Sectoral Resilience of Enterprises in Eastern Nepal Amid Covid-19 with Reference to Young Entrepreneurs

Arjun Rai[1] and Chandra Kumar Rai [2]

[1]Principal author
Tribhuvan University, Mahendra Multiple Campus, Dharan, Nepal
Email: arjun.rai@mahmc.tu.edu.np, https://orcid.org/0000-0001-9578-6971

[2]Corresponding author
Tribhuvan University, Mahendra Multiple Campus, Dharan, Nepal
Email: chandra.rai@mahmc.tu.edu.np, https://orcid.org/0000-0002-0111-6609

Abstract

This investigation compared the negative effect of the Covid-19 pandemic on different business sectors run by young entrepreneurs from eastern Nepal. The population in this study comprised all the young entrepreneurs of eastern Nepal. A standardized instrument was used to collect primary data from 204 young entrepreneurs. An independent sample t-test and Analysis of Variance were used as statistical tools to compare the negative impact of Covid-19 on different sectors of business. The collected data were coded, entered, and processed in Statistical Package for the Social Science (SPSS), version 25. The results of the study revealed that different sectors of businesses were negatively and significantly affected by Covid-19. The grocery business was the least negatively affected business amongst the seven sectors included in this study.

Keywords: COVID-19, negative impact, young entrepreneurs, sectoral resilience, business types,

Introduction

Background of the Study

The COVID-19 outbreak erupted from Wuhan province China in December 2019 and was declared a pandemic on March 11, 2020, by the World Health Organization (WHO), and Nepal reported the first positive case of COVID -19 on January 24, 2020 (Devkota 2020). After that, the outbreak of the 2019 novel coronavirus (2019-nCoV) in China spread progressively to other countries (Yang et al., 2020; Chan et al., 2020). Although the epicenter of the coronavirus was Wuhan, China,

its tremor was experienced by the entire world destabilizing social, political, and economic order, compelling business houses irrespective of their sizes and areas of operations to contemplate survival strategies and tactics. Future studies in different disciplines are yet to unveil the magnitude of its socio-cultural, economic, and political impacts. Scholars feared the coronavirus with exponential infection rate and forecasted to hit the global population very soon. Considering the severity of the virus, and to flatten the spread rate of infection, on January 30, 2020, World Health Organization (WHO) declared the outbreak that originated in Wuhan, China, as a Public Health Emergency of International Concern (PHEIC), while advising people not to travel or trade to and with China, Eurosurveillance Editorial Team. (2020). Amid the virus spreading like wildfire, Nepal could not stand in isolation. Shrestha et al. (2020) stated that the first confirmed Cov-19 case in Nepal was a Nepali student pursuing study in Wuhan, China, who returned to Nepal on January 9, 2020, with some indication onset on January 3, 2020, later confirmed as COVID positive. The death rate of infected people is comparatively lower in Nepal compared to other countries' death rates. However, economic impact does not correlate with the death rate of the infected subjects agued (Noy et al. 2020). Similar arguments are presented by other researchers like Ozili and Arun (2020). They argued that the number of the confirmed positive case did not significantly correlate with economic activities. OCOVID-19 affected the countries at large scales, making socio-economic life stagnant, adversely impacting different sectors of the economy, and slowing down economic activities (Chaudhary et al. 2020). Further, the writers asserted that the COVID-19 pandemic affected almost all sectors of an economy. International Labour Organisation (ILO), in its report (2020), forecasted that approximately 195 million full-time jobs would be lost like half of the world is in lockdown. Enterprises are redefining their strategies, shifting their priorities, and restructuring their organizations to offset the impact and gain momentum. This study examines which sector of business was worst affected by the pandemic in eastern Nepal, especially to those enterprises run by young entrepreneurs. By business sector, seven business types or sectors are included in this study viz., (i) agriculture, (ii) manufacturing, (iii) grocery, (iv) construction material (hardware business as colloquially called in Nepal), (v) trading, (vi) service sector, and (vii) other sectors. The study attempted to identify the most resilient sector or business type during the pandemic.

The objective of the study

The following are the objectives of the study.

- To compare the mean negative impact of Covid-19 on different enterprises falling in different business sectors in eastern Nepal.
- To compare the mean negative impact of Covid-19 on the enterprises based on the demographic differences of the owners.

Problem Statement

Different research studies have indicated that COVID-19 had negatively affected almost all countries. Different economic sectors have been reported to be adversely affected by the pandemic. Apart from the negative impact of the pandemic on the health sector, the pandemic affected the economic and social aspects of human life. Continued travel prohibition, vehicular movement, confinement of the people to their residences, and restriction on mass gathering adversely affected every type of business globally. In the background of this situation, this study raises the following problem statements;

- Was the effect of COVID-19 significantly different on different types of business?
- Were the effect of COVID-19 on businesses significantly due to differences in the gender of the young entrepreneurs, training, training providing agencies, and the served customer?

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Review of the Literature

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United Nation Industrial Development Organization (UNIDO), in its (2020) report, presented a comparison of production between December 2019 and June 2020 in 62 different countries, which together account for around 90% of world manufacturing value-added, and found that more than half of those countries experienced a lengthened economic downturn over the periods of January-March and April-June 2020. Ozili and Arun (2020) examined the impact of social distancing policies imposed due to the pandemic on economic activities. They found that the increasing number of lockdown days, monetary policy decisions, and international travel restrictions severely impacted the number of lockdown days affected the level of economic activities. In contrast, the imposed restriction on internal movement and higher fiscal policy spending positively impacted the level of economic activities. To

curb the infection rate, the government of Nepal imposed a nationwide lockdown on March 24, 2020, restricting vehicular movement and shutting down economic activities except for essential ones, full lockdown measures resorted until June 15, after which the government relaxed the prohibition partially, until July 21, 2020 (Shrestha 2020).

The history is evident that the world has witnessed other pandemics like Covid-19. The world experienced the Spanish Flu in 1918, affecting the world for almost two years until 1920 (Shrestha 2020), and various studies have been conducted to assess the effect of the Spanish Flu on the economy. Citing the work of Madhav et al. (2018), Shrestha (2020) stated that pandemics leave long-term damage to the economy and its growth. Malik et al. (2020) examined the impact of Covid-19 on microfinance institutions in Pakistan and collected data through phone surveys from 1,000 microenterprise owners, 200 microfinance loan officers, and found that, on average, weekly sales and household income both plummeted by approximately 90%., around 70% of the microfinance borrowers defaulted their loans. Shrestha (2020) reported that in Nepal, Nepal Rastra Bank (NRB) carried out an online survey to assess the impact of Covid-19 on economic activities from 8 to June 24, 2020, collecting data from 674 industries and enterprises, and found that 61% of enterprises were had closed their operations, more than 90 % of hotel and restaurants, and educational institutions were closed, less affected sector was agriculture, forestry and fishing having 31.6 percent of the enterprises were in the whole operation, two-third of manufacturing establishments were in partial operation. The Survey of NRB found that approximately two-thirds of Medium and Small Size industries were closed during the survey period.

Further, Shrestha (2020) asserts that enterprises had to downsize due to the stoppage of the operation massively. Bartik et al. (2020) stated that in addition to the impact of COVID-10 on public health, it had caused a significant economic shock. Their study surveyed more than 5,800 small businesses during March 28 and April 4, 2020. The findings suggest that the COVID-19 had already resulted in a massive dislocation of small businesses; 43% of enterprises were temporarily closed due to COVID-19. Initially, it was believed that the pandemic would be localized to China only. However, it spread across the globe through peoples' movements (Ozili & Arun 2020). The problem of the pandemic was not confined to the health sector. The problem pervaded in the economic domain, especially as people were advised and confined to home, travel restriction affected the aviation industry, sports events, prohibition of public events severely affected entertainment industries (Elliot 2020). The global

supply chain was disrupted, the confidence of the investors and consumers was shaken. Both the formal and informal sectors of the economy were adversely affected. Abrupt economic disruption caused by the pandemic (COVID-19) was not only destructive in nature but also had a spillover implication due to the shocks in demand and supply in more or less in every sector (El-Erian, 2020). This study attempted to examine the worst affected business type in the Nepalese socio-cultural context.

Youth and Young Entrepreneurs

Youth entrepreneurship is a process of accepting risk, introducing innovation, initiating something new, being creative in a work setting, either in own enterprise or in an employment situation (Schnurr & Newing 1977). However, this definition of youth entrepreneurship remains silent to define who the youths are. Thus, this study borrows the meaning of youth in the Nepalese context. Nepal National Youth Policy (2015) defines youth as citizens in the age bracket of 16 to 40 years. Thus, young entrepreneurs are citizens of Nepal who are between 16-40 and involved in different entrepreneurial activities.

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Research Methods

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All the young entrepreneurs running their businesses in eastern Nepal were considered as the population of this study. However, due to mobility constraints imposed by the government of Nepal during the pandemic lockdown, all the areas of eastern Nepal could not be covered in this study. This empirical study used cross-sectional data, which was collected by using a standardized questionnaire sent to the respondents. This study used the snowball sampling technique to collect the data. First of all, young entrepreneurs who were in acquaintance with the researcher were sent the questionnaire through the mails, and after that, those recipients submitted their responses and further forwarded the same questionnaire to other young entrepreneurs of their acquaintances. The questionnaire contained two sections. The first section was related to demographic factors and organization (enterprise) related information, and the second section of the questionnaire contained four items with 5 Likert scales, ranging from 1= strongly disagree to 5= strongly agree. Likert items were used to collect data on the negative impact of Covid-19 on business. Using the option 'scale if item deleted' available in SPSS, the reliability test was conducted to check the internal consistency of the data collected. The reliability test produced an Alpha value = 0.845.

The collected data were analyzed by using inferential statistics viz., an independent sample t-test, and ANOVA.

Result and Discussion

This section presents the reliability statistics produced by the reliability test. A reliability test was conducted to assess the internal consistency of the data collected through Likert Scales. The reliability test scored a Cronbach's alpha = 0.845, suggesting strong reliability as referred by Cortina (1993). Similarly, the mean negative impact of covid-19 on different business types and demographic differences were compared using ANOVA and an independent sample t-test. The subsequent sections deal with data analysis.

Table 1

Independent Sample t-test Summary for Negative Impact of Covid 19 on Business Compared by Demographic Variables

Variables	Groups	N	Mean	Std. Deviation	t	Df	P
Gender	Male	121	14.20	4.09	-1.523	202	0.129
	Female	83	15.05	3.64			
Training	Yes	150	14.31	4.13	-1.617	118.93	0.108
	No	54	15.20	3.24			
Training Provider	Govt	44	14.75	4.17	0.846	148	0.399
	Non Govt	106	14.12	4.12			
Served Customers	Individual buyers	131	14.79	4.28	1.324	186.16	0.187
	Organizational buyers	73	14.10	3.17			

Table 1 presents the summary of the independent sample t-test conducted to compare the mean negative impact of COVID-19 on the business based on the gender difference and training acquired, the training provider, and the served customers. An independent-samples t-test at 0.05 level of significance was conducted to compare the mean negative impact of Covid-19 on the business run by young entrepreneurs of eastern Nepal. The test statistic showed that there were no significant differences in the

mean negative impact on the businesses run by young male entrepreneurs (M=14.20, S.D. = 4.09), young female entrepreneurs (M=15.05, S. D= 3.64), conditions; t (202) =-1.523, and p=0.129, i.e., >0.05. This result indicates that the negative impact of Covid-19 on the business run by both genders was insignificantly different. Similarly, an independent sample t-test was conducted to examine the negative impact of Covid-19 on businesses run by young entrepreneurs with and without business-related training. The test result suggested that the negative impact of Covid-19 on businesses run by the young entrepreneurs with and without entrepreneurial training was not significantly different, implying that businesses were equally affected by Covid-19 irrespective of the training status of the entrepreneurs. The test statistics produced a negative impact on the business run by the entrepreneurs with training (M=14.31, S.D. = 4.13) and without training (M=15.20, S.D. = 3.24), conditions; t (118.93) =-1.617, and p >0.05. Likewise, an independent sample t-test was applied to check whether Covid-19 had differently affected the businesses run by young entrepreneurs who were provided entrepreneurial training by the government and non-government agencies. The test statistics revealed the mean negative impact of Covid-19 on the business run by the young entrepreneurs trained by the government (M=14.75, S.D. = 4.17), and non-government (M=14.12, S.D. = 4.12), conditions; t (148) =0.846, and p >0.05. This result suggests that the negative impact of Covid-19 was insignificantly different based on the nature of training providers. Furthermore, an independent sample t-test revealed that irrespective of the nature of the customers served by the business, the businesses were equally hit hard by Covid-19. The test statistics revealed the mean negative impact of Covid-19 on the businesses that served individual customers (M=14.79, S.D. = 4.28) and served organizational customers (M=14.10, S.D. = 3.17), conditions; t (186.16) =1.324, and p >0.05.

Table 2

Negative Impact of Covid-19 on Different Business Sectors

Business Sectors	Mean	N	Std. Deviation	Minimum	Maximum
Agriculture	14.52	67	2.00	8	19
Grocery	6.50	24	0.93	5	10
Construction Materials	10.29	7	3.59	7	15
Manufacturing	16.00	5	0.00	16	16
Trading	17.25	16	1.65	13	19
Service	17.29	70	1.72	12	19
Other sectors	13.33	15	3.46	8	19

Table 2 exhibits the mean adverse impact of Covid-19 on different business sectors in eastern Nepal. From the table, it is evident that the least negatively affected business by Covid-19 is grocery business, followed by the second least negatively affected sector; business related to construction materials. The table also suggests that the young entrepreneurs involved in the service sector were worst hit by Covid-19, followed by the trading sector as the second worst-hit sector. To examine the mean level of the negative impact of Covid-19 on those seven different sectors, an analysis of variance (ANOVA) test was applied. An ANOVA test revealed that the impact of Covid-19 on different sectors was significantly different.

Table 3

Multiple Comparison: Post Hoc Result of ANOVA Using LSD Method

(I) Business Type	(J) Business Type	Mean Difference (I-J)	p-value
Agriculture	Grocery	8.02239*	0.000
Agriculture	Construction Materials	4.23667*	0.000
Agriculture	Manufacturing	-1.47761	0.110
Agriculture	Trading	-2.72761*	0.000
Agriculture	Service	-2.76333*	0.000
Agriculture	Other sectors	1.18905*	0.037
Grocery	Construction Materials	-3.78571*	0.000
Grocery	Manufacturing	-9.50000*	0.000
Grocery	Trading	-10.75000*	0.000
Grocery	Service	-10.78571*	0.000
Grocery	Other sectors	-6.83333*	0.000
Construction Materials	Manufacturing	-5.71429*	0.000
Construction Materials	Trading	-6.96429*	0.000
Construction Materials	Service	-7.00000*	0.000
Construction Materials	Other sectors	-3.04762*	0.001
Manufacturing	Trading	-1.25	0.220
Manufacturing	Service	-1.28571	0.163
Manufacturing	Other sectors	2.66667*	0.010
Trading	Service	-0.03571	0.948
Trading	Other sectors	3.91667*	0.000
Service	Other sectors	3.95238*	0.000

Note: * The mean difference is significant at the 0.05 level.

Table 3 presents a multiple group comparison of differences in the mean negative impact of COVID-19 on different business types. One-way ANOVA was conducted to compare the mean level of the negative effect of Covid-19 on different types of business- classified as "agriculture-related," "grocery," "construction material," "manufacturing," "trading," "Service," and "other sectors." The mean level of the negative impact of Covid-19 on the different business types was significant at the 5% level of significance [F (6, 197) = 99.837, p = 0.000]. Therefore, Post Hoc comparisons analysis was conducted using the LSD test. The Post Hoc analysis indicated that the mean negative impact of COVID-19 on different business types was significantly different. However, mean negative impact of COVID-19 on agriculture (M =14.52, S.D =2), vs. manufacturing (M= 16.00, S. D=0), manufacturing (M= 16.00, S. D=0) vs. trading (M=17.25, S. D= 1.65), manufacturing (M= 16.00, S. D=0) vs. service (M=17.29, S. D=1.72), and trading (M=17.25, S. D= 1.65), vs. service (M=17.29, S. D=1.72) are insignificantly different since p>0.05. Taken together, Covid-19 had a significantly different negative impact on different business types except for four groups viz. agriculture vs. manufacturing, manufacturing vs. trading, manufacturing vs. service, and trading vs. service sector. Of twenty-one, multiple comparison groups, four multiple comparison groups' mean negative effects of covid-19 were insignificantly different.

Conclusion, Implication, and Limitations of the Study

This study examined whether COVID-19 had equally affected all types of businesses negatively, mainly those enterprises run by young entrepreneurs in eastern Nepal. To answer this question, primary data were collected from 204 young entrepreneurs from eastern Nepal. The average negative impact of COVID-19 on the businesses was compared by gender (for instance, the negative impact of covid-19 on the business run by young male entrepreneurs and young female entrepreneurs was compared), training, the training provider, and the served customers. An independent-samples t-test at 0.05 level of significance was conducted to compare the mean negative impact of Covid-19, and the result revealed that the mean negative impact of Covid-19 on the businesses was not significantly different due to differences in gender, training, training provider and the nature of the served customers.

One-way ANOVA was conducted to compare the mean level of the negative effect of Covid-19 in different types of business- classified as "agriculture-related," "grocery," "construction material," "manufacturing," "trading," "Service," and "other

sectors." The mean level of the negative impact of Covid-19 on the different business types was significant at the 5% level of significance. A Post Hoc comparisons analysis was conducted using the LSD test to find out the significant group differences. The Post Hoc analysis revealed that the mean negative impact of COVID-19 on different business types was significantly different. However, the mean negative impact of COVID-19 on agriculture vs. manufacturing, manufacturing vs. trading, manufacturing vs. service, and trading, vs. service were insignificantly different since p>0.05. Based on ANOVA Post Hoc analysis, it is concluded that Covid-19 had a significantly different negative impact on different business types except for four business types viz., agriculture vs. manufacturing, manufacturing vs. trading, manufacturing vs. service, and trading vs. service sector. Out of twenty-one multiple comparison groups, four multiple comparison groups' mean negative effects of covid-19 differed insignificantly. Some possible rationale behind an insignificant difference in the mean negative impact of COVID-19 on the businesses, irrespective of the gender of the entrepreneurs, training status, training provider, and the customer served, maybe that the trainers might not have taught the trainees to handle a crisis like a pandemic situation. Training agencies and entrepreneurship development authorities must educate the entrepreneurs to deal with emergent situations through training programs. Further studies can be directed to find out the reasons behind such a disproportionately negative impact of COVID-19 on different business types.

References

Bartik, A. W., Bertrand, M., Cullen, Z., Glaeser, E. L., Luca, M., & Stanton, C. (2020). The impact of COVID-19 on small business outcomes and expectations. *Proceedings of the National Academy of Sciences*, *117*(30), 17656-17666.

Chan, J. F. W., Yuan, S., Kok, K. H., To, K. K. W., Chu, H., Yang, J., ... & Yuen, K. Y. (2020). A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: a study of a family cluster. *The lancet*, *395*(10223), 514-523.

Chaudhary, M., Sodani, P. R., & Das, S. (2020). Effect of COVID-19 on Economy in India: Some Reflections for Policy and Programme. *Journal of Health Management*, *22*(2), 169-180.

Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of applied psychology*, *78*(1), 98.

Devkota, S. (2020). Impacts of COVID-19 on Nepalese economy. *Applied Science and Technology Annals*, *1*(1), 119-121.

El-Erian, M. (2020). The Coming Coronavirus Recession and the Uncharted Territory Beyond. *Foreign Affairs. Accessed*, *27*. Available at: https://www.foreignaffairs.com/articles/2020-03-17/coming-coronavirus-recession [date accessed: February 14, 2021]

Elliot, L. (2020). Prepare for the coronavirus global recession. *The Guardian*, *15*. Available at: https://www.theguardian.com/business/2020/mar/15/prepare-for-the-coronavirus-global-recession, [Date accessed: February 10, 2021]

Eurosurveillance Editorial Team. (2020). Note from the editors: World Health Organization declares novel coronavirus (2019-nCoV) sixth public health emergency of international concern. *Eurosurveillance*, *25*(5), 200131e.

Horowit, J. (2020). The global coronavirus recession is beginning. CNN. Media report. Available at: https://edition.cnn.com/2020/03/16/economy/global-recession-coronavirus/index.html [date accessed: February 14, 2021]

Madhav, N., Oppenheim, B., Gallivan, M., Mulembakani, P., Rubin, E., and N. Wolfe. 2018. "Pandemics: Risks, Impacts and Mitigation", in Jamison, et. al. (editors), Disease Control Priorities: Improving Health and Reducing Poverty, Ch. 17, pp. 315- 342

Malik, K., Meki, M., Morduch, J., Ogden, T., Quinn, S., & Said, F. (2020). COVID-19 and the Future of Microfinance: Evidence and Insights from Pakistan. *Oxford Review of Economic Policy*, *36*(Supplement_1), S138-S168.

Monitor, I. L. O. (2020). COVID-19 and the world of work. *Updated estimates and analysis*. Available at: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_743146.pdf, [Date accessed: February 13, 2021]

Nepal Youth Policy (2015). Available at: http://www.moys.gov.np/sites/default/files/nitiheru/National%20Youth%20Policy%202072_2.pdf, [date accessed February 9, 2021]

Noy, I., Doan, N., Ferrarini, B., & Park, D. (2020). Measuring the Economic Risk of COVID-19. *Global Policy*, *11*(4), 413-423.

Ozili, P. K., & Arun, T. (2020). Spillover of COVID-19: Impact on the Global Economy. *Available at SSRN 3562570*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3562570 [date accessed: 10 February 2021]

Schnurr, J., & Grant, M. (1999). A conceptual and analytical research framework for youth enterprise and entrepreneurship development: social innovation towards sustainable livelihoods for youth. Available at: https://idl-bnc-idrc.dspacedirect.org/bitstream/handle/10625/29670/118405.pdf?sequence=1, [date accessed December 29 2020]

Shrestha, P. K. (2020). Impact of Covid-19 on Microfinance Institutions of Nepal. Available at: https://www.nrb.org.np/contents/uploads/2020/10/NRB_Working_Paper-NRB-WP-51-Impact_of_Covid_19_on_Microfinance_Institutions_of_Nepal-Prakash_Kumar_Shrestha_PhD.pdf, [date accessed: February 13, 2021]

Shrestha, R., Shrestha, S., Khanal, P., & Kc, B. (2020). Nepal's first case of COVID-19 and public health response. *Journal of travel medicine*, *27*(3), 1-2.

UNIDO (2020). Coronavirus: the economic impact – October 21 2020 Recovery or protracted economic downturn? The role of policies based on evidence October 21 2020. Available at: https://www.unido.org/stories/coronavirus-economic-impact-21-october-2020, [date accessed: February 11, 2021]

Yang, X., Yu, Y., Xu, J., Shu, H., Liu, H., Wu, Y., ... & Shang, Y. (2020). Clinical course and outcomes of critically ill patients with SARS-CoV-2 pneumonia in Wuhan, China: a single-centered, retrospective, observational study. *The Lancet Respiratory Medicine*, *8*(5), 475-481.