Role of Entrepreneurship in Economic Growth of Nepal

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Abstract

This study examines the role of entrepreneurship in economic growth of Nepal. Economic growth is the dependent variable. The selected independent variables are infrastructure development, market condition, access to capital, education skills, and innovation and technology. The primary source of data is used to assess the opinions of respondents regarding infrastructure development, market condition, access to capital, education skills, innovation and technology, and economic growth. The study is based on primary data of 126 respondents. To achieve the purpose of the study, structured questionnaire is prepared. The correlation and multiple regression models are estimated to test the significance and importance of role of entrepreneurship in economic growth of Nepal.

The study showed a positive impact of infrastructure development on economic growth. It indicates that development in infrastructure leads to increase in economic growth. Similarly, the study showed a positive impact of market condition on economic growth. It indicates that h increase in external economic environment leads to increase in economic growth. Likewise, the study also revealed a positive impact of access to capital on economic growth. It indicates that effective utilization and mobilization of money leads to increase in economic growth. Further, the study observed a positive impact of education skills on economic growth. It indicates that higher the educational skills related to entrepreneur, higher would be economic growth. In addition, the study observed a positive impact of innovation and technology on economic growth. It indicates that use of innovative technology leads to increase in economic growth.

Keywords: infrastructure development, market condition, access to capital, education skills, innovation and technology, economic growth

1. Introduction

Entrepreneurial activity is generally seen as an important aspect of the organization of industries that are conducive to innovation and unrestrained competition. As a human endeavor, it emphasizes undertaking economic activities that create value. Entrepreneurship is viewed as an effective way of broadening people's competitive advantages (Amiri and Marimaei, 2013). Similarly, the conditions for the development of entrepreneurship can therefore be an influential factor affecting economic growth, especially in unpredictable external environments (Dana, 1993). Likewise, national governments face the challenge of ensuring sustainable socio-economic development, which is characterized by accelerating scientific and technological changes (Batrancea *et al*., 2022). Moreover, the crisis resulted in an upsurge in unemployment, contracted liquidity in financial markets, and reduced economic growth levels, and a fall in international trade, consumption, and commodity prices, among many other things (Vatavu *et al*., 2022). Governments across the world responded to the effects of the global financial crisis by introducing policies and frameworks to rekindle economic growth. In general, such strategies have been used by policymakers in contemporary times to

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address economic crises, global challenges, and societal ills.

Entrepreneurship has been perceived as a key driver for job creation, economic growth, and societal advancements (Stringham *et al.,* 2015). Furthermore, Sharma *et al*. (2023) stated that crowd funding and peer-to-peer lending platforms broke down barriers, allowing a diverse range of businesses to secure essential funding. Likewise, the influx of innovative start-ups during this period laid the foundation for several 'unicorns' start-ups valued at over a billion dollars. Concurrently, regions in Asia, especially cities like Bengaluru and Shenzhen, burgeoned as global hotspots for tech-driven entrepreneurial ventures. Their growth narratives offer a testament to the universal appeal and efficacy of the tech-innovation-entrepreneurship trinity (Sharma *et al*., 2023). Similarly, technology and innovation are pivotal components in the realm of entrepreneurship. Technology is broadly defined as the application of scientific knowledge for practical purposes, involving the usage of tools, processes, systems, and methodologies to solve problems or attain goals (Tidd and Bessant, 2020).

Entrepreneurs began recognizing the importance of collaborative innovation. Open innovation paradigms, where businesses collaborated with external partners – ranging from academic institutions to freelancers gained traction. This approach diversified innovation sources, fostering holistic and sustainable growth (West and Bogers, 2014). Likewise, the integration of AI in E-commerce has contributed to increased sales, customer retention, and operational efficiency. The enhanced customer experiences facilitated by personalized interactions lead to higher conversion rates, impacting the overall financial health positively (Khrais, 2020). Moreover, entrepreneurship plays a crucial role in the economic development of a country. By providing employment opportunities, entrepreneurship contributes to reducing the unemployment rate and improving the standard of living for the population (Abbasianchavari and Moritz, 2021). Moreover, entrepreneurship fosters income distribution by allowing more individuals to access sustainable income sources. Likewise, at the same time, the globalized nature of the current economy drives technological change, and entrepreneurs are at the forefront of adopting and implementing innovations. This not only enhances productivity but also stimulates long-term economic growth (Wijayanti *et al*., 2022). Similarly, entrepreneurship involves recognizing opportunities and creating businesses, which can be nascent with activities prior to the start of the business, or the establishment of the business itself. Nascent entrepreneurship is influenced by entrepreneurship education, while the decision to establish a business is based on economic aspects such as income differentials, as well as non-economic factors such as the desire for independence and personal satisfaction. Individual characteristics such as education, experience, and available capital are also considered (Ramirez Urquidy, 2022). Moreover, Small, and Medium Enterprises (MSMEs) sector, it is mentioned that they do not receive sufficient support from the state, face numerous challenges that limit their development, and struggle to compete in highly dynamic environments (Cenamor *et al.,* 2019).

Khyareh and Amini (2021) examined the governance quality, entrepreneurship and economic growth. The study found that entrepreneurship and governance indicators have a significant impact on economic growth. Similarly, Urbano *et al*. (2020) investigated the entrepreneurial activity matter for economic growth in developing countries? The role of the institutional environment. The study found that institutional factors – such as the number of procedures to start a new business, private credit coverage, and access to communication

– influence entrepreneurial activity driven by opportunity. Likewise, Prasetyo and Kistanti (2020) analyzed the human capital, institutional economics and entrepreneurship as a driver for quality and sustainable economic growth. The study found that the very strong role of human capital as the main key in driving economic growth both directly and indirectly. Further, Al-Qudah *et al*. (2022) examined the relationship between social entrepreneurship and sustainable development from economic growth perspective: 15 'RCEP' countries. The study found that some interesting results which consistence with the results of previous studies in this field, like that there is a positive relationship between the social entrepreneurship and sustainable development, and positive relationship between the innovations and sustainable development and in the regard of the institutions variable, the study also found that there is an indirect effect on innovation.

Audretsch, and Belitski (2021) investigated towards an entrepreneurial ecosystem typology for regional economic development. The study found that the implications for regional and national policymakers and scholars who study geography of entrepreneurship. Similarly, Rudhumbu *et al.* (2020) analyzed the challenges and opportunities for women entrepreneurs in Botswana: revisiting the role of entrepreneurship education. The study found that while women entrepreneurs faced a number of challenges, the legal and regulatory environment in Botswana was highly conducive and supportive of women entrepreneurship and also that customized entrepreneurship education and training offered opportunities for women entrepreneurs to enhance their knowledge and technical skills. Likewise, Demircioglu and Chowdhury (2021) explored the entrepreneurship in public organizations: the role of leadership behavior. The study found that while all three types of leadership behavior are positively associated with public sector entrepreneurship, the effect is larger for relations-oriented leadership, followed by change-oriented leadership. Further, Botella *et al.* (2022) investigated the role of entrepreneurial skills as a vehicle for business growth: a study in Spanish start-ups. The study found that the differences between the combination of variables for BG through the consideration of sales growth and profit. In addition, Sansone *et al.* (2021) examined the academic spinoffs: The role of entrepreneurship education. The study found that the theoretical and practical implications for universities, students and scholars interested in entrepreneurship. Moreover, Ledi *et al.* (2022) explored the role of entrepreneurial attitude and opportunity recognition on entrepreneurial intention of university students. The study found that entrepreneurial attitude has a substantial positive impact on both entrepreneurial intention and opportunity recognition among university students in Ghana. Similarly, Donbesuur *et al*. (2020) examined the effect of entrepreneurial orientation on new venture performance: Contingency roles of entrepreneurial actions. The study found that advances knowledge in entrepreneurship research and provides insights into how entrepreneurial actions can enhance the relationship between EO and new venture performance.

Hamdan *et al*. (2020) examined the mediation role of public governance in the relationship between entrepreneurship and economic growth. The major objectives of the study was to investigate the mediation role of public governance in the relationship between entrepreneurship and economic growth in the United Arab Emirates (UAE). The study used to economic growth as a dependent variable and the selected independent variables were access to capital, market condition, and entrepreneurship. The study was conducted using the data collected by a questionnaire research method. The study found that determined that public governance buoys the positive effect that entrepreneurship activities exert on economic

growth in the United Arab Emirates (UAE). Roles of entrepreneurship as a tool to improve economic development: Case of job creation in developing nations was assessed by Uleanya (2020). The major objective of the study was to the understanding how entrepreneurship influences the standard of living of people, economic development, wealth-sharing and job creation method. The study used to economic growth as a dependent variable and the selected independent variable were entrepreneurial skills, training and education, and infrastructure development. The study found that it is good practice for tertiary institutions of learning to have budget for entrepreneurship education, which in turn is expected to empower citizens.

In the context of Nepal, Mukti (2019) examined the small and medium scale enterprises: their role in economic growth of Nepal. The study found that he dynamic relationship among the total SMEs and investment with real gross domestic product (GDP) of Nepal and found to be significant and positive relationship in between investment and real GDP of Nepal while insignificant and inverse relationship in between total small and medium scale enterprises (SMEs) and real GDP of Nepal. Likewise, Paudel (2020) investigated the role of financial development in economic growth of Nepal: ARDL approach of counteraction with structural break analysis. The study found that financial development has a strong long-run positive relationship with economic growth. Therefore, developing the strategies for the proper financial development improving the financial institution quality and widening the financial market to improve capital formation would be a way to accelerate the economic growth in Nepal. Moreover, Nepal (2023) explored role of political economy in mediating innovation and entrepreneurship–a perspective based on some cases from Nepal. The study found that innovation is independent work of an individual which generally happens to be indifferent with the political, economic and social system but a good system of political economy can influence the innovative behavior and can play a significant role to flourish social entrepreneurship more effectively.

The above discussion shows that empirical evidences vary greatly across the studies on the role of entrepreneurship in economic growth. Though there are above mentioned empirical evidences in the context of other countries and in Nepal, no such findings using more recent data exist in the context of Nepal. Therefore, in order to support one view or the other, this study has been conducted.

The major objective of the study is to examine the role of entrepreneurship in economic growth of Nepal. Specifically, it examines the relationship of infrastructure development, market condition, access to capital, education skills, and innovation and technology with economic growth of Nepal.

The remainder of this study is organized as follows: section two describes the sample, data, and methodology. Section three presents the empirical results and final section draws the conclusion.

2. Methodological aspects

The study is based on the primary data which were collected from 126 respondents through questionnaire. The study employed convenience sampling method. The respondents' views were collected on infrastructure development, market condition, access to capital, education skills, innovation and technology, and economic growth. This study is based on descriptive as well as causal comparative research designs.

The model

The model used in this study assumes that economic growth depends upon role of entrepreneurship. The dependent variable selected for the study is economic growth. Similarly, the selected independent variables are infrastructure development, market condition, access to capital, education skills, and innovation and technology. Therefore, the model takes the following form:

Economic growth = *f* (infrastructure development, market condition, access to capital, education skills, and innovation and technology).

More specifically,

$EG = \beta_0 + \beta_1 ID + \beta_2 MC + \beta_3 AC + \beta_4 ES + \beta_5 IT + e$

Where,

EG = Economic growth

IF = Infrastructure development

MC = Market condition

ES = Education skills

AC = Access to capital

IT = Innovation and technology

Economic growth was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 5 for strongly agree and 1 for strongly disagree. There are 5 items and sample items include "Entrepreneurship significantly contributes to the economic growth of our country", "The government's support for entrepreneurs has a positive impact on economic growth" and so on. The reliability of the items was measured by computing the Cronbach's alpha ($\alpha = 0.805$).

Infrastructure development were measure using a 5-point Likert scale where the respondents were asked to indicate the responses using 5 for strongly agree and 1 for strongly disagree. There are 5 items and sample items include "Infrastructure development in urban areas positively impacts entrepreneurship and economic growth", "Infrastructure development in rural areas can significantly enhance entrepreneurial opportunities and economic growth" and so on. The reliability of the items was measured by computing the Cronbach's alpha ($\alpha = 0.736$).

Market condition factor was measure using a 5-point Likert scale where the respondents were asked to indicate the responses using 5 for strongly agree and 1 for strongly disagree. There are 5 items and sample items include "The stability of the market positively impacts entrepreneurial activities and economic growth", "Competitive market conditions drive innovation and enhance the role of entrepreneurship in economic growth" and so on. The reliability of the items was measured by computing the Cronbach's alpha ($\alpha = 0.706$).

Access to capital were measure using a 5-point Likert scale where the respondents were asked to indicate the responses using 5 for strongly agree and 1 for strongly disagree.

There are 5 items and sample items include "Access to capital plays a critical role in fostering entrepreneurship and driving economic growth", "Entrepreneurs with access to diverse funding sources are better positioned to drive economic growth" and so on. The reliability of the items was measured by computing the Cronbach's alpha ($\alpha = 0.798$).

Education skills law was measure using a 5-point Likert scale where the respondents were asked to indicate the responses using 5 for strongly agree and 1 for strongly disagree. There are 5 items and sample items include "Entrepreneurs with higher levels of education are more likely to contribute to economic growth", "Skills development programs enhance the capabilities of entrepreneurs and support economic growth" and so on. The reliability of the items was measured by computing the Cronbach's alpha ($\alpha = 0.752$).

Innovation and technology was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 5 for strongly agree and 1 for strongly disagree. There are 5 items and sample items include "Innovation in products and services by entrepreneurs drives economic growth", "Technology adoption enhances the capabilities of entrepreneurs and supports economic growth" and so on. The reliability of the items was measured by computing the Cronbach's alpha ($\alpha = 0.759$).

The following section describes the independent variables used in this study along with the hypothesis formulation.

Infrastructure development

Aschauer (1989) showed that the infrastructure development is widely recognized as a critical driver of economic growth. Similarly, Ng *et al.* (2019) found that the infrastructure development and other socio-economic factors that contributed positively to economic growth. Similarly, Easterly *et al.* (1993) revealed that infrastructure development has a positive relationship with economic growth. Moreover, Sahoo and Pravakar (2011) stated that public infrastructure development has positive effects on a country's productivity performance as well as economic growth. Likewise, Prudhomme (2004) argued that the increasing the investment in infrastructure development can enhance productivity growth as well as quality of life and economic growth of the country. Based on it, this study develops the following hypothesis:

$H_{1:}$ There is a positive relationship between infrastructure development and economic growth.

Market condition

Adjasi and Biekpe (2006) showed a positive relationship between the economic growth and the market condition affected by the circumstances of each country. Likewise, Ali *et al.* (2010) found a positive relationship between the market conditions and the economic growth. Similarly, Odhiambo (2008) showed that there is a long-run relationship between the market performance or condition and economic growth. Similarly, Ram (1999) argued that well-functioning market condition systems encourages technical innovations by re-allocating resources to the entrepreneurs and promote economic growth. Moreover, Sinha and Macri (2001) explored that market condition system plays an important role in full-filling the needs of investors by mobilizing funds and transforming them into an asset and ultimately economic growth. Similarly, Vazakidis and Adamopoulos (2009) stated that there is a positive connection between market condition and economic growth. Likewise, Robinson

(1952) showed that market development is positively correlated to economic growth. Based on it, this study develops the following hypothesis:

$H_{2:}$ There is a positive relationship between market condition and economic growth.

Access to capital

Sanders and Nee (1996) found that access to capital is an important component of financial sector for development and supplements the role of the banking system in economic development. Similarly, Holzer and Neumark (2000) stated that access to capital provide market liquidity that enables implementation of long term projects with long term payoffs thereby promoting a country's economic growth endeavor. Likewise, Rajan and Zingales (1998) argued that access to external finance influences the growth of industries that are more dependent on external capital. Similarly, Wurgler (2000) found that efficient financial markets provide better access to capital, contribute to economic growth by better allocating resources. Based on it, this study develops the following hypothesis:

$H_{3:}$ There is a positive relationship between access to capital and economic growth.

Education skills

Acs *et al.* (2013) showed that education has a positive impact on entrepreneurial success, which in turn promotes economic growth. Similarly, Audretsch and Thurik (2004) argued that Skills development enhances entrepreneurial capabilities, leading to significant economic growth. Likewise, Brixiová and Égert (2012) stated that the role of entrepreneurship acts as a mediator between education, skills, and economic growth, amplifying the impact of the former on the latter. Moreover, Fayolle and Gailly (2015) concluded that higher education levels is highly correlate with increased entrepreneurial activities because educated individuals are more likely to recognize and exploit business opportunities. Similarly, Hartog *et al.* (2010) stated that entrepreneurship mediates the relationship between education/skills and economic growth by converting human capital into economic output. Based on it, this study develops the following hypothesis:

$H_{4:}$ There is a positive relationship between education skills and economic growth.

*Technology and innovatio***n**

Kim *et al.* (2006) showed that technology adoption positively impacts entrepreneurial success, which in turn promotes economic growth. Similarly, Minniti and Lévesque (2010) argued that innovation enhances entrepreneurial capabilities, leading to significant economic growth. Likewise, Porter and Heppelmann (2015) stated that role of entrepreneurship acts as a mediator between technology, innovation, and economic growth, amplifying the impact of the former on the latter. Moreover, Rauch and Frese (2007) argued that economies with high levels of innovation tend to have robust entrepreneurial ecosystems, which contribute significantly to economic growth. Likewise, Remeikiene and Startiene (2011) suggested that technological advancements enable entrepreneurs to develop competitive advantages, leading to increased business success and economic growth. Similarly, Van Praag and Versloot (2008) revealed that entrepreneurship mediates the relationship between technology/innovation and economic growth by converting technological advancements and innovative ideas into economic output. Based on it, this study develops the following hypothesis:

$H_{5:}$ There is a positive relationship between technology and innovation and economic growth.

3. Results and discussion

Correlation analysis

On analysis of data, correlation analysis has been undertaken first and for this purpose, Kendall's Tau correlation coefficients along with mean and standard deviation has been computed and the results are presented in Table 1.

Table 1

Kendall's Tau correlation coefficients matrix

This table presents the Kendall's Tau correlation coefficients between dependent and independent variables. The correlation coefficients are based on 126 respondents. The dependent variable is EG (Economic growth). The independent variables are ID (Infrastructure development), MC (Market condition), AC (Access to capital), ES (Education skills), and IT (technology and innovation).

Variables	Mean	S.D.	BG	SMM	EM	IM	POAN	UMAM
EG	3.698	1.173	1					
ID	3.640	1.137	0.350**	1				
MC	3.642	1.190	0.407**	0.431**	1			
AC	3.594	1.168	0.347**	0.329**	0.506**	1		
ES	3.610	1.198	0.445**	0.341**	0.424**	0.507**	1	
IT	3.614	1.179	0.464**	0.353**	0.380**	0.371**	0.404**	1

Notes: The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent level respectively.

Table 1 shows that infrastructure development is positively correlated to economic growth. It indicates that development in infrastructure leads to increase in economic growth. Similarly, market condition is positively correlated to economic growth. It indicates that increase in external economic environment leads to increase in economic growth. Likewise, access to capital is positively correlated to economic growth. It indicates that effective utilization and mobilization of money leads to increase in economic growth. Further, education skills are positively correlated to economic growth. It indicates that higher the educational skills related to entrepreneur, higher would be economic growth. Moreover, technology and innovation is positively correlated to economic growth. It indicates that use of innovative technology leads to increase in economic growth.

Regression analysis

Having indicated the Kendall's Tau correlation coefficients, the regression analysis has been carried out and the results are presented in Table 2. More specifically, it shows the regression results of infrastructure development, market condition, access to capital, education skills, and technology and innovation on economic growth.

Table 2

Estimated regression result of infrastructure development, market condition, access to capital, education skills, and technology and innovation on economic growth

The results are based on 126 observations using linear regression model. The model is EG = $\beta_0 + \beta_1$ID + β_2MC + β_3AC + β_4 ES + β_5IT + e where the dependent variable is EG (Economic growth). The independent variables are ID (Infrastructure development), MC (Market condition), AC (Access to capital), ES (Education skills) and IT (Innovation and technology).

Model	Intercept	Regression coefficients of					Adj. R_bar2	SEE	F-value
		ID	MC	AC	ES	IT			
1	0.985 (4.420)**	0.756 (12.491)**					0.573	0.587	167.464
2	1.133 (4.973)**		0.769 (11.994)**				0.535	0.613	143.854
3	0.859 (3.601)**			0.784 (12.599)**			0.56	0.597	158.726
4	1.391 (5.661)**				0.701 (10.051)**		0.446	0.669	101.023
5	1.157 (4.926)**					0.721 (11.527)**	0.515	0.626	132.862
6	0.552 (2.572)**	0.48 (6.656)**	0.422 (5.548)**				0.656	0.527	119.393
7	0.356 (1.652)	0.321 (3.758)**	0.336 (4.312)**	0.29 (3.216)**			0.681	0.508	89.138
8	0.284 (1.305)	0.299 (3.491)**	0.263 (3.015)**	0.268 (2.968)**	0.701 (10.051)**		0.686	0.503	68.858
9	0.282 (1.293)	0.285 (3.080)**	0.262 (2.989)**	0.245 (2.338)*	0.138 (1.705)	0.042 (0.418)	0.684	0.505	54.742

Notes:

i. Figures in parenthesis are t-values.
ii. The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent level respectively.
iii. Economic growth is dependent variable.

The regression results show that the beta coefficients for infrastructure development are positive with economic growth. It indicates that infrastructure development has a positive impact on economic growth. This finding is consistent with the findings of Aschauer (1989). Similarly, the beta coefficients for market condition are positive with economic growth. It indicates that market condition has a positive impact on economic growth. This finding is consistent with the findings of Acemoglu *et al.* (2001). In addition, the beta coefficients for access to capital are positive with economic growth. It indicates that access to capital has a positive impact on economic growth. This finding is consistent with the findings of Beck *et al.* (2000). Further, the beta coefficients for education skills are positive with economic growth. It indicates that education skills have positive impact on economic growth. This finding is consistent with the findings of Mankiw *et al*. (1992). Moreover, the beta coefficients for innovation and technology are positive with economic growth. It indicates that innovation and technology has a positive impact on economic growth. This finding is similar to the findings of Romer (1990).

4. Summary and conclusion

Entrepreneurship has been perceived as a key driver for job creation, economic growth, and societal advancements. Crowd funding and peer-to-peer lending platforms broke down barriers, allowing a diverse range of businesses to secure essential funding. These platforms not only democratized funding access but also fostered a sense of community and stakeholder engagement. The tangible impact of this synergy between technology, innovation, and entrepreneurship is best exemplified through real-world success stories. Likewise, the

influx of innovative start-ups during this period laid the foundation for several 'unicorns' – start-ups valued at over a billion dollars. Concurrently, regions in Asia, especially cities like Bengaluru and Shenzhen, burgeoned as global hotspots for tech-driven entrepreneurial ventures. Their growth narratives offer a testament to the universal appeal and efficacy of the tech-innovation-entrepreneurship trinity. Similarly, technology and innovation are pivotal components in the realm of entrepreneurship. Technology is broadly defined as the application of scientific knowledge for practical purposes, involving the usage of tools, processes, systems, and methodologies to solve problems or attain goals.

This study attempts to examine the role of entrepreneurship in economic growth of Nepal. The study is based on primary data of 126 respondents.

The major conclusion of the study is that infrastructure development, market condition factor, access to capital, education skills, and innovation and technology have positive impact on economic growth. The study also concludes that access to capital is most significant factor followed by market condition that determines the change in the economic growth.

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