs as the economic backbone of the country [6]. However, globalization and advancement in science and technology of larger firms challenge the smaller enterprises [7,8]. Addressing these challenges can prove itself a developing engine [2] because the success of small enterprise development portrays the country’s economic performance [9]. Small enterprises such as small agro-enterprises (SAEs) have been playing an essential role in Bhutan’s economy as well. Partially adopting the definition of SMEs from the Royal Government of Bhutan [10], SAEs in this study refer to crop, livestock, and forestry enterprises with an investment of less than Ngultrum 10 million and involvement of 1 to 19 people. Agriculture sector contributed 16.52% to the country’s gross domestic product and employed 58% of its population in 2016 [11]. Thus, promoting SAEs in an agrarian country like Bhutan has potential to assuage national challenges including food insecurity, poverty, unemployment, and rural-urban migration. However, Bhutan can derive benefits only if these SAEs are successful.

Factors affecting the success of SAEs are multiple [12], however, entrepreneur as a decision-maker has a significant influence on the success of the business. Although a study reported no major influence of entrepreneurial factors on the success of business [13], many other studies reported a significant relationship [14-16]. Entrepreneurial factors in this study refer to different aspects of entrepreneurs’ characteristics. For instance, entrepreneurs’ motivation influences the success of the business. A study noted that the entrepreneurs’ motivation for finance, employment creation, and self-fulfillment improved the business success [14]. Similarly, several other studies reported a significant relationship between the business success and entrepreneurs’ motivation [17-19]. Personal entrepreneurial competencies (PECs) understood as the cluster of related knowledge, attitude, and organizational capabilities [20] are also necessary for the success of the business. Studies from different countries confirmed the vital role of PECs in the success of business [21-23]. Entrepreneurs with high PECs gain advantages in the competitive market due to their competencies to perform essential works better than others. Entrepreneurs’ age is another important factor influencing the success of the business. Entrepreneurs’ age can exhibit a significant, but either positive [14,24,25] or negative [26] relationship with the success of the business, depending on the context of the study. Although some studies reported a non-significant relationship between the success of business and entrepreneurs’ education [27], other studies reported a significant and positive relationship [28-31]. Some studies argued that educated people are efficient, skilful, able to absorb training, and better in understanding business needs than the uneducated ones [32-35]. Similarly, despite a study showing a non-significant relationship [36], other studies noted a significant relationship between the success of the business and numbers of training entrepreneur has attended [14,21,37,38]. Also, a study in Tanzania reported that the lack of training as a limiting factor for the success of business [39]. Collectively, most of the earlier studies showed the evidence of a significant relationship between the success of the business and entrepreneurial factors.

Studies conducted in other countries on the similar topics showed a variety of results depending on the socio-economic context of a country. However, there is a dearth of empirical studies in Bhutan examining the relationship between the success of SAEs and entrepreneurial factors. Studies on such topics will help entrepreneurs understand entrepreneurial factors necessary for the success of SAEs. Also, it will help agribusiness promoters to design programs to improve entrepreneurial factors. Therefore, we proposed a research question as ‘To what extent do entrepreneurial factors affect the success of SAEs in Bhutan?’.

Initially, we attempted to study the relationship between the success of SAEs and five entrepreneurial factors including education, training, PECs, motivation, and age. However, we removed education and training from the analysis as they violated one or more conditions for Pearson’s correlation and linear regression analysis such as normality of variables, data type, linearity, and homoscedasticity. Therefore, the objective of this study is to determine the relationship between the success of SAEs and three entrepreneurial factors including
entrepreneurs’ motivation, PECs, and age. Accordingly, we proposed three null and alternate hypotheses as follow:

**H10:** There is no relationship between entrepreneurs’ motivation and the success of SAEs

**H11:** There is a relationship between entrepreneurs’ motivation and the success of SAEs

**H20:** There is no relationship between entrepreneurs’ PECs and the success of SAEs

**H21:** There is a relationship between entrepreneurs’ PECs and the success of SAEs

**H30:** There is no relationship between entrepreneurs’ age and the success of SAEs

**H31:** There is a relationship between entrepreneurs’ age and the success of SAEs

2. METHODOLOGY

As presented in Fig. 1, this study covered four districts of Bhutan: Samtse, Gasa, Tashigang, and TashiYangtse. Trained enumerators collected data from 320 entrepreneurs of SAEs using pre-tested structured questionnaire upon approval from the respective district administration. We adopted multi-stage quota sampling. Stage 1: We divided Bhutan into four regions such as northeast, northwest, southeast, and southwest consisting of five districts each. We randomly selected four districts, one from each region to ensure uniform dispersion of districts across the country. Stage 2: We selected two geogs (sub-districts) in each selected district consulting district agriculture officer (DAO) and district livestock officer (DLO) as they were the most reliable person who knew about SAEs at the district level. With their support, we selected one enterprising and one non-enterprising geog in each selected district. Stage 3: We selected four chiwogs (sub-geogs), two enterprising and two non-enterprising, in each selected geog. Stage 4: We randomly selected ten SAEs in each selected chiwog. One-day workshop conducted in all selected districts decided the stage 3 and stage 4. The workshop members included DAO, DLO, representatives from the department of forest, extension officials, local leaders, and farmers.

Selecting a model to measure success is important because it influences the type of data and data collection method. The earlier studies showed various models to measure the success of the business. Some studies used financial indicators (e.g. profit), some used non-financial indicators (e.g. customer satisfaction), while others preferred to use a combination of both financial and non-financial indicators [40-42]. Depending on the study design, researchers can measure success objectively or subjectively [43]. In this study, we adopted a model developed in [28] because of its simplicity, effectiveness, and recentness. The model consists of four indicators: (1) satisfaction with the growth of net income, (2) satisfaction with the time needed to reach the breakeven point, (3) consider business is successful, and (4) consider business is growing. Entrepreneurs rated each statement as 1 (Strongly Disagree) to 5 (Strongly Agree) and we used the sum for the analysis. As data were parametric in nature, we conducted Pearson’s correlation and multiple linear regression using IBM SPSS version 23 to examine the relationship between the success of SAEs and entrepreneurial factors.

![Fig. 1. Bhutan – study areas](image-url)
3. RESULTS AND DISCUSSION

3.1 Demographic Profile

We found 61.9% entrepreneurs were aged below 52 years indicating more economically active entrepreneurs involved in SAEs. Women entrepreneurs (52.8%) are dominating men entrepreneurs (47.2%) in running SAEs. It could be because, in the rural communities of Bhutan, most men are usually engaged in non-farm employment opportunities such as constructions, whereas women engage in agricultural activities in the farms. Also, 88.1% of the sample did not come from the family business background, revealing poor entrepreneurship culture in Bhutan. This holds true because agriculture was dominantly subsistent until recently and it is still transitioning to entrepreneurial farming in Bhutan [44]. The result showed 71.9% of the sample had not undergone any formal education. Agreeing to the current finding, another study also discussed the reluctance of educated youths to take up farming as a promising career in Bhutan [45]. However, with support from the other family members, some regular employees (11.9%) also owned SAEs for the additional income. Table 1 presents the demographic profile of the entrepreneurs in detail.

3.2 Pearson’s Correlation Analysis

Table 2 shows the results of Pearson’s correlation to study a relationship between the success of SAEs and three entrepreneurial factors including motivation, PECs, and age. The subsequent paragraphs present results in detail.

3.2.1 Entrepreneurs’ motivation

The entrepreneurs rated five variables as likely motivation to start their business on 5 points Likert Scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree): (1) meeting challenges, (2) personal achievement, (3) creating employment, (4) financial independence, and (5) improve social status. We calculated the sum and used it for further analysis. We found a significant and moderate positive relationship between the success of SAEs and entrepreneurs’ motivation to start a business ($r = .44$, $P = .000$). Thus, we rejected the null hypothesis ($H_{1o}$). This means that when entrepreneur’s motivation increases, the success of SAEs also increases and vice versa. Their high motivation to start a business could have led to passions and efforts to carry out activities necessary for success. Also, higher motivations could boost their ability to face difficulties during the early stage of enterprise development. In the agreement, studies noted that entrepreneurial motivations such as finance, employment creation, and self-fulfilment were essential factors of enterprise development [14,19]. In Bhutan, the program such as farmers’ study tour provides farmers with the opportunity to visit successful entrepreneurs [46]. Such programs help aspiring entrepreneurs to derive motivation from the success of other entrepreneurs and, therefore, we recommend relevant agencies to continue such practices.

Table 1. Demographic profile of the SAEs entrepreneurs

<table>
<thead>
<tr>
<th>Variables</th>
<th>Categories</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>19-52</td>
<td>198 (61.9)</td>
</tr>
<tr>
<td></td>
<td>53-86</td>
<td>122 (38.1)</td>
</tr>
<tr>
<td>Gender</td>
<td>Men</td>
<td>151 (47.2)</td>
</tr>
<tr>
<td></td>
<td>Women</td>
<td>169 (52.8)</td>
</tr>
<tr>
<td>Family business background</td>
<td>Yes</td>
<td>49 (15.3)</td>
</tr>
<tr>
<td>Regular Job</td>
<td>No</td>
<td>27 (84.7)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>38 (11.9)</td>
</tr>
<tr>
<td>Formal education</td>
<td>No</td>
<td>282 (88.1)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>90 (28.1)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>230 (71.9)</td>
</tr>
</tbody>
</table>

Table 2. Relationship between entrepreneurial factors and success of SAEs

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.44**</td>
<td>.39**</td>
<td>.02</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>.62**</td>
<td>.03</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>1</td>
<td>.04</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed)

3.2.2 Entrepreneurs’ PECs

The respondents rated ten variables using 5 points Likert Scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree): (1) opportunity seeking, (2) persistence, (3) commitment to work contract, (4) demand for quality and efficiency, (5) risk-taking, (6) goal setting, (7) information seeking, (8) systematic planning, (9) persuasion, and (10) self-confidence. We calculated the sum and used it for further analysis. The result showed a significant and positive relationship between PECs and success of SAEs ($r = .39$, $P = .000$). Thus, we rejected the null hypothesis ($H_{2o}$). This means that when entrepreneurs’ PECs increase, the success of SAEs also increase and vice versa. As PECs are the total
ability of the entrepreneur to perform a job successfully [23]. They are an essential entrepreneurial factor for success. For instance, a study reported that the competent entrepreneurs were more successful in developing business than incompetent entrepreneurs [21]. Similarly, other studies have shown the importance of PECs on enterprise success [20,22]. To this end, the result confirms that PECs improve the performance of SAEs. Thus, responsible stakeholders should strive to build PECs through training and entrepreneurship education. Other studies also suggested the need for entrepreneurship education in Bhutan [45,47]. To build PECs, relevant authorities also need to promote business mentoring and agribusiness incubation centers in Bhutan, which are not accessible to all aspiring entrepreneurs, as of today.

3.2.3 Entrepreneurs’ age

We found a non-significant relationship between the success of SAEs and entrepreneurs’ age (r = .02, P = .707). Thus, we did not reject the null hypothesis (H3a). In contrast, earlier studies have reported a significant relationship between the success of business and entrepreneurs’ age. For instance, several studies have reported significant and positive relationship [14,24,25]. On the other hand, other studies showed a significant negative relationship [26]. Some studies support a negative relationship with several plausible reasons such as young entrepreneurs are energetic, motivated, risks takers, open minded, efficient, productive, creative, and innovative [48-52]; while other studies reported opposite characteristics for the older people [52,53]. A potential reason for the non-significant result in this study could be that SAEs in Bhutan are mostly family business. These entrepreneurs, irrespective of their age, receive help from other family members in terms of required resources. Moreover, Bhutan has agriculture extension agents in all 205 geogs [54] rendering professional services to both young and old entrepreneurs. These arrangements reduce the differences between old and young entrepreneurs in doing business in Bhutan. Moreover, Bhutan is the easiest country to do business in South Asia [55], partially indicating the existence of conducive business environment for all Bhutanese irrespective of age, gender, and other socio-economic backgrounds. The non-significant relationship between these two variables indicates that young entrepreneurs can equally compete with older ones in operationalizing SAEs in Bhutan. The very finding of this study should motivate youths who are gradually transitioning to entrepreneurial farmers in Bhutan [44].

3.3 Multiple Linear Regression

As presented in Table 3, the multiple linear regression analysis further confirmed the association between the success of SAEs and entrepreneurial factors. Motivation and PECs are significant at 1% level and entered in the regression model. However, there is no significant relationship between the success of SAEs and entrepreneurs’ age. The F-test was also significant at 1% level. Overall, motivation and PECs contributed 20.7% to the success of SAEs in Bhutan. It also means that other factors contribute 79.3% to the success of SAEs in Bhutan, paving the road for future researchers to explore other factors.

Accordingly, we got the regression model as:

\[
Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \varepsilon_0
\]

\[
Y = 5.368 + 0.316X_1 + 0.109X_2 + \varepsilon_0
\]

Where;

- \(Y\) = Success of SAEs;
- \(\beta_0\) = Constant;
- \(\beta_1, \beta_2\) = Coefficients;
- \(X_1\) = Motivation;
- \(X_2\) = PECs; and
- \(\varepsilon_0\) = Error.

Table 3. Multiple linear regression results

<table>
<thead>
<tr>
<th>Model</th>
<th>(\beta)</th>
<th>(t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>5.368**</td>
<td>4.186</td>
</tr>
<tr>
<td>Motivation</td>
<td>.316**</td>
<td>4.972</td>
</tr>
<tr>
<td>PECs</td>
<td>.109**</td>
<td>3.040</td>
</tr>
<tr>
<td>Age</td>
<td>.007</td>
<td>.759</td>
</tr>
<tr>
<td>Adjusted (R^2)</td>
<td>.207</td>
<td></td>
</tr>
<tr>
<td>F-test</td>
<td>28.756**</td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent variable: Success of SAEs \(*P < .01\)

4. CONCLUSION

This study examined the relationship between entrepreneurial factors and the success of SAEs in Bhutan. We found a significant and positive relationship between the success of SAEs and entrepreneurs’ motivations and PECs. However, there was no significant relationship with
entrepreneurs’ age. Bhutan being an agrarian country, development of SAEs will not only improve the livelihood of rural people but also contribute to the national economy. Realizing the potentials of SAEs, government organizations and non-government organizations in Bhutan support the development of SAEs through financing, marketing, training, etc. Today, entrepreneurship in Bhutan is gaining popularity among rural farmers and educated youths, and it is likely to continue. The entrepreneurs need diverse soft and hard skills to thrive in the increasingly globalized competitive market. However, most of the entrepreneurs in Bhutan lack business experiences as they do not come from the family business background. As finding from this study showed a positive relationship between the success of SAEs and entrepreneurs’ motivation and PECs, we suggest relevant authorities to motivate and build competencies of both existing and aspiring entrepreneurs to realize the goal of SAEs development in the country. In addition to looking for other innovative approaches, relevant authorities should make existing platforms accessible to entrepreneurs, which are not accessible to many Bhutanese, as of today. One limitation of this study was that responses were self-reported; thus, the result could be slightly flawed. Moreover, we could not include other entrepreneurial factors such as gender, leadership experiences, etc. Therefore, future researchers can replicate this study by including other entrepreneurial factors.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

12. Lampadarios E. Critical success factors for SMEs: An empirical study in the UK chemical distribution industry. International


31. Wanigasekara WMSK, Surangi HKNS. Impact of level of education and business


39. Nkonoki ESN. What are the factors limiting the success and/or growth of small businesses in Tanzania? – An empirical study on small business growth; Arcada University of Applied Sciences; 2010.


43. Perez EH, Canino RMB. The Importance of the entrepreneur’s perception of “Success”. Review of International Comparative Management. 2009;10(5).


46. ICMOD. Farmers from barshong visit Gelephu, Sarpang Bhutan to learn about agricultural practices: ICMOD; 2017. Available:http://www.icimod.org/?q=28286


