Entrepreneurial leadership and business performance

Effect of organizational innovation and environmental dynamism

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Abstract

Purpose – The purpose of this paper is to examine effects of entrepreneurial leadership (EL) and organizational innovation (OI) on business performance (BP) of small and medium enterprises (SMEs) as well as to determine whether environmental dynamism (ED) moderates the mediating effect of OI in the EL–BP relationship.

Design/methodology/approach – The study was carried out on the basis of questionnaire survey among 243 SME owners of Pokhara valley of Nepal. Hierarchical multiple regression and other different PROCESS models were considered to examine direct, mediation, moderation and moderated mediation relationships.

Findings – The findings suggest a significant positive effect of EL on OI and BP and significant mediating role of OI in EL–BP relationship. But contrary to the prediction, the results indicate that the moderation and moderated mediation relationship are weaker under a dynamic environment than a stable environment.

Research limitations/implications – As research reveals, ED moderates the studied model differently, and it raises questions on applicability of western theories, scales and their relationship in the South Asian context. Besides this, it has few limitations, which also present opportunities for future research.

Practical implications – The findings of this research will be significant to entrepreneurs, educators and policymakers for better understanding about study variables, to use as consulting options as well as to prepare effective policies for entrepreneurship development.

Originality/value – This study is perhaps the first study that examines the complex moderated mediation model in the context of minimal work on EL–BP relationship and facilitates more sophisticated understanding about their relationships as well as shows variables’ and model’s generalizability in the eastern context.

Keywords Moderated mediation, Business performance, Organizational innovation, Environmental dynamism, Entrepreneurial leadership, Nepali SMEs

Paper type Research paper

1. Introduction

The traditional leadership approaches for better organizational performance are seen ineffective in the context of today’s increasingly dynamic and competitive business environment (Leitch and Volery, 2017). Some studies analyzed the relationship between leadership and entrepreneurship for business and emphasized the need of the entrepreneurial leadership (EL) (Gupta et al., 2004; Renko et al., 2015). The EL is distinct from other behavioral forms of leadership, which is required in turbulent and competitive situation and is associated with superior performance and sustainability. Scholars also specified that in the context of environmental dynamism (ED), EL leads to organizational innovation (OI) and creativity, which further contribute for higher business performance (BP) (Huang et al., 2014; Ranjan, 2018). Although researchers emphasized the relationship between the four variables, namely EL, OI, BP and ED, very few studies have been conducted to examine the relationship simultaneously (Huang et al., 2014; Leitch and Volery, 2017). Moreover, even if prior studies indicated a mediating role of OI and moderating role of ED in the leadership–performance relationship, almost no attention has been devoted to study these most important relationships in a single model.

This paper forms part of a special section “Creativity, innovation and entrepreneurship (CIE) in South Asia”; guest edited by Vishal K. Gupta and Murad Mithani.
Although these entrepreneurship concepts are understood and used in the western context, their relevance in eastern and developing countries is arguably the least studied. Due to the distinct culture, dynamic environment and existence of different challenges in South Asia, the western variables and leadership–performance relationship might be different from what it was observed in a developed country. Some scholars questioned the transferability of entrepreneurship scale to different business environments outside the western world (Thomas and Mueller, 2000), and they argued that Anglo-American framework of EL should be reviewed across countries and regions on organizational level, especially in small and medium enterprises (SMEs) (Leitch and Volery, 2017). Moreover, validity issues on measures of different variables developed in western country context to be replicated in different cultural contexts are still doubtful (Arvey et al., 2015; Hofstede, 1993; House and Associates, 2004). Some researchers urged to critically examine western theories in the South Asian context to add to their relevance globally (Khilji and Mathews, 2012; Menon, 2016). Additionally, although different quantitative research works applied and verified the generalizability of different measures of leadership and entrepreneurship scales in the South Asian context, review of literature shows academic absence, as none of the researcher attempted to verify scales of EL, OI and ED and understand their roles in BP.

Moreover, entrepreneurship in SMEs, which is significant for economic and social phenomena in the world, is rather unknown. In South Asia, SMEs constitute over 97 percent of total businesses, contribute between 40 and 60 percent of the total output to their national economies and account for over 70 percent of the total employment (Moktan, 2007). In Nepal, SMEs comprise almost 95–98 percent of the total business establishments and contribute 83 percent in employment generation (Pandey, 2004; Uprety, 2016). An increasingly dynamic environment has created challenges for the development of Nepali SMEs, and they are finding it hard to survive in the new environment ushered by increased competition (Gautam, 2016). The growth in the number of cottage and small enterprises has gradually eroded, nearly half of the Nepali SMEs are on the verge of closure and more than 60 percent of those in operation are characterized by under-utilization of capacity, sickness and closure (Pandey, 2004). Recent statistics indicate that the SMEs’ failure rate is alarmingly high (Uprety, 2016), and their share to national GDP has been rapidly decreasing (MOF, 2017; IRD, 2017). But researcher’s interest in these issues is not growing in Nepal in comparison with worldwide growth, even though they have substantial impact on both individuals and on the national economy. Few research works indicated that the failures of Nepali SMEs are due to their level of lower BP and innovativeness resulting from owner’s lack of required entrepreneurship and leadership skills (Gautam, 2016; Villanger, 2015). This signifies the need of immediate inquiry on the entrepreneurship–leadership–performance relationship to identify the variables that affects BP and the failure of Nepali SMEs in the dynamic environment.

Against above scholarly and contextual gap, this study was designed to examine effects of EL and OI on BP and to understand whether OI mediates the relationship between EL and BP in the context of dynamic environment. The next section of this paper provides a brief literature review of the constructs considered for the current study, theoretical framework followed by the related hypothesis. The other section looks into the research methodology. The subsequent section reports the results, followed by a discussion of results, practical implications and limitations and future scope of the study. The last section concludes the research work.

2. Literature review

The fields of leadership and entrepreneurship have undergone parallel developments in recent time. Although they are studied separately, some researchers have tried to combine entrepreneurship with leadership, defining entrepreneurship into a new form of leadership called EL. Renko et al. (2015) explained that it entails influencing and directing the performance of group members to recognize and explore entrepreneurial opportunities for
the achievement of organizational goals. In the dynamic, uncertain and competitive environment, entrepreneurial leader creates visionary or transformational scenarios of business as well as assembles and mobilizes a supporting cast of participants committed for the vision (Gupta et al., 2004). As a new and distinctive style of evolving leadership, EL offers a break from the past and movement into the future (Leitch and Volery, 2017). Although there have been a number of conceptual and empirical studies providing some insights into this leadership, as research base, it has grown significantly since the early 1990s, but it is still in the embryonic stages of conceptual and theoretical development (Renko et al., 2015). Till date, it lacks definitional clarity and has not yet developed appropriate tools to assess its characteristics (Leitch and Volery, 2017).

Gupta et al. (2004) developed a measure of EL based on the GLOBE study and called for simultaneous accomplishment of both leadership and entrepreneurial challenges. They included five roles within two dimensions of EL: scenario enactment (framing the challenge, absorbing uncertainty and path clearing) and cast enactment (building commitment and defining gravity/specifying limits). Leadership challenge or cast enactment is to create, inspire, mobilize and deploy an appropriate cast of characters that is capable of effecting the envisioned transformation. The entrepreneurial challenge or scenario enactment is to enact a transformation of the business units to exploit opportunities as they emerge. Although EL is very much in its infancy (Leitch and Volery, 2017), in the current volatile and dynamic business environmental context, researchers argued on the importance of business leaders being more entrepreneurial to foster innovation and enhance performance, organizational capacity for adaptation, and long-term survival (Renko et al., 2015). Scholars have also noticed that the EL contributes for increased OI, creativity, higher BP, strategic management of resources and wealth creation for business ventures (Huang et al., 2014; Ranjan, 2018; Wu, 2016).

2.1 Hypothesis development

2.1.1 Direct relationship between entrepreneurial leadership, organizational innovation and business performance. A large part of the entrepreneurship research (Chen et al., 2014; Covin and Slevin, 1989; Zahra, 1991; Wiklund and Shepherd, 2005) has examined direct impacts of entrepreneurship and leadership on innovation, creativity, learning and firm performance. It is emphasized that leadership has a strong influence on creativity and innovation (Yukl, 2013). Schumpeter (1942) linked entrepreneurship with innovativeness and emphasized it as the process of creative destruction. Innovation is the ability to do something in an improved and creative way. Innovation in the context of organization indicates combinations of several forms of new activities that allow organizations to gain and sustain competitive advantage (Al-Ansari, 2014). It includes new goods or new quality of a product, methods of production, markets and sources of supply as well as a new way of firm (Deschamps, 2005; Rosenbusch et al., 2011). OECD (2005) defined OI as the implementation of a new organizational method in a firm’s business practices, workplace organization or external relationships. Different leadership skills for different types of innovations like building new product and service design, building new business models, improvement of customer solutions and improvement of products, process and service offering are recommended (Deschamps, 2005). Transformational leadership, which is much more common with EL (Gupta et al., 2004), is found instrumental for promoting and managing innovation in organizations (Bass, 2008; Chen et al., 2014). In line with these findings, this study proposes the following hypothesis:

H1. EL positively affects OI.

BP is key dependent variable of interest for researchers in any area of management. It can be a reference to how the firm achieved substantial success in its activities. It refers to ability of an enterprise to achieve goals such as high profit, quality product, large market share, good
financial results and survival at a pre-determined time (Koontz and Donnell, 1993). OI is a mechanism by which firms can draw upon core competencies and alter these into performance outcomes critical for success (Vincent et al., 2005; Rosenbusch et al., 2011). The firm must be innovative to gain a competitive edge in order to survive and grow (Gronhaug and Kaufmann, 1988). Scholars argued that exploitative and exploratory innovation in organization (Huang et al., 2014) as well as product and service innovations (Koellinger, 2008) contribute for increased enterprise performance. There are some inconsistent and inconclusive results (Vincent et al., 2005); however, most of the studies provide empirical support for positive effect of innovation on performance (Huang et al., 2014; Koellinger, 2008; Rosenbusch et al., 2011). Based on these information’s, the present study hypothesizes the following:

**H2.** OI positively affects BP.

Similarly, several studies (e.g. Ensley et al., 2006; Huang et al., 2014; Wu, 2016) found direct positive effects of EL on profitability, growth and strategies of firm. In their meta-analysis, Harrison et al. (2016) confirmed that EL is an important factor in enhancing organizational performance across different environments. Although none of the researchers studied EL in the Nepali context, some reviewed transformational leadership, which is more similar to EL, and revealed that it positively influences organizational performance (e.g. Shrestha, 2012). In line with these findings, this study proposes the following hypothesis:

**H3.** EL positively affects BP.

2.1.2 Organizational innovation as mediator. Several studies indicated that innovation as well as creativity mediates the relationship between leadership and performance (Jansen et al., 2009; Sethibe and Steyn, 2015). Jansen et al. (2009) argued that innovation mediates the relationship between strategic leadership and performance in business organization. Huang et al. (2014) stated that the entrepreneurial leaders can effectively recognize and exploit entrepreneurial opportunities, promote creativity of followers and enhance the innovative capability of business ventures, which subsequently result in superior performance. Wu (2016) supported that the EL is required for organizational learning and creativity, which, in turn, stimulates firm’s performance. Based on these information’s, present study hypothesizes the following:

**H4.** OI mediates the relationship between EL and BP.

2.1.3 Environmental dynamism as moderator. Empirical and theoretical evidence suggests that EL enhances innovation and innovation contributes to performance. However, the direct and indirect effects occur against the backdrop of powerful environmental variable. Organizational and management theories report environment as a key factor that influences leadership, innovation and performance (Bass, 2008; Yukl, 2013). Scholars argued that entrepreneurial leaders are required in dynamic environment where the traditional business and leadership approaches for better organizational performance are seen ineffective (Gupta et al., 2004; Leitch and Volery, 2017; Renko et al., 2015). ED means unpredictability, degree of variability and frequency of change of external environment of a firm (Lumpkin and Dess, 2001; Omri, 2015). Dynamic environments are characterized by unpredictable and rapid change, which also increases uncertainty for individuals and firms operating within them (Dess and Beard, 1984; Duncan, 1972). Conversely, a stable environment is characterized by certainty, predictability and routine situations, which create little ambiguity about future directions and exert minimal pressure on leaders and firms (Huang et al., 2014). In comparison to a stable environment, the uncertainties of ED result in organizational contexts characterized by stress, anxiety, pressure and risk (Ensley et al., 2006). The company leader must be responsive for scanning the external business environment in
order to adopt innovative strategy and improve company performance, as dynamic business environment offers important market opportunities (Omri, 2015). When rivalry grows fierce, companies need to innovate product and services, explore new markets and find novel ways to compete (Vincent et al., 2005; Zahra, 1991). In this context, leaders need to encourage followers to view the changing environment as a source of opportunity and favor change and innovation to obtain a competitive advantage for their firm (Gupta et al., 2004). The dynamic environment allows entrepreneurial leaders to generate a collective feeling of their followers to recognize and explore opportunities (Renko et al., 2015). Entrepreneurial leaders encourage groups to challenge the status quo, take radical changes and innovative action by framing the challenge and absorbing uncertainty (Gupta et al., 2004; Huang et al., 2014). In an increasingly turbulent and competitive environment, they nurture creativity and support innovation, such as rapid product and service design, development and commercialization (Gupta et al., 2004). Scholars found a strong association between ED and EL on OI (Huang et al., 2014).

Moreover, the relationship between the innovation and performance is also moderated by ED (Huang et al., 2014; Jansen et al., 2009; Omri, 2015; Vincent et al., 2005). In dynamic environments, those who simultaneously consider more alternatives tend to outperform than those who do not (Judge and Miller, 1991). Businesses in this situation confront the challenge that existing products and/or services deteriorate quickly and earnings quickly diffuse to rivals (Zahra and Bogner, 2000). The uncertainty and dynamism of the environment may push managers to rely on their creative abilities to generate and implement creative solutions and ideas of new products and processes (Omri, 2015; Vincent et al., 2005). To minimize this, firms devote resources to R&D that actively acquires new technologies, scans emergent customer preferences as well as designs and innovates new product and services (Yang and Li, 2011). Consequently, it creates opportunities for above normal returns, which can lead to superior performance (Huang et al., 2014). Conversely, in a stable environment, there are few environmental disturbances and less uncertainty about future directions. So, firms do not acquire new skills and use existing and outdated practices, established knowledge, skills and related processes and resources, which impair business results (Huang et al., 2014). Extant research works also suggest that innovative firms can achieve higher performances in volatile and hostile environments (Lumpkin and Dess, 2001; Omri, 2015). Therefore, a positive interaction effect of ED or a close association between EL and BP is likely to be facilitated under a dynamic environment than in a stable environment in the South Asian context too. Based on above evidence and information, this study proposes the following hypotheses:

**H5.** ED moderates the relationship between EL and OI such that the relationship will be more strongly associated under a dynamic environment than in a stable environment.

**H6.** ED moderates the relationship between OI and BP such that the relationship will be more strongly associated under a dynamic environment than in a stable environment.

### 2.1.4 Moderated mediation relationship

Various scholars explored a moderating role of ED with strategic leadership behavior on different types of OIs (i.e. exploratory and exploitative) and those innovations on firm’s performance (Jansen et al., 2009). Huang et al. (2014) also confirmed the moderating effects of ED on linkages between EL, innovation and new ventures performance. Although prior studies studied direct relationship and mediating relationship between these variables as well as simple moderating role of environmental uncertainty and dynamism between their interrelations, none of the research works have been found on moderated mediation relationship between these four variables in a same model. To fully understand the influence of ED, it should be considered as
moderator in a model that includes OI as a mediator between EL and BP. Based on above information, the following hypothesis is proposed:

\[ H7. \text{ ED moderates the mediating effect of OI on the relationship between EL and BP such that the relationship will be more strongly associated under a dynamic environment than in a stable environment.} \]

The theoretical model of this moderated mediation relationship is depicted in Figure 1.

### 3. Research methodology

The design of this research can be described as non-experimental and cross-sectional one. Self-reported questionnaire technique was adopted to collect responses from the owners and top-level executives of SMEs.

#### 3.1 Measures and development of the questionnaire

For the questionnaire, four survey instruments with five sections were used. The first section was based on EL. It was measured by a 24-item scale adapted from Gupta et al. (2004). This measurement incorporates five constructs, namely framing the challenge, absorbing uncertainty, underwriting, building commitment and defining gravity. The scale has been widely used with Cronbach’s α 0.90 (Huang et al., 2014).

The second section was related with OI scale. It was measured with a ten-item scale adapted from Al-Ansari (2014), which was also used by other researchers (Blumentritt and Danis, 2006). The scale includes OI in terms of the ability of the firm to seek new and better management and administrative systems, internal cultures, processes, products, services, distributing channels and marketing methods–segments within a determined time period. Cronbach’s reliability coefficient for this scale was deemed acceptable (CA = 0.932) (Al-Ansari, 2014).

The third section was based on the ED. It was measured with a six-item scale adopted from Omri (2015). The scale was used by various researchers to assess ED (e.g. Jansen et al., 2009; Miller and Friesen, 1982). The scale identifies the degree of major changes in market-related aspects (e.g. customer demand, intensive R&D and intensity of competition) to obtain a measure of the market dynamism within the industry. The internal consistency for all six items was 0.91 (Omri, 2015).

The fourth section was related with BP scale. The scale contains nine items containing two dimensions (financial and non-financial performance). Financial performance includes outcome on return on assets, financial liquidity and net profits, whereas non-financial performance includes both growth-related (sales growth, number of employees growth and market share growth) and other factors (customer satisfaction, ability to new product development and differentiation in goods and services). In order to better evaluate venture performance, the Likert scale was adopted, as SMEs’ financial performance is not required to be made public as well as owners are also reluctant to provide actual financial figure. This scale was based upon firm owners’ perception and evaluation of how their firm fared up with

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**Figure 1.**

Theoretical model of the study (PROCESS Model 58)
the largest competitor in the market. As the original construct of BP, with six items adapted from Omri (2015), has low internal consistency reliability ($CA = 0.684$, Omri, 2015), this research included three more performance items to make it more reliable and acceptable.

Although there are other competitive scales for constructs used in this type of research, the researcher selected the best and the most suitable scales based on validity of different competitive scales, their number of usage and replication of those scales in different countries as well as their specific applicability in the research works related to SMEs.

The fifth section of the questionnaire was intended to collect demographic and business information. It included 13 different items. In data analyses, different demographic variables (respondent’s age, gender, ethnicity, education and type and firm’s type, nature, age and size) are used as control variables. Except for demographic variables and BP, responses for items were obtained on a five-point Likert-type scale, ranging from “strongly disagree” to “strongly agree.” The BP items were measured on a five-point Likert-type scale, ranging from “extremely low performance” to “extremely high performance.” The average of the individual item scores was regarded as the scale’s score, with high overall scores on the scale reflecting a greater tendency toward individual variable.

The questionnaire was initially translated from English to Nepali, followed by a reverse verification from Nepali back to English to develop it into Nepali version. A pilot test was carried out with ten prospective respondents and suggestions were incorporated to develop the final Nepali version questionnaire to administer on the desired sample.

3.2 Population and sampling design
This study selected Pokhara as sample place, and the number of enterprises registered as members with Pokhara Chamber of Commerce and Industry (PCCI) as the proposed population. Pokhara was selected for its importance in Nepal’s economy as a prominent business center. It is Nepal’s largest metropolis in terms of area and is a major tourist destination with substantial business activities. The total number of members of PCCI is 2,460, and almost all of them are SMEs. Therefore, this was assumed to be preliminary population for the study.

Stratified judgment sampling method was adopted to choose the sample from the population to include entrepreneurs from various ethnic groups, demographic backgrounds as well as of diverse business natures (manufacturing, trading and service), sizes (small and medium) and types (private, proprietorship and partnership). The sampling also used some snowball methods so that more people from a specific community and business were covered.

3.3 Administration of the questionnaire
The questionnaire was administered in September–December, 2017. The questionnaire mentioned to relate leadership style statements only with owner–employee relationship and OI and BP statements with leadership of enterprise. Out of 520 questionnaires distributed, a total of 256 (49.23 percent) were returned. After a careful scrutiny of incomplete responses, 243 valid questionnaires formed the final sample for this study. As 245 was the required sample size as per the thumb of rule (five observations for one item) for a questionnaire with 49 items for multivariate analysis (Hair et al., 2010), the final usable questionnaires were good for generalization of results.

3.4 Data analysis
3.4.1 Preliminary data analysis. Descriptive statistics was used to check the error on coding and entering the data through dispersion, central tendency and normality. Correlation and variance inflation factor was calculated to assess multicollinearity. Furthermore, heteroscedasticity test was checked to examine whether the initial raw data demonstrate
any violation of the assumptions of multivariate analyses. These assessments indicated that sample was adequate for factor analysis, running goodness of measures and model analysis. Moreover, to test the common method variance, Harman’s single-factor test was conducted. The subsequent results of factor analysis for all variables are below 50 percent cut-off point (Podsakoff et al., 2012) (EL, 35.44 percent, OI, 47.78 percent, ED, 45.55 percent, business performance, 40.49 percent), indicating that data set did not suffer from common method variance. Additionally, Kaiser–Meyer–Olkin (KMO) and Bartlett’s test of sphericity, measures of sampling adequacy were reviewed before further analysis. The value of the KMO for EL (0.91), OI (0.90), ED (0.82), BP (0.81) and overall variable (0.87) would be labeled as “meritorious” as per the Kaiser criterion (Kaiser, 1974). Similarly, significant values on Bartlett’s test for all variables also indicate validity and suitability of the responses, thereby indicating that sample is adequate for factor analysis and to test reliability and validity of measures. Thus, raw data were used for goodness of model and measures analyses.

3.4.2 Confirmatory factor analysis (CFA). A CFA was conducted using structural equation modeling to analyze goodness of fit of model for each variable. The study analyzed modification indices to check covariance between two errors and found no discrepancies in error terms of different items. The goodness-of-fit indices of EL ($\chi^2 = 524, \chi^2/df = 2.193$, GFI = 0.842, AGFI = 0.801, NFI = 0.787, RMSEA = 0.07, PCLOSE = 0.00, CFI = 0.870 and TLI = 0.849), OI ($\chi^2 = 73.48, \chi^2/df = 2.226$, GFI = 0.943, AGFI = 0.906, NFI = 0.920, RMSEA = 0.071, PCLOSE = 0.055, CFI = 0.954 and TLI = 0.937), ED ($\chi^2 = 13.8, \chi^2/df = 1.533$, GFI = 0.98, AGFI = 0.954, NFI = 0.952, RMSEA = 0.047, PCLOSE = 0.486, CFI = 0.982 and TLI = 0.971) and BP ($\chi^2 = 73.318, \chi^2/df = 3.055$, GFI = 0.938, AGFI = 0.883, NFI = 0.892, RMSEA = 0.092, PCLOSE = 0.002, CFI = 0.923 and TLI = 0.884) suggested that all variables were fit for this study. Thus, all four scales of measures were appropriate for inclusion in further analyses.

Moreover, a series of CFA on the data set were carried out to review overall model fit. Initially, a CFA on the full measurement model was carried out, in which all items loaded onto their latent factors as intended. Results of sequential tests revealed that the model fit of the intended model with four distinct variables was better ($\chi^2 = 1.875, \chi^2/df = 1.712$, $p = 0.00$, RMR = 0.075, GFI = 0.761, AGFI = 0.733, NFI = 0.673, RMSEA = 0.054, PCLOSE = 0.048, CFI = 0.829, IFI = 0.832 and TLI = 0.816) than all other models with three, two and one factor. A single-factor model formed by combining all items of four variables had a poor fit to the data ($\chi^2 = 3.282.24, \chi^2/df = 2.913, p = 0.00$, RMR = 0.104, GFI = 0.571, AGFI = 0.534, NFI = 0.427, RMSEA = 0.054, PCLOSE = 0.00, CFI = 0.526, IFI = 0.531 and TLI = 0.506) as compared to the four-factor model. The model fit indices of four-factor model of this study also provided discriminant validity and four constructs captured distinct vs common source effect. Thus, the four-factor model was found better fit in this study than other alternative models.

3.4.3 Validity. To assess convergent validity, the standardized factor loadings and correlation among the items and their underlying dimensions, squared multiple correlations, the average variance explained (AVE) and composite reliability for each factor were calculated. Convergent validity can be established when all factors have correlation coefficient greater than 0.50, squared correlation more than 0.20, an AVE greater than 0.50 and composite reliability more than 0.70 (Al-Ansari, 2014; Wu, 2016). Although AVE of EL (0.32), OI (0.38), ED (0.42) and BP (0.39) are lower than 0.50, other indicators indicated good convergent validity. For EL variable, the standardized path coefficient and correlation of all items except one were higher than 0.50, squared correlations of all items except one were higher than 0.20 and composite reliability of the variable was 0.92, indicating that this variable demonstrates adequate convergent validity. Similarly, for OI variable, the standardized path coefficient and correlation of all items were higher than 0.61, squared correlations of all items were higher
than 0.38 and composite reliability of the variable was 0.87, indicating that this variable demonstrates good convergent validity. Additionally, for ED variable, the standardized path coefficient and correlation of all items were higher than 0.63, squared correlations of all items were higher than 0.4 and composite reliability of the variable was 0.81, indicating that this variable also demonstrates good convergent validity. Similarly, for BP variable, the standardized path coefficient and correlation of all items were higher than 0.58, squared correlations of all items were higher than 0.34 and composite reliability of the variable was 0.84, indicating that BP variable demonstrates good convergent validity. Thus, all four study variables have shown adequate convergent validity.

To examine discriminant validity, factor analysis was done and rotated component matrix was generated for four factors. The result supported discriminant validity at the item level, as items from same variable were strongly loaded, whereas they were poorly loaded to all other factors. In order to ensure discriminant validity, measurement scales should demonstrate low correlations (Sekaran, 2003). A very high value for the correlation coefficient (i.e. > 0.85) between different variables indicates that variables are likely to measure the same construct and should be combined into a single measurement variable. Thus, test for discriminant validity was done through analyses of correlation coefficient, squared correlation coefficient and AVE between each variable. The correlation coefficient values of all variables were below 0.56, which indicated good discriminant validity of these four variables. Furthermore, a comparison between the AVE values and squared correlations was also examined. All variables meet the criteria that squared correlation between each variable was less than AVE. Thus, these results indicated good discriminant validity of the variables used in this study.

3.4.4 Reliability. A reliability analysis for each instrument was carried out by calculating Cronbach’s $\alpha$. The values of internal consistency for EL, OI, ED and BP were 0.92, 0.88, 0.76 and 0.82, respectively. Alfa consistency of all four instruments crossed basic standard (0.70) and was considered as internally reliable, that is they measured the concepts which they intended (Nunnally, 1978).

3.4.5 Comparison of sample with population. Based on registration types, in the population, the largest number of businesses was of proprietorship (83.1 percent), followed by private limited companies (14.4 percent) and partnership companies (2.5 percent). The total sample size consists 63.4 percent of proprietorship SMEs, 25.9 percent private limited companies and 10.7 percent of partnership firms. Although this composition of sample did not match exactly with the population, the ranking of population is reflected in the sample of this research, indicating its generalizability.

3.4.6 Demographic analysis. An analysis of statistics of demographic and business variables obtained in the questionnaire was carried out. Out of the total 243 respondents, 90.5 percent were owners and 9.5 percent were from top managerial level of business enterprises. The majority of the respondents were male (88.5 percent), having bachelor’s degree or above (58.9 percent) and with age above 30 years (74.1 percent). The gathered responses were also from different ethnic groups (Newar, 21.8 percent, Marwari/Madhesi, 2.1 percent, Janajati, 10.7 percent, Bramin/Chhetri, 58 percent, Dalit, 4.9 percent and Muslim, 2.5 percent).

The firm’s characteristics showed that 28 percent had more than 10m annual sales, 35.4 percent had more than 10m investments and 17.3 percent had above ten employees, and these were considered as medium-level enterprises for this study. The rest of the businesses were considered as small-level enterprises. Only about 30 percent of the responding firms had age less than five years, whereas about 55 percent were within 5–20 years age category, and rest of the businesses were above 20 years of age category. The sample contained 63.4 percent from proprietorship business, 10.7 percent were from partnership and 25.9 percent were from private limited firms. The nature of business was
characterized into manufacturing (21.8 percent), service (39.9 percent) and trading businesses (38.3 percent).

The independent sample t-test and one-way analysis of variance (ANOVA) were conducted to determine whether there exist any differences among different group of subjects (socio-demographic and business) in EL, OI, ED and BP. As some significant differences between comparison groups were assessed, these socio-demographic and business characteristics were included as control variables for correlation, regression and hypotheses analyses.

3.4.7 Nature and strength of relationships between study variables. Pearson correlation was compiled among the study variables controlling different socio-demographic and business characteristics variables. The results of correlation analysis presented in Table I show that all the relationships between the study variable are positive and statistically significant. The results indicated that all independent and dependent variables are in the expected direction.

3.4.8 Assessment of direct and indirect relationships. While estimating regression equations, in the first model, control variables (respondent’s gender, age, ethnicity, education and type and SME’s nature, age and size based on number of employees, annual sales and total investment) were introduced as some variables were found significant for study variables. Prior entrepreneurial studies used ED, environmental hostility and other environmental issues as control variable based on their association with the firm performance, the dependent variable (Hameed and Ali, 2011). Thus, this research also used ED as control variables to partial out its impact and determined the true effect of independent variables on BP. To examine the direct relationships (H1–H3), dependent variable was regressed on independent variable of each hypothesis including control variables through hierarchical regression. The indirect relationships were assessed to understand mediating effect (H4), moderating effect (H5 and H6) and moderated mediation effect (H7). To examine indirect relationships, different PROCESS models (Hayes, 2018) were considered including study variables and control variables.

4. Results
4.1 Direct relationships
Hierarchical regression results showed that EL has a significant and positive effect on OI ($\beta = 0.58$, $p = 0.00$). It was also verified by ANOVA test ($F = 8.85$) and significant $p$-value, thus suggesting full support for H1. Regression of OI on BP indicated that OI was related significantly ($p = 0.00$) and positively ($\beta = 0.24$) to BP. It was also verified by ANOVA test ($F = 3.74$, $p = 0.00$), thus suggesting full support for H2. $\beta$ estimate and $p$-value of EL on BP were found positive and significant ($\beta = 0.25$, $p = 0.00$), with significant $F$-value (3.51), thus indicating that results are consistent with H3.

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<tbody>
<tr>
<td>Entrepreneurial leadership (EL)</td>
<td>3.87</td>
<td>0.62</td>
<td>0.32</td>
<td>(0.92)</td>
<td>0.28</td>
<td>0.02</td>
<td>0.08</td>
</tr>
<tr>
<td>Organizational innovation (OI)</td>
<td>3.67</td>
<td>0.73</td>
<td>0.38</td>
<td>(0.53**)</td>
<td>(0.88)</td>
<td>0.09</td>
<td>0.10</td>
</tr>
<tr>
<td>Environmental dynamism (ED)</td>
<td>3.35</td>
<td>0.74</td>
<td>0.42</td>
<td>0.15*</td>
<td>0.30**</td>
<td>(0.76)</td>
<td>0.02</td>
</tr>
<tr>
<td>Business performance (BP)</td>
<td>3.72</td>
<td>0.59</td>
<td>0.39</td>
<td>0.29***</td>
<td>0.32**</td>
<td>0.15*</td>
<td>(0.82)</td>
</tr>
</tbody>
</table>

Table I. Correlation, reliability and validity coefficients of study variables

Notes: Control variables: respondent’s gender, age, ethnicity, education and type; SME’s type, nature, age and size (number of employees, annual sales and total investment), dummies used as per necessary. Cronbach’s $\alpha$ of construct appears on the main diagonal. Values in left of diagonal are discriminant values and values in right of the diagonal are squared correlation. *$p < 0.10$; **$p < 0.05$
4.2 Mediating effects of organizational innovation

To show mediation relationship, many scholars followed suggestions made by Baron and Kenny (1986) and Sobel test (Hayes, 2018). But recently scholars suggested that bootstrapping method is superior to Baron and Kenny’s four steps and Sobel test for mediation (Hayes, 2018). Thus, in this research, mediating effects of OI on the relationship between EL and BP were assessed by using bootstrapping through PROCESS Model 4 (Table IV, Models 1, 3, 4), controlling ED, demographic and business characteristics as covariates. As per PROCESS, to mediate, zero should not lie between the indirect effect’s 95% bootstrap confidence interval. But if zero lies between indirect effect’s confidence interval, it rejects the mediation relationship.

In the present study, 95% of bias-corrected bootstrap confidence interval of the direct and indirect effects was obtained with 5,000 number of bootstrap resample. The results indicated that the total effect of EL on BP was 0.2533 (CI = 0.1357–0.3710, p = 0.00). Out of the total effect, the direct effect of EL on BP was only 0.1520 (CI = 0.0168–0.2873, p = 0.00). The indirect effect of EL on BP through OI was 0.1013. The indirect effect’s confidence interval indicates that zero does not lie between the bootstrapping lower and upper confidence interval (LLCI = 0.0314 and ULCI = 0.1882). This signifies that OI mediates the relationship between EL and BP, thus suggesting full support for H4.

4.3 Assessment of moderating effects

The PROCESS Model 1 suggested by Hayes (2018) was followed to assess moderating effects (H5 and H6) and examine intervals of direct and indirect effects. For moderation to be significant, both interaction and conditional effects must be significant. For this condition, zero should be outside the lower and upper confidence interval. For H5, interaction effect between independent variable (EL) and moderator (ED) on dependent variable (OI) was examined. It was found that beta estimate of interaction (ED×EL) was negative (β = −0.26) and significant (p = 0.00) (Table IV, Model 2). Furthermore, overall moderation regression model was significant (R = 0.65, R² = 0.43, F = 9.27, p = 0.00). Moreover, it was observed that zero does not lie between the lower and upper confidence interval (LLCI = −0.4213 and ULCI = −0.1004) of interaction, which signifies that ED as moderator is significant. Then, in order to identify the condition under which this moderator was significant, conditional effect was checked. Values of conditional effect indicate that zero does not lie between the confidence interval at all levels of ED, that is low, medium and high (Table II). The plot of moderation result (Figure 2) indicated that the moderation was significant at both dynamic and static levels of ED.

For H6, interaction effect between independent variable (OI) and moderator (ED) on dependent variable (BP) was examined. The result showed β estimate of interaction (ED×OI) was negative (β = −0.11) and significant at p-value of 0.06 (Table IV, Model 5). Furthermore, overall moderation regression model was significant (R = 0.48, R² = 0.23,

<table>
<thead>
<tr>
<th>Level of moderator</th>
<th>Effect</th>
<th>SE</th>
<th>T</th>
<th>P</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Conditional effects of EL (X) on OI (Y) at levels of the moderator (ED): H5</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>0.7188</td>
<td>0.0761</td>
<td>9.4406</td>
<td>0.0000</td>
<td>0.5688</td>
<td>0.8689</td>
</tr>
<tr>
<td>Medium</td>
<td>0.5266</td>
<td>0.0655</td>
<td>8.0428</td>
<td>0.0000</td>
<td>0.3976</td>
<td>0.6557</td>
</tr>
<tr>
<td>High</td>
<td>0.3344</td>
<td>0.0999</td>
<td>3.3489</td>
<td>0.0010</td>
<td>0.1376</td>
<td>0.5312</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level of moderator</th>
<th>Effect</th>
<th>SE</th>
<th>T</th>
<th>P</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Conditional effects of OI (X) on BP (Y) at levels of the moderator (ED): H6</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>0.2906</td>
<td>0.0578</td>
<td>5.0292</td>
<td>0.0000</td>
<td>0.1768</td>
<td>0.4045</td>
</tr>
<tr>
<td>Medium</td>
<td>0.2069</td>
<td>0.0557</td>
<td>3.7178</td>
<td>0.0000</td>
<td>0.0972</td>
<td>0.3166</td>
</tr>
<tr>
<td>High</td>
<td>0.1232</td>
<td>0.0819</td>
<td>1.5042</td>
<td>0.1339</td>
<td>−0.0382</td>
<td>0.2845</td>
</tr>
</tbody>
</table>

Table II. Moderation results: conditional effects
Moreover, it was observed that zero lies between the lower and upper confidence interval (LLCI = -0.2310 and ULCI = 0.0037), which signifies that ED as moderator is significant only at p-value of 0.06. Then, in order to identify the condition under which this moderator was significant, conditional effect was checked. Values of conditional effect indicate that zero does not lie between the confidence interval at two levels of ED, that is low and medium (Table II). But zero is between the confidence interval at high level of ED (LLCI = -0.0382 and ULCI = 0.2845). This moderation result is shown in Figure 3. From the conditional effect and plot analysis, it can be concluded that ED moderates the relationship between OI and BP only at low and medium level of ED and not at high level of ED.

In both Figures 2 and 3, two curves of ED (static and dynamic) are not parallel and sloped positively. The curve of dynamic environment above the curve of static environment indicated that dynamic environment leads toward higher level of OI or BP than static environment. But their slope indicates that static environment has the steeper slope than dynamic environment. This was also observed from regression coefficient results. As β value of interaction term was negative (ED×EL: β = -0.26, p = 0.00 and ED×OI: β = -0.11, p = 0.06 for H5 and H6, respectively), this indicates that the more positive the ED (or situation of dynamic environment), the more negative the effect of independent variable (EL or OI) on BP becomes. Alternatively, the more negative the ED (or situation of static environment), the more positive the effect of independent variable on BP becomes. Although these results showed that ED moderates the relationships, contrary to the prediction, that is the relationship will be more strongly associated under a dynamic environment.
environment than in a stable environment, the findings specify that the relationship is weaker under a dynamic environment than in a stable environment; thus, $H5$ and $H6$ are not supported.

4.4 Moderated mediation relationship between EL and BP

Initially, the PROCESS Model 7 was followed to test moderated mediation relationship. For moderated mediation (Preacher et al., 2007), first, independent variable should be associated with dependent variable. The EL has a significant effect on BP of SMEs (support of $H3$), which satisfies this first condition. Second, it was investigated whether there is a significant interaction between EL and the proposed moderator, ED on OI ($H5$). It was observed from the model results that zero does not lie between the lower and upper confidence interval ($LLCI = -0.4213$ and $ULCI = -0.1004$ with $p = 0.00$) of interaction term (EL×ED) (Table IV, Model 2). This signifies that ED as moderator is significant. Third, the coefficient results indicate that both independent (EL; $\beta = 0.1512$, $LLCI = 0.0160$ and $ULCI = 0.2864$ with $p = 0.03$) and mediating variables (OI; $\beta = 0.192$, $LLCI = 0.0735$ and $ULCI = 0.3049$ with $p = 0.00$) are significant to predict BP (Table IV, Model 6). Hence, the third condition for moderated mediation as set forth by Preacher et al. (2007) has been supported.

To test the fourth condition, it was examined whether the magnitude of the conditional indirect effect of EL through OI is different at high vs low levels of ED on BP. The results revealed that the indirect conditional effects of EL and OI as mediator were significant at all three (low, medium and high) levels of moderator for BP (Table III).

At last, the index of moderated mediation was examined and found to be $-0.0494$ (Table III). The value zero does not lie between the lower and upper confidence interval ($LLCI = -0.1207$ and $ULCI = -0.0064$) of index, which further supports moderated mediation relationship. Thus, it can be concluded that ED moderates the mediating effect of OI on the relationship between EL and BP. But the negative value ($-0.0494$) of index of moderated mediation again indicates that the indirect effect of EL on BP via OI is weaker under a dynamic environment than in a stable environment. Thus, the moderation is just reverse to the predicted hypothesis, suggesting rejection of $H7$ and indicating that ED weakens the mediating relationship.

Additionally, Model 58 of PROCESS for moderated mediation was assessed. Again, contrary to the prediction, it also proved the negative interaction of ED with independent and mediating variables on dependent variables (BP) (Table IV, Models 2 and 7). The conditional indirect effect of EL on BP through OI at different values of the ED indicates that only at low and medium level of EL, BP is higher (Table III). At high level of EL, BP is

<table>
<thead>
<tr>
<th>Mediator</th>
<th>Level of moderator</th>
<th>Effect</th>
<th>SE</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>OI</td>
<td>Low</td>
<td>0.1360</td>
<td>0.0461</td>
<td>0.0544</td>
<td>0.2400</td>
</tr>
<tr>
<td>OI</td>
<td>Medium</td>
<td>0.0997</td>
<td>0.0352</td>
<td>0.0396</td>
<td>0.1842</td>
</tr>
<tr>
<td>OI</td>
<td>High</td>
<td>0.0633</td>
<td>0.0344</td>
<td>0.0177</td>
<td>0.1599</td>
</tr>
</tbody>
</table>

Index of moderated mediation

<table>
<thead>
<tr>
<th>Mediator</th>
<th>Level of moderator</th>
<th>Effect</th>
<th>SE</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>OI</td>
<td></td>
<td>$-0.0494$</td>
<td>0.0276</td>
<td>$-0.1207$</td>
<td>$-0.0064$</td>
</tr>
</tbody>
</table>

Table III. Moderated mediation results: conditional indirect effects

<table>
<thead>
<tr>
<th>Mediator</th>
<th>Level of moderator</th>
<th>Effect</th>
<th>SE</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>OI</td>
<td>Low</td>
<td>0.1591</td>
<td>0.0521</td>
<td>0.0644</td>
<td>0.2678</td>
</tr>
<tr>
<td>OI</td>
<td>Medium</td>
<td>0.0756</td>
<td>0.0378</td>
<td>0.0084</td>
<td>0.1588</td>
</tr>
<tr>
<td>OI</td>
<td>High</td>
<td>0.0219</td>
<td>0.0365</td>
<td>$-0.0338$</td>
<td>0.1204</td>
</tr>
</tbody>
</table>
insignificant, compared with dynamic and static environment. This indicates that at dynamic environment, business owners with high level of EL are not able to generate higher performance. These results confirm that EL seems to be somewhat more effective for innovation in static environment, and innovation leads to higher BP more in static environments than in dynamic environments. Hence, these results not only reject H7 but also reiterate that the ED weakens the mediating effect of OI between EL and BP.

5. Discussion
Some prior research works suggested that an owner’s EL can significantly enhance OI, which ultimately supports to increase BP (Huang et al., 2014). Although the importance of EL in changing environment (Gupta et al., 2004; Renko et al., 2015) and its relationships with innovation and performance in SMEs has been highlighted (Huang et al., 2014), their relationship still remains imprecise in developing countries. Thus, this study developed a theoretical moderated mediation model integrating EL, OI, ED and BP variables and examined their relationship to clarify the complete picture in the South Asian context. The empirical results strongly support the direct positive effects of EL on OI and BP. These results are in line with some recent research (e.g. Huang et al., 2014; Wu, 2016) and indicate that EL is meaningful for Nepali SMEs to stimulate innovation and higher performance. This endorses that this leadership style is necessary for managing and promoting learning, creativity and innovation in organizations. The results of study also confirm that OI is positively related to BP. Consistent with other literature works (Al-Ansari, 2014; Gronhaug and Kaufmann, 1988; Koellinger, 2008; Omri, 2015), the findings from the current study also suggest that an increased level of OI contributes for higher level of performance. Thus, it can be argued that the firm must be innovative to gain a competitive edge and higher BP for its survival and growth. These results are also consistent with the findings of some Nepali studies (e.g. Shrestha, 2012), which have empirically shown that leadership style positively influences performance. The empirical results also support the mediating role of OI in the relationship between EL and BP of Nepali SMEs. This confirms previous findings that entrepreneurial leaders can also enhance SMEs performance indirectly by increasing OI (Huang et al., 2014; Jansen et al., 2009; Wu, 2016). Thus, by identifying and practicing EL activities, SMEs can move rapidly to gain different OI advantages, which can consequently increase their financial and non-financial performance. Building on this relationship, Nepali
SME owners should act as an entrepreneurial leader to increase innovation in their SMEs, which further exerts higher level of BP. Therefore, Nepali SME owners need to have key aspects of EL, namely scenario enactment (framing the challenge, absorbing uncertainty and path clearing) and cast enactment (building commitment and specifying limits), to increase their innovativeness for higher BP.

But the empirical findings of this study strongly reject possibility of positive moderating effects of ED on the direct and indirect (mediation) relationship. Interestingly, the results found that the level of ED may have a considerable influence on innovation as well as on firm’s performance, but its interactive role is negative. Moreover, this study also confirmed that the OI mediates to increase role of EL for higher performance; however, contrary to the prediction, it explored that the inclusion of ED in the model weakens the relationship in Nepali SMEs context. These patterns are unexpected under simple moderation as well as on the moderated mediation model, but they are consistent with several past studies (e.g. Huang et al., 2014; Omri, 2015; Vincent et al., 2005). Although positive correlation between ED and BP, many scholars (e.g. Huang et al., 2014; Jansen et al., 2009; Omri, 2015) found that the dimension and degree of moderation can be different for different types of leadership and innovation. Huang et al. (2014) found that a highly dynamic environment can negatively affect the relationship between EL and exploitative innovation. In line with that result, this study has also found that ED weakens (negatively moderate) the relationship between EL and OI and OI and BP. The rationale behind these negative interaction results in this study is that in complex and extremely unstable environments, SMEs are less motivated for EL and OI (Omri, 2015). This indicates that in complex environment, Nepali SMEs are not successful to generate higher level of OI and BP. One possible reason for the reverse results might be that Nepali SMEs owners are less motivated for EL and innovation in a high degree of ED, considering increased financial burden of innovative activities and uncertainty about return of investment in short-term crisis situation. Moreover, this research contributes to the existing literature that ED differently moderates the EL and OI, with their less effect on BP, thus supporting the claims (Huang et al., 2014; Jansen et al., 2009) that the ED should be considered to fully understand the effectiveness of leadership. Another possible explanation for these contradictory results is that the current scale of EL may not be universal. This result reiterates that Anglo-American theories, variables and measures may not be true in other contexts, especially in South Asia due to its distinct culture and existence of unique challenges (Khilji and Mathews, 2012; Menon, 2016). They need to be comprehensively examined to explore how leadership in Asia may be different from what it is observed in western contexts (Arvey et al., 2015). Hence, this research supports the claim “entrepreneurial leadership is still in infancy” (Leitch and Volery, 2017) and argues that more research is still required to broaden EL theory. Thus, upcoming researchers need to explore the characteristics of non-western entrepreneurial leaders and incorporate them in an improved EL construct, which should be critically reviewed in different environmental contexts to ensure its global applicability.

6. Limitations and future research implications

Although this research has explored negative interaction of ED on the studied relationship, it provides ground for further research to critically review EL construct as well as its relationship with different variables across countries and regions. Besides this prospect, this study has a number of limitations, which also provide opportunities for future research.

First, the participants of this study were only from Pokhara Valley of Nepal. Research on other cities, business sector, other nations and other different socio-cultural and economic context may give different results. All these results might be different due to local context; hence, future researchers could review these outcomes in their own context as well as explore reasons for them. Second, all measures on EL behavior, OI, ED and BP were
evaluated by either the owners or the top managers of SMEs. The use of self-reported measures might encourage self-response bias. In future research, the study can be extended by the collection of data from multiple raters (employees as well as employer) on the measured variables to address this bias. For example, responses for owner’s leadership style and OI can be obtained from employees as well as responses for BP and ED can be obtained from owner for the research.

Third, since many SMEs refuse to provide/reveal their actual financial performance, this study adopted subjective measures for BP. This might also encourage performance evaluation bias, so upcoming researchers can adapt actual financial performance measures to review and validate this research results. Fourth, this research mainly focused on SMEs, so future studies could be interesting to investigate large firms (financial institutions, manufacturing industries, etc.) and determine if they have similar findings as of SMEs. The results of the study can be more accurate by finding homogeneous businesses in sample based on their activities, nature (manufacturing, trading and service), types and size.

Fifth, this study employed a cross-sectional research design, where in data were collected at the same time. So, any causal relationship cannot be inferred from this research. So, future works should consider adopting a longitudinal research design to shed light on the changes of these relationships over time. Sixth, this study adopted questionnaire that has no qualitative data. Open-ended questions in questionnaire and interviews with owners of SMEs would have improved the quality of the study to better understand their own perceived understanding of OI and ED. Future researchers should, therefore, include both qualitative and quantitative data in the study. This will help obtain more complete overview of the relationships evaluated in this research.

7. Practical implications

The findings of this research might be significant to entrepreneurs, educators and policymakers. In the context of Nepali SMEs, this study offers a better understanding on the level of EL and OI and their effect on BP in a dynamic environment. Although this study found negative interaction of ED, findings show a significant positive direct and indirect relationship between EL, OI and BP, with their practical implications. The findings of this study can be used as consulting options by entrepreneurs. The owner and top management of SMEs may want to strengthen their EL skill. First, they should be aware that EL increases organization innovation, which, in turn, drives for higher BP. The owner of SMEs can join different trainings as well as learn skills to be more effective to display EL. They can also recruit top managers who exhibit EL behavior as well as train and develop existing manager’s EL characteristics and skills to enhance OI, which ultimately increases firm’s performance.

The findings of this research are important to universities, educators, trainers and teachers in the field of entrepreneurship. Nepali universities and business colleges can develop EL syllabus and implement it in their courses based on the research findings. The application-oriented EL course can be developed incorporating its different dimensions focused on real-world examples and situations that address critical enterprise building skills and backed by both theory and practice. This course might be valuable opportunity for students to understand the context of EL and OI and their relationships with BP. Moreover, students can begin to develop their own EL roles and characteristics to be able to apply EL practices to a wide range of situations and contexts. The educators, trainers and teachers can also incorporate important component of EL as well as findings of this research in their specific courses, lectures as well as trainings to teach/train to enhance student’s/trainees’ business skills. In return, it can help students/trainees to understand as well as enhance key skill sets required to lead entrepreneurial ventures successfully.

The literature and findings of this research will also be useful for policymakers on preparing effective policies for entrepreneurship development in Nepal. Practically, the
outcomes of this study will benefit government-related agencies and development agencies for the development of entrepreneurs in Nepal. For example, a more robust and specific training program may be initiated by government and development agencies to foster and develop appropriate EL posture as well as organizational innovativeness among entrepreneurs.

The spirit of entrepreneurship is applicable in all economic endeavors other than SMEs. Based on the research findings, same EL drive and innovation can be cultivated, nurtured and developed in family businesses, large corporate entities, not-for-profit organizations, government and indeed the home environment as well for their higher innovativeness and better performance.

8. Conclusion
In the context of relatively minimal work on the relationship between EL and BP variables, with even less attention paid to OI serving as a mediator in leadership–performance relationship and ED as moderator in a same model, this research examines the relationship and extends empirical insights of leadership in entrepreneurship in the context of Nepali SMEs. Many of the previous studies in these areas of research focused on western or other developed countries. So, this study provides extant knowledge and empirical evidences of the applicability of these concepts to developing countries like Nepal. Although this research has validated measures and their direct and indirect relationships in Nepali context and indicated that they are relevant for prospective researches in developing countries, it has also raised questions of their generalizability if ED is included as moderator in the same model. The findings indicate a further need to examine their relevance globally to confirm this result as well as to expect improved and universally sound scale of EL that integrates diversity and complexity of different regions. Moreover, the moderated mediation methodology and its way of interpretation done in this research might be helpful to develop a similar type of complex model as well as to analyze their results. This study also provides theoretical understanding about EL for upcoming researchers as well as more practical knowledge for business owners to increase SMEs’ innovation and performance, which ultimately support entrepreneurship and economic development of a nation.

References


Further reading

Appendix. Survey instruments

Instrument 1: entrepreneurial leadership (Gupta et al., 2004)
In total, 24 descriptive statements are used to judge how frequently each statement fits with SMEs owner (leader) with their employees and team members. The statements are related to five dimensions of entrepreneurial leadership:

1. Dimension 1: framing the challenge:
   - I specify highly challenging but realistic outcomes for the cast of actors to accomplish (Framing the challenge).
   - I set high standards of performance (Performance oriented).
   - I set high goals and work hard (Ambitious).
   - I set goals for the organization with full awareness of market information (Knowledgeable, aware of information and informed).
   - I have high intuition (Extra insight).

2. Dimension 2: absorbing uncertainty:
   - I undertake the burden of responsibility for the future (Absorbing uncertainty).
   - I anticipate possible future events (Foresight).
   - I instil followers with confidence by showing confidence in them (Confidence builder).
   - I have a clear vision and imagination of the future (Visionary).

3. Dimension 3: path clearing/Underwriting:
   - I negotiate with opposition and clear the path for scenario enactment (Path clearing/Underwriting).
   - I have good interpersonal skills and I am tactful (Diplomatic).
   - I negotiate effectively to make transactions with others on favorable terms (Effective bargainer).
   - I have unusual ability to persuade others (Convincing).
   - I give courage, confidence or hope to followers through reassurance and advice (Encouraging).

EL and business performance
(4) Dimension 4: building commitment:
- I build commitment for an inspired common purpose (Building commitment).
- I inspire emotions, beliefs, values and behaviors of others to be motivated to work hard (Inspirational).
- I demonstrate and impart strong positive emotions for work (Enthusiastic).
- I induce group members to work together (Team builder).
- I seek continuous performance improvement (Improvement oriented).

(5) Dimension 5: specifying limits:
- I build a common understanding and agreement of what can and cannot be done (Specifying limits).
- I integrate people or things into a cohesive, working whole (Integrator).
- I encourage others to use their mind, challenging beliefs, stereotypes and attitudes of others (Intellectually stimulating).
- I show optimism and confidence in the accomplishment of followers’ task goals (Positive).
- I make decisions firmly and quickly.

**Instrument 2: organizational innovation (Source: Al-Ansari, 2014)**
To evaluate the innovation of business, ten descriptive statements were used:

1. our firm frequently tries out new ideas;
2. our firm introduces number of new products, services, processes or organization/management systems;
3. our firm is the first to market new products or services;
4. our management seeks out new ways to do things;
5. our firm is creative in its methods of operation;
6. our firm uses up-to-date technologies;
7. our firm develops new market segments;
8. our firm uses new marketing methods;
9. our firm develops new ways of establishing relationships with customers; and
10. our firm spends resources on research and development for new products, services or processes.

**Instrument 3: environmental dynamism (Source: Omri, 2015)**
To describe the environment of SMEs, six descriptive statements were used:

1. actions of competitors are unpredictable;
2. our firm must change its marketing practices quite frequently;
3. demand and consumer tastes are almost unpredictable;
4. environmental changes in our local market are intense;
5. our clients regularly ask for new products and services; and
6. in our market, the volumes of products and services to be delivered change fast and often.
**Instrument 4: business performance**

To describe the performance of SMEs in comparison with their firm’s competitors, nine descriptive statements were used. The statements are related to three dimensions (profitability, growth and other) of business performance:

1. return on assets (ROA);
2. financial liquidity;
3. net profits;
4. sales growth;
5. market share growth;
6. employee growth;
7. customer satisfaction;
8. differentiation on products and services; and
9. development of new products, services and process.

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