COVID-19

The Economy and Society

Editors

Tapas R. Dash
Kenneth Paul Charman

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International Research Symposium on
How did a Health Crisis Translate to an Economic Crisis?
The Impact of the COVID-19 Pandemic

November 15, 2020

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Acknowledgments

We are pleased to bring out this research-based book, *COVID-19: The Economy and Society*, which is an outcome of the International Research Symposium on *How did a Health Crisis Translate to an Economic Crisis? The Impact of the COVID-19 Pandemic* held on November 15, 2020, organized by the CamEd Business School, Phnom Penh, Cambodia. This book contains 13 chapters comprised of two parts—*COVID-19: The Economy*, and *COVID-19: The Society*.

Concerning the devastating effects of COVID-19 on the economy and society, we took a humble initiative to bring together researchers, academics, policymakers, corporates, and development partners to exchange and disseminate their research results and experiences on issues arising out of the global pandemic in the region and beyond to support policy measures for the Kingdom of Cambodia.

We are extremely thankful to all the presenters of the symposium for their valuable research outputs and sincere efforts in disseminating their research results. We are also thankful to all participants, especially the students of the CamEd Business School for their active participation in the discussions.

We are grateful to Professor Casey Barnett, president of the CamEd Business School, for his thought-provoking inaugural address and meaningful guidance to make the symposium successful. Our colleagues at the CamEd Business School need special appreciation for their cooperation and support in organizing the symposium. Finally, we express our sincere thanks to Allied Publishers Pvt. Ltd. for accepting our request to publish this edited book in a timely manner.

Our heartedly thanks to all of you!

Editors

CamEd Business School
Phnom Penh, Cambodia

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Introduction

Tapas R. Dash

Since the end of 2019, the first detection of COVID-19 in Wuhan, China, the global pandemic poses an unprecedented impact on economies by hitting major economic sectors at different speeds and intensities. The negative economic shocks intensified by the global health crisis, shutdowns and layoffs, create a devastating effect on the lives and livelihoods of millions around the world. Indeed, over half-a-billion people perished due to the global health crisis. In a bid to flatten the epidemic curve, many countries made attempts by strictly following social distancing measures and shutdowns. The government measures of curtailing the activities of non-essential industries in many countries forced hundreds of millions of workers to be confined to their homes. Thus, several measures imposed by the governments triggered supply and demand shocks and posed severe challenges as the economic response to the pandemic. Further, as the poor and marginalized are the worst sufferers, the significant reduction of income due to job loss, led to wider inequalities between the higher and lower income groups and increase the vulnerability of the lower segment of the population.

In addition to the loss of income and economic insecurity due to the closure of business units, the impacts of COVID-19 on other sectors including education were devasting. The closure of the educational institutions and change in the delivery of instructions to online mode has deprived millions of learners due to inadequate technological and infrastructural facilities. The negative impacts on education, skills building, and employment as a result of COVID-19 have long lasting consequences on the livelihoods of all sections of the population.

Though Cambodia's success in COVID-19 containment was exemplary, the economy was adversely affected due to the global restrictions on the movement of people and the halt of the main drivers of the Cambodian economy such as tourism and other related sectors. According to the Asian Development Bank, Cambodia's economy contracted by 3.1 percent in 2020 (ADB, 2021), and as predicted by the United Nations Development Programme (UNDP), Cambodia's poverty rate will rise to 17.6 per cent, around 8 percentage points higher than before the COVID-19 pandemic (UNDP, 2020). However, the Royal Government's stimulus measures, particularly cash transfers to about 700,000 of the poorest and most vulnerable households was a tremendous support to those in need and hit the hardest by the global pandemic.

According to the World Bank, for 2021, Cambodia's growth is projected at 2.2 percent, despite strong export performance supported by improved external demand (World Bank, 2021). As per the Asian Development Outlook, Cambodia's industrial production is expected to rise 7.1 percent in 2021 and 7.0 percent in 2022 on the back of a rebound in the garments, footwear, and travel goods sector, as well as growth in other light manufacturing industries. Agriculture is expected to grow by 1.3 percent in 2021 and 1.2 percent in 2022. Services will recover slowly, expanding by 3.3 percent in 2021 and 6.2 percent in 2022 (ADO, 2021). As stated by the UNDP, the three core priorities in the challenging times are to prevent and stop the transmission of the virus, and save lives; mitigate the socioeconomic impacts on the most vulnerable; and set the stage for an inclusive, sustainable, and equitable recovery (UNDP, 2020). However, these require a pragmatic approach to deal with the emerging challenges in minimizing the negative effect of the global pandemic on both the formal and informal sectors. Against this backdrop, it is pertinent to disseminate as well as deliberate the research outputs supporting policy measures. Our attempt in this direction led to the organization of an International Research Symposium and finally the production of the research-based results in the form of an edited book.

Thirteen chapters presented in this book are brought under two parts- *COVID-19: The Economy*, and *COVID-19: The Society*. Authors of the chapters have tried their best in bringing out the effects of COVID-19 on the economy and society in several dimensions, and what needs to be done to overcome the crisis. These research-based outputs are valuable for policymakers to deal with the emerging challenges, and in streamlining the planned activities. Together, the chapters give an overview of how a health crisis translates to an economic crisis that needs careful attention and multi-pronged strategic interventions.

Part-I

COVID-19: The Economy

CHAPTER 1

COVID-19: Economic and Social Impact Assessment in Cambodia*

United Nations Development Programme, Cambodia**

INTRODUCTION AND BACKGROUND

COVID-19 has taken immense tolls on societies and economies around the world, including through dramatic global impacts on trade, production and other economic activities. The World Bank, International Monetary Fund, Asian Development Bank and United Nations system have all estimated the high costs of COVID-19, but mainly at the regional level, such as for ASEAN (the Association of Southeast Asian Nations). The UN Secretary General Report in April estimated a regional contraction of –0.1 percent in gross domestic product (GDP) for 2020 in South-East Asia, contrasting to the predicted 4.5 percent growth before the pandemic.[1] UNDP Cambodia has undertaken a costing of socioeconomic impacts specific to Cambodia.

Crucially, the crisis operates through both demand and supply channels. Cambodia is highly exposed as it relies on a narrow economic base built from garments, tourism, agriculture and construction. It has a highly open economy, where exports and imports are around 62 percent and 63 percent of GDP, respectively. Foreign direct investment is 11 percent of GDP. On the supply side, Cambodia is highly reliant on China for raw materials for its garment industry and as a source of tourists. On the demand side, China is an important export destination for agricultural products. Capital inflows from China are key to sectors such as construction. Cambodia's higher value-added exports go mainly to Europe. COVID-19 effects will exacerbate the pre-existing loss of trade preferences from the partial suspension of the European Union's Everything But Arms programme, starting in August 2020.

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* A part of this chapter was presented by Mr. Nick Beresford, Resident Representative, United Nations Development Programme, Cambodia at the CamEd Business School's International Research Symposium held on November 15, 2020.

** We sincerely thank the Ministry of Economy and Finance (MEF), Royal Government of Cambodia and the Australian Government Department of Foreign Affairs and Trade (DFAT), for contributing to this study.

Against this backdrop, UNDP's macroeconomic model-based estimates suggest a range of impacts, with the central projection being a loss of around 0.6 percent in GDP, and the headline year-on-year figure declining to 6.5 percent. Moreover, the estimates underscore how pre-existing socioeconomic vulnerabilities will exacerbate the welfare and distributional impacts of the crisis. Likely consequences include more people clustering around the poverty line and potentially large increases in the poverty headcount, and high levels of household indebtedness, particularly given weak channels of social protection.

UNDP used computable general equilibrium (CGE) and global trade analysis (GTAP) models to assess the economic and social impacts of COVID-19, based on channels of the Cambodian economy already identified as most affected.[2] The CGE model, suitable for various types of policy simulation, was anchored in the Social Accounting Matrix (SAM) 2020 and used data from Macroeconomic and Fiscal Policy Framework 2020–2022 of the Ministry of Economy and Finance (MEF)[3] for a business-as-usual (BAU) scenario. It captured secondary indirect impacts across all agents of the economy (e.g., households, the government and the rest of the world). The outcomes generated were fed into employment and poverty modules to assess related impacts. The starting points were external (exogenous) demand shocks.

The GTAP model tracks trade flows between Cambodia and representative countries as well as by major economic blocks as classified in the model. By contrast, in the single-country CGE model, import and export trade with Cambodia are treated as single external flows. The latest version of the GTAP model is calibrated to 2014 global data sets. Its main limitation is the use of single households as opposed to multihousehold groups as in the CGE model. This fails to capture important impacts on income distribution. Impact outcomes from the two models, however, supplement each other and enhanced the robustness of the assessment overall.

IDENTIFIED CHANNELS AND ASSUMPTIONS

Two scenarios were analyzed: BAU and predicted case. BAU scenario is described in the next section. Table 1.1 summarizes time frames, the identified channels, and extent of shocks for the predicted case scenario.

Table 1.1: Description of Assumptions

No.	*Key Driver Variables*	*Assumptions of Predicted Case Scenario*
1.	Duration of the global outbreak impacts (base month is February)	2020 full year
2.	Garments (including textiles and footwear)	13.1 percent output decline (20.1 percent reduction in export demand)

No.	*Key Driver Variables*	*Assumptions of Predicted Case Scenario*
3.	Construction	10.6 percent output decline (24 percent reduction in project approval)
4.	Hotels and restaurants	13.3 percent output decline (42 percent reduction in international tourist arrivals and 30 percent in domestic tourists)
5.	Transportation and communication	1.5 percent output decline (as above)
6.	Agriculture	Based on MEF subsector output data (the agricultural GDP growth rate is estimated at 0.9 percent)
7.	Government response	1. Estimated government response: Social protection +1.9 percent of GDP, tax relief +0.7 percent of GDP, savings on capital schemes –3.5 percent of GDP (net–0.9 percent of GDP) 2. UN social protection proposals: Government programme (above), plus additional UN social protection proposal[4] (net +3.5 percent of GDP)

BUSINESS-AS-USUAL SCENARIO

Using the CGE model, we generated the BAU scenario using sectoral GDP information for 2020 projected in the MEF's macroeconomic and fiscal policy framework 2020–2022. This was before adjustments for the partial suspension of Everything but Arms and provisional COVID-19 impacts[5] (the former is re-included in the scenarios). The sectoral GDP estimated under the BAU scenario exactly matched the sectoral GDP reported in the MEF's macroeconomic and fiscal policy framework. The BAU scenario provided benchmark data against which GDP, employment, household consumption and poverty outcomes under the demand shock and stimulus in the predicted case scenario were compared.

BAU Scenario Key Observations

The size of the Cambodian economy was estimated at US$27.6 billion at current prices and US$13.9 billion in constant prices. GDP growth without any demand shock was projected to reach 6.5 percent in fiscal year 2020. The total number of employed persons was 9.2 million, implying an extremely low unemployment rate of 0.7 percent.[6] The headcount poverty rate continued to drop to 9.56 percent of the total population (16.7 million people).

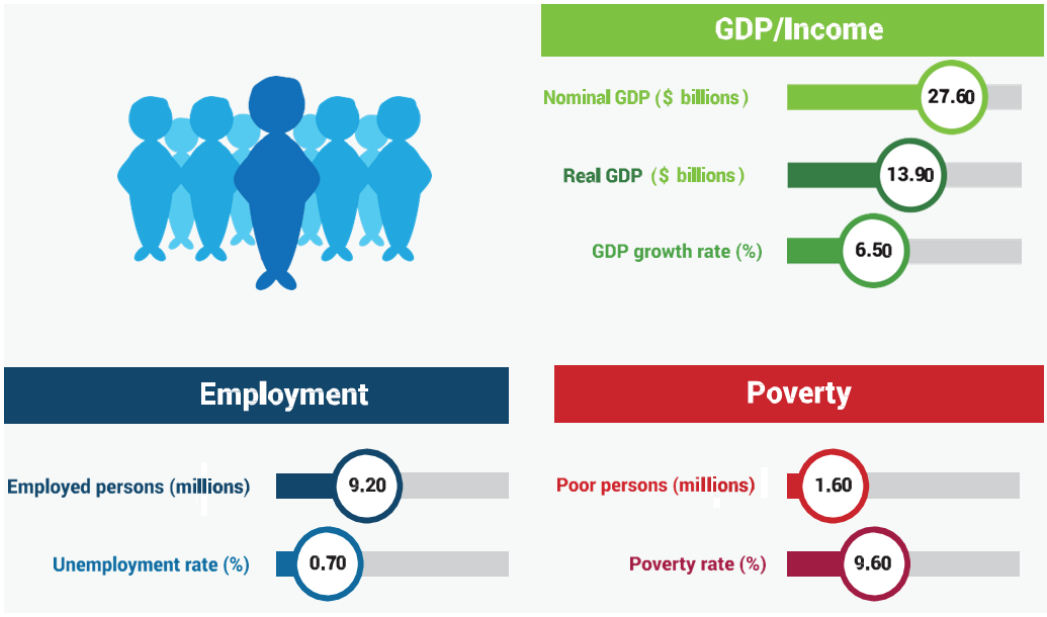

Figure 1.1: Simulated GDP, Employment and Poverty under the BAU Scenario

Source: Cambodia SAM 2000, employment matrix and poverty modules.

DEMAND SHOCK

The most widely used and accepted indicator to measure economic well-being is GDP. It is the sum of the values of all goods and services produced in an economy in a given time, usually a quarter or a year.

GDP Key Findings

Ceteris paribus, demand shocks of the scale shown in Figure 1.2 would likely contract the economy severely. The GDP growth rate reduction was large and negative at –4.11 percent under the predicted case scenario. The impact on GDP growth rates was even higher under the GTAP simulation, with a –4.6 percent contraction for the predicted case scenario.

Like many developing nations, Cambodia does not have a robust system to track employment. A large number of workers are clustered in informal sectors with low productivity, mainly in services and agriculture, where on average they work less than 40 hours a week, leading to high rates of underemployment.

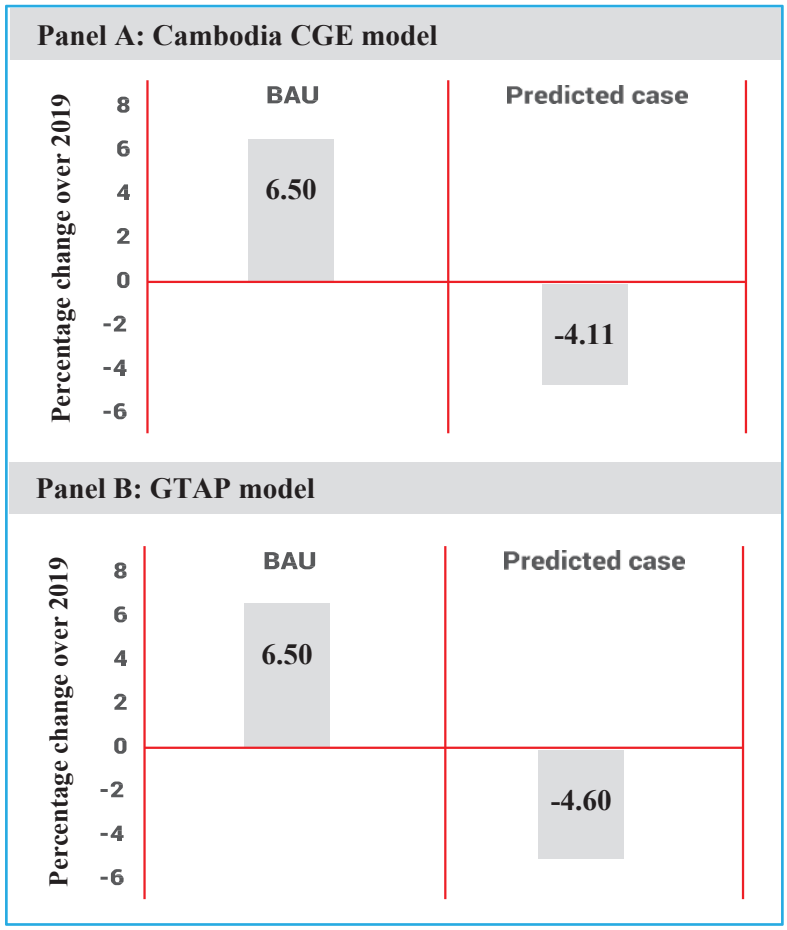

Figure 1.2: Simulated Impacts on GDP Growth Rates—CGE and GTAP Models (Percentage Change over 2019)

Source: Cambodia Static CGE Model 2020 and GTAP Model.

Employment and Poverty Key Findings

Estimated employment intensities across activities were high, suggesting that a decline in domestic output may spur the unemployment rate. Unemployment rates in the post-COVID-19 period may increase to 4.8 percent of the total labour force in the predicted scenario. Unemployment rates were even higher under the GTAP model.

Poverty impacts were high in the post-COVID-19 scenarios, as GDP or national income loss leads to the loss of household income and consumption. As a result, the headcount poverty rate may increase to 17.6 percent under the predicted case scenario, implying an 8 percentage-point jump in poverty compared to the pre-COVID-19 period. As many as 1.34 million persons may slip back into poverty.

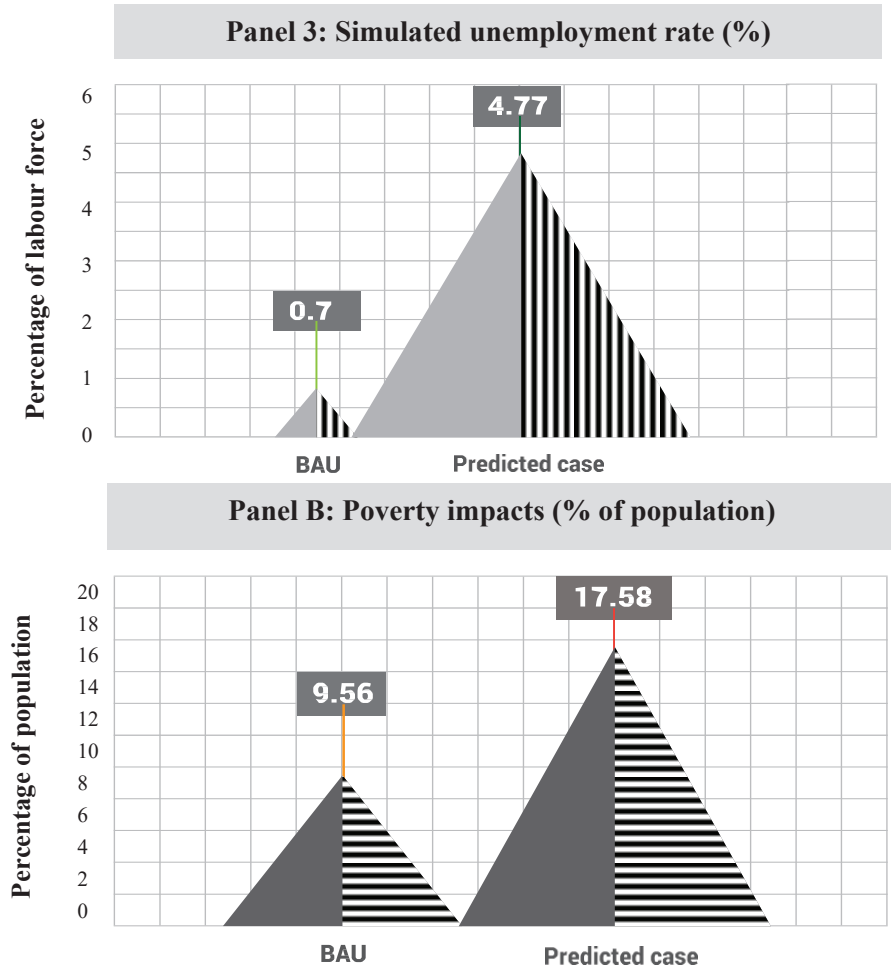

Figure 1.3: Simulated Impacts on Employment and Poverty

Source: Cambodia Static CGE Model 2020, Employment and Poverty Module 2020.

STIMULUS

In response to the pandemic, the Government has proposed a series of stimulus packages involving the expansion of social protection and tax relief. According to government budget information, the funds for these measures will likely come from reallocating funds for some capital projects.

Estimated Government Expenditure Stimulus

GDP, employment, and poverty outcomes under the proposed government stimulus measures are presented in Table 1.2.

Table 1.2: Impacts from Government Stimulus Measures

Indicators	*Predicated Case Scenario*	*Predicted Case + Estimated Stimulus*
Cambodia CGE Model		
GDP growth rate (Percentage over 2019)	–4.11	–4.41
Unemployment rate (Percentage of labour force)	4.77	5.02
Household consumption (Percentage over BAU)	–15.86	–14.53
Poverty rate (Percentage of population)	17.58	16.55
GTAP Model		
GDP growth rate (Percentage over 2019)	–4.60	–2.50

Source: Cambodia Static CGE Model 2020 and GTAP Model.

Estimated Stimulus Key Findings

The government stimulus package may not improve already deteriorated social and economic conditions since they do not inject additional funds into the economy. They in fact withdraw resources totalling –0.9 percent of GDP. Even though the GTAP model found some improvements in the GDP growth rate, it would remain in the negative zone (–2.5 percent). When the CGE model is employed, GDP loss worsens. As a result, unemployment rates deteriorate under the stimulus measures compared to the demand shock scenario. Despite worsening income and employment trends, however, headcount poverty improves under the stimulus measures, due mainly to social protection transfers to three kinds of vulnerable household groups.[7]

Social Protection-Focused Stimulus Package

Social protection—especially social assistance—has emerged as the most important stimulus to protect lives and livelihoods during COVID-19. Rich countries have already allocated around 6 percent of GDP to social protection to mitigate the crisis. Proposals for higher allocations with universal coverage (even on a temporary basis) have come from unlikely sources such as the International Monetary Fund and World Bank. Martin Ravallion[8] suggested allocating at least 2 percent of GDP to social protection programmes.

Over the last five months, an unprecedented vertical and horizontal expansion has occurred (Figure 1.4). Following these developments at the global level, the UN system

proposed a 3.5 percent social protection stimulus for Cambodia, meant to both protect lives and livelihoods, and propel the economy.[9]

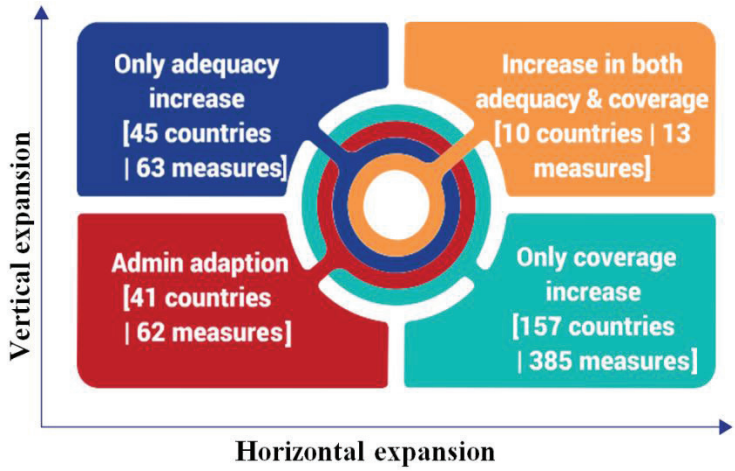

Figure 1.4: Social Protection Programmes during COVID-19
Source: Gentilini *et al.*[10]

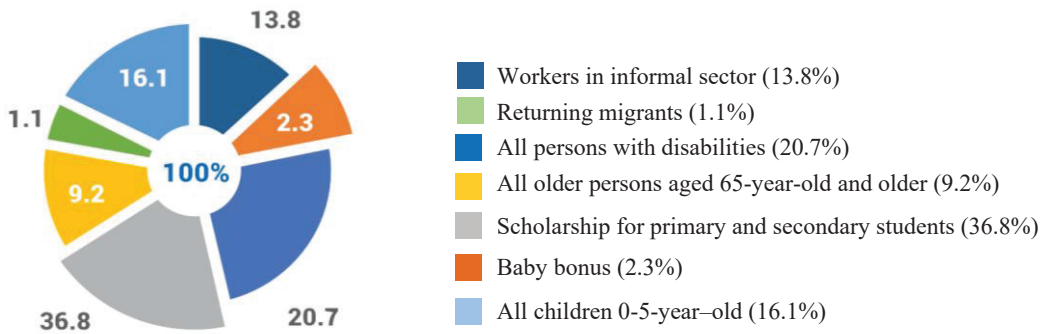

Figure 1.5: Distribution of Social Protection Stimulus by Programmes

Accordingly, a separate scenario with a social protection-focused stimulus package was modelled. Here we assumed that cash transfers were allocated to all seven representative household groups according to their population share and types of social protection interventions (Figure 1.5). This is a simplified approach without reference to the ability to deliver transfers in this manner and scale. Modifications of this assumption can be made if needed.

The results and key findings were necessarily provisional, but important differences with the other two results emerged. We saw a small decline in the abatement of GDP losses (around 0.3 percent of GDP). The wider socioeconomic impacts on

employment and poverty and the distributional impacts were more positive and, in many cases, significant (Figure 1.6).

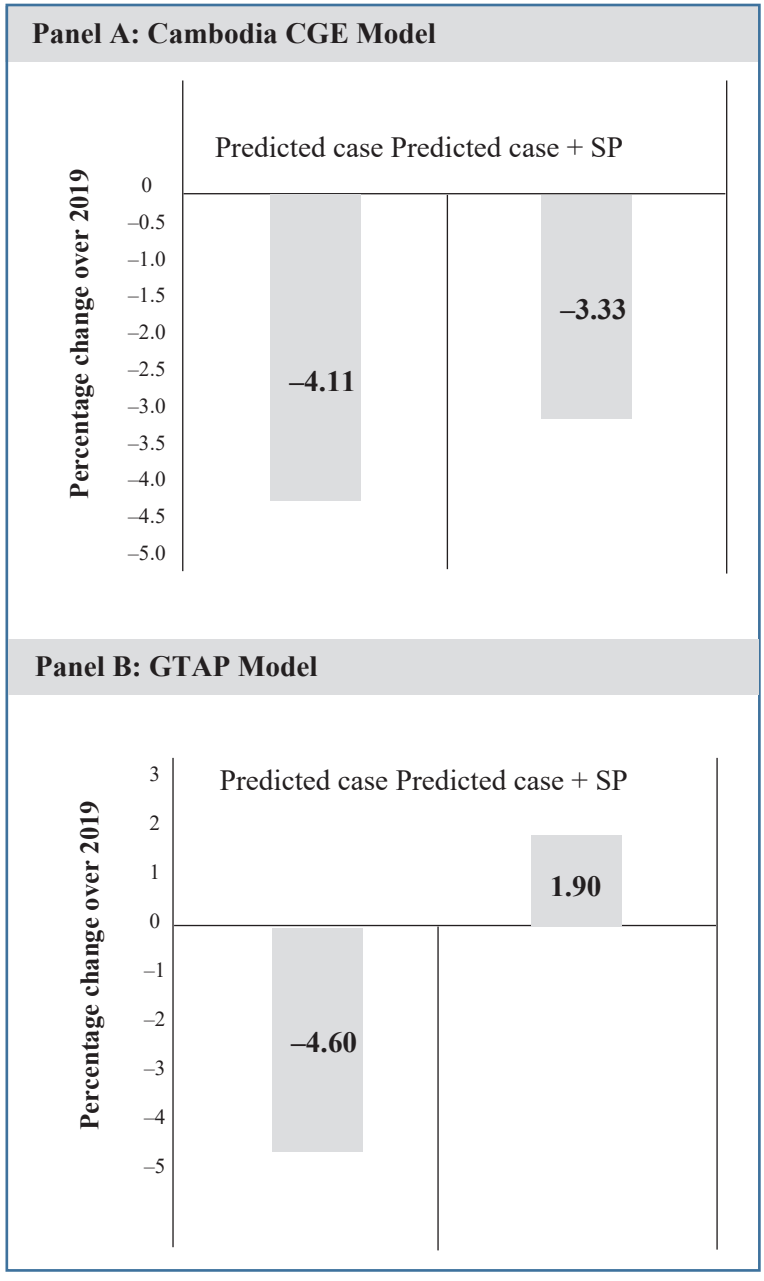

Figure 1.6: Simulated GDP Impact under a Social Protection Stimulus Scenario
Source: Cambodia Static CGE Model 2020 and GTAP Model.

GDP Growth Key Findings

The social protection stimulus was found to improve GDP or national income compared to the predicted case scenario. Under the CGE model of the social protection stimulus scenario, impacts on GDP growth rates at –3.33 percent were slightly better than under the demand shock scenario at –4.11 percent. Under the GTAP simulation, the growth impact of the social protection stimulus scenario was a positive 1.9 percent.

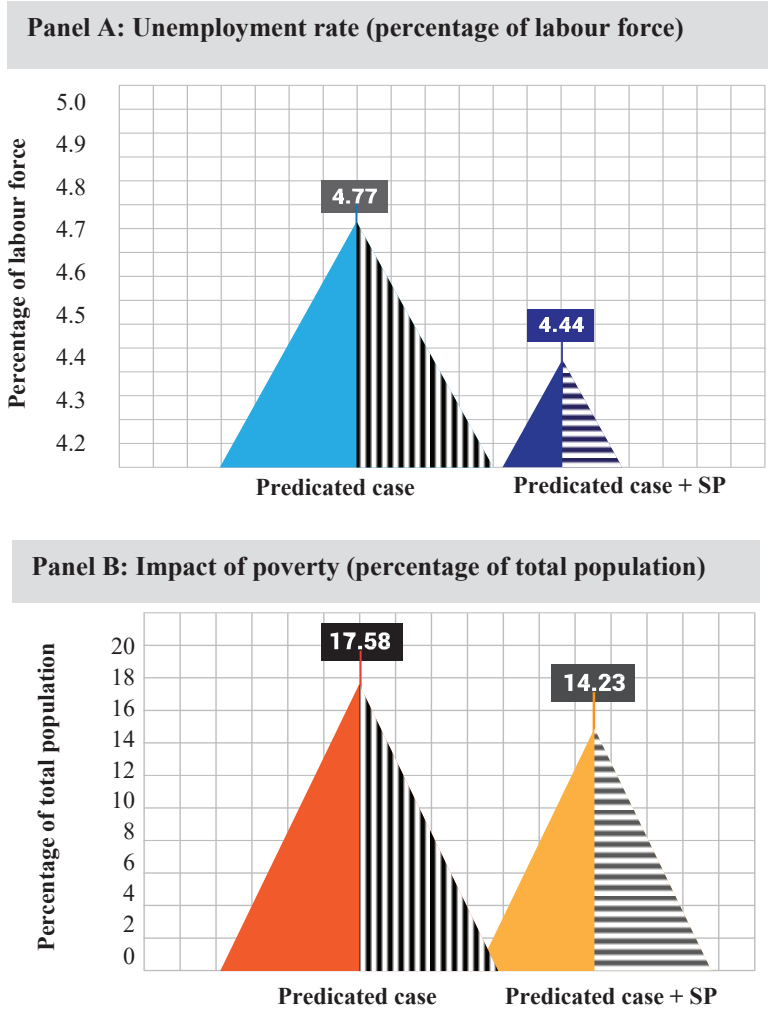

Figure 1.7: Simulated Employment and Poverty Effects of a Social Protection Stimulus Scenario

Source: CGE Model 2020 and Employment and Poverty Modules.

Employment and Poverty Key Findings

Due to improvements in GDP under the social protection stimulus, the employment effects were better than under the estimated stimulus of the Government or the demand shock scenarios. With the social protection stimulus, the unemployment rate shrank by around 0.4 percentage points compared to the demand shock scenario in predicted case under the CGE model, and the number of jobless persons declined by 28,500. Employment effects are similarly high in the GTAP simulation.

The overall consumption decline was –4.64 percentage points less under the social protection stimulus compared to the demand shock scenarios. The impacts are higher for rural household groups compared to urban household groups as the current social protection system is overwhelmingly biased towards the rural poor. The poverty rate would be lower, at 14.2 percent compared to 17.6 percent, with 560,000 fewer poor people. This clearly indicates the superiority of the social protection stimulus compared to the demand shock and estimated government stimulus scenarios.

NOTES

1. UN Secretary-General's April report.
2. For details, please refer to Poch, K. and Marshall, R.C. (2020). "Potential impacts of the COVID-19 outbreak on the Cambodian economy."
3. https://www.mef.gov.kh/documents/mustsee/Macroeconomic_and_Fiscal_Policy_Framework_2020-2022.pdf
4. The United Nations (April 2020). *Social protection responses to the COVID-19 crisis: Policy options paper for Cambodia.* Unpublished document.
5. COVID-19 will necessarily alter the impacts of the partial suspension of Everything But Arms as the quantity and value of exports will decline prior to the reimposition of some tariffs.
6. These were revised and updated employment statistics based on Cambodia Socio-Economic Survey (CSES) 2017. Given that policymakers prefer this source for employment estimation, previous estimates based on the 2012 Labour Force Survey were replaced with employment statistics based on CSES 2017.
7. They are landless, small farmers and low educated household groups.
8. Ravallion, M. (2020). "On the virus and poor people in the world," blog post, 2 April, https://economicsandpoverty.com/2020/04/02/on-the-virus-and-poor-people-in-the-world.
9. The United Nations (April 2020). *Social protection responses to the Covid-19 crisis: Policy options paper for Cambodia.* Unpublished document.
10. Gentilini, U. *et al.* (2020). "Social Protection and Jobs Responses to COVID-19: A Real-Time Review of Country Measures," living paper version 12, 10 July.

CHAPTER 2

The Impact of COVID-19 on Cambodian Economy and the ILO's Response

Charles Bodwell

INTRODUCTION

The rapid spread of COVID-19 has caused various problems and changes in our society. People are required to wear face masks when they go out and keep social distancing. There are temperature check points everywhere, and many countries are still restricting the immigration of foreigners to prevent entry of infected visitors. While those preventative measures are necessary, they are negatively affecting the Cambodian economy in various dimensions.

The Cambodian economy heavily relies on tourism, garment, manufacturing and construction, which embed around 40 percent of paid employment and comprise 70 percent of the country's GDP (World Bank, 2020). The tourism sector is one of the most severely affected industries as overseas tourists have stopped due to the border closure. Many restaurants and hotels have had to shut down, and surviving businesses are struggling to pay maintenance costs. However, the travel industry is now in gradual recovery. The Ministry of Tourism (MoT), Government of Cambodia reported that 1.44 million domestic tourists and 14,148 foreign tourists had travelled during the Khmer New Year Holiday (The Cambodia Daily, 2020), and the country is discussing the possibility to accept foreign tourists from the "travel bubble" with other ASEAN countries (The World Tourism Organization [UNWTO], 2020).

The garment and manufacturing industries are other industries affected by COVID-19. The ILO states that 324 factories have had to suspend operations from 14 February to 9 June, which has affected 193,924 factory workers in Cambodia (International Labour Organization [ILO], 2020). The garment industry was originally expected to experience some downturn in 2020 due to the EU's new sanction under "Everything but Arms (EBA)", preferential duty-free treatment. The COVID-19 crisis accelerated this downturn by disrupting global supply-chains and increasing factories' costs to secure occupational safety and healthcare for employees.

Given these observations, it is clear that the COVID-19 pandemic had significant impact on Cambodian economy. It affected workers' employment, companies'

operation and the country's GDP. However, people and society are gradually adopting to this new normal and signs of recovery are emerging. In October 2020, International Monetary Fund (IMF) updated Cambodia's real GDP projection to –2.8 percent, which is slightly better than previous projection of –2.9 percent. Cambodia is controlling well the COVID-19 infection, and thus the number of infected cases is small. If the government succeeds in keeping the infections low, Cambodia may be able to re-boost the economy in the future.

PROBLEMS THAT THE ILO IS CONCERNED WITH

The ILO is mandated to promote decent work for all workers and employers. Thus, security of employment is the primary concern of the ILO in this COVID-19 crisis. The ILO works with government ministries to collect data and propose potential solutions for their policy development and actions. Critical areas for COVID-19 response include but not limited to social protection for those who lost incomes, occupational safety and healthcare for returning workers and fair treatment for migrant workers and informal workers. To assure that these services are sufficiently delivered to all people in need, the ILO works not only with the government but also with various entities such as trade unions, employers' organizations, academic institutions, NGOs and the private sector.

IMPORTANCE OF INCLUSIVE AND SUSTAINABLE CAPACITY BUILDING IN THE COVID-19 NEW NORMAL

COVID-19 increased hardships particularly for vulnerable people, including but not limited to those who live in isolated areas, those with low literacy and those in marginalized communities. They are now being exposed to higher risks of income loss and COVID-19 infection due to lack of access to accurate information and social services. For the recovery of Cambodian economy, the ILO ENTERPRISE team believes that inclusive and sustainable capacity building is necessary. While traditional programmes were not sustainable due to high costs and capability demands, the ILO expects its' Activity-Based Learning (ABL) programmes to be an effective solution for those who suffered from COVID-19.

The ILO's Activity-Based Learning (ABL) Programme

The ABL programmes are a low-cost, peer-learning and easy-to-implement training approach to help participants develop teamwork and social skills. There are six training module packages under the ABL programme as listed in Figure 2.1.

	C-BED Community-Based Enterprise Development	SBC Small Business Competitiveness	R4B Ready For Business	Our. COOP	In Business	FIT Factory Improvement Toolset
Targets	Vulnerable rural communities	SMEs operating in the tourism sector	Youth	Cooperatives or those interested in starting a coop	Formal enterprises	Factories
Key topics	Entrepreneurship, financial literacy	Small business improvement	Entrepreneurship	How to start and improve your COOP	Soft skills, SME development	Factory improvement
Key partners	NGOs, ministries	NGOs, training institutions, ministries	Educational institutions, development partners	NGOs, ministries	Employers and business membership organizations	Development partners, sectorial associations, private sector

Figure 2.1: Training Module Packages under the ABL Programme
Source: ILO.

Till today, over 140 organizations in 14 countries in Asia Pacific have implemented the ABL programmes. One of the significant achievements of the ABL programmes is the Guinness World Record and led to the establishment of Cambodia Entrepreneurship Day. In 2017, the ILO worked with Cambodian Ministry of Education, Youth and Sports (MoEYS) to obtain the Guinness World Record for the largest practical business seminar in the world using the C-BED training toolkit which is one of the training toolkits under ABL programmes, focusing on entrepreneurship. The attempt was successful and MoEYS obtained the record by delivering C-BED training to 2,304 youth participants. After this event, MoEYS decided to set September 21 as Cambodia Entrepreneurship Day (CED) and hold C-BED trainings nationwide.

CED2018 was the first CED event conducted nationwide on the same day. Despite some challenges for such large-scale coordination, 3,942 participants (58 percent female) enjoyed the C-BED training and had the chance to develop and present their business ideas among peers. In 2019, the CED expanded its scale even broader to reach out to 4,685 youth participants (58 percent female) nationwide. Some newspaper and TV companies picked up this event and praised its impact. This year, the event was expected to become even broader, but the COVID-19 crisis happened. However, it enabled the ILO to shift the CED event to a new direction, the online CED event.

The online CED2020 was a one-month process, unlike the previous CEDs which were one-day or half-day gathering events. In the one month, participants worked on a self-guided preparatory worksheet on their laptops or smartphones for 30–60 minutes, joined online small group exercises for two hours, developed business ideas as the groups, and watched the livestream event on September 21, where participants listened to speeches by senior officials and youth entrepreneurs, and selected the best business ideas by online voting.

The ABL programme has undergone a long path with a number of tests and improvements to optimally deliver social skills to some hundreds of thousands of participants through the peer-learning approach. Its transformation to online training has opened a new frontier for the ABL programme to explore the possibility of reaching out to an even greater number of potential future beneficiaries.

ABL Programmes and Innovation as Keys for COVID-19 Response

The ILO expects that the ABL programmes will accelerate innovations to support all who suffered from COVID-19, including the most vulnerable communities, through their peer-to-peer learning method. A study from the UK shows that peer-learning spaces are important to nurture creativity and innovation (Winks *et al.*, 2019). There are several reasons why the ABL programme is effective in fostering innovation in those who are affected by COVID-19.

First, ABL programmes, C-BED and particularly Ready for Business Tools provide opportunity to think about starting a new business as a real career option. A number of people have lost their jobs or have become unable to earn sufficient income due to the COVID-19 crisis. These trainings give them basic knowledge for creating new businesses as well as opportunity to work with people who share the same interest. The ILO expects these participants to create new businesses and create more jobs in Cambodia.

Second, innovation through ABL programmes addresses social problems like COVID-19. The past trainings demonstrated youth's high concern on social problems. In CED events, many youth participants proposed business ideas to address social problems such as deforestation, needs for food sanitation, and environmental pollution. Today, COVID-19 is the centre of everyone's concern, and ABL can be a tool to hatch innovative ideas and solutions for the issues around COVID-19.

Third, the ABL programmes now connect people online. The innovative online methodology of the ABL programme allows people to stay connected with peers while the preventative measures for COVID-19 isolate them physically. Since the COVID-19 pandemic occurred, it become more and more difficult to meet with someone in person, particularly with those who live far or abroad. The preventative measures, such as staying home and social distancing, have isolated people, which can

cause mental problems for some people. Online C-BED is a peer-learning approach which promotes interpersonal communications through online discussion. A research from Japan shows that online workshops have positive impacts on people who isolate themselves due to psychological problems (Yokoyama *et al.*, 2019). Thus, the peer-learning method of online ABL can relieve people's stress during the COVID-19 crisis.

For the above reasons, the ILO believes that promotion of innovation and online ABL programmes lead to solutions for social and economic problems associated with COVID-19. The ILO is currently working with MoEYS, MOT and Ministry of Labour and Vocational Training (MLVT) to provide more trainings for people in need, and is looking for more partners to collaborate for the ABL programme.

CONCLUSION

In summary, COVID-19 effected a big impact on Cambodian economy. The crisis has caused unemployment in core industries, barriers for migrant workers, urgent needs of social protection for vulnerable people, and many other challenges directly linked to our daily lives. While there are a number of ways to address those challenges, the ILO's Enterprise team in Asia Pacific proposes online activity-based learning as one approach to respond to COVID-19 crisis.

The COVID-19 pandemic has changed people's lifestyle and it is expected that the crisis will last for a while. Therefore, the ILO intends to keep promoting the online ABL while carefully watching how the situations change.

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CHAPTER 3

The Impact of COVID-19 on Consumer Behavior

Satyendra Singh

INTRODUCTION

Pandemic is not a new type of outbreak. COVID-19 is the fifth such documented occurrence in the last century (World Economic Forum [WEF], 2020), with total number of confirmed cases being over one million worldwide. During the last two decades alone, the world has witnessed SARS (Severe Acute Respiratory Syndrome) in Hong Kong, Ebola in Sierra Leone, and Zika in Brazil. Table 3.1 lists the timeline of some of the major pandemics. Naturally, COVID-19 has created an unprecedented

Table 3.1: Timeline of Some Major Pandemics

Name	*Period*	*Type*	*Deaths*
COVID-19	2019–	Coronavirus	1.2 m
MERS	2015–	Coronavirus	850
Ebola	2014–2016	Ebolavirus	11.3 k
SARS	2002–2003	Coronavirus	770
Swine Flu	2009–2010	H1N1 Virus	200 k
HIV/AIDS	1981–	Virus	25–35 m
Hong Kong Flu	1968–1970	H3N2 Virus	1 m
Asian Flu	1957–1958	H2N2 Virus	1.1 m
Spanish Flu	1918–1919	H1N1 Virus	40–50 m
Russian Flu	1889–1890	H2N2 Virus	1 m
Yellow Fever	Late 1800s	Virus	100–150 k
The Third Plague	1855	Bacteria	12 m
Cholera	1817–1923	Bacteria	1 m
Smallpox	1520–	Virus	56 m

Note: k = thousand; m = million
Source: World Economic Forum, 2020.

situation for consumers, retailers and governments, as they are compelled to go online and operate under the public health and safety guidelines such as lockdown, social distancing, and sanitization measures, among others.

For the purpose of this chapter, we focus on how the need to maintain government safety regulations such as social distancing has caused consumers, retailers and governments to go online to do transactions in a safe environment. The increased online activities during the COVID-19 means that businesses need to adjust to a new form of interactions with consumers that can offset the loss of in-person shopping experiences. One of the effects of the COVID-19 is that potential customers now appear to be more inclined to search for product information, and accordingly read and write online product reviews rather than talking to salespersons in physical stores. Thus, businesses have the opportunity to recognize the interactive nature of consumer behavior and turn it into a relation-based marketing strategy that involves customer interaction and continuous assessment of online consumer experiences and expectations in order to develop products and services (e.g., hand sanitizers, masks, and online retailing) that are particularly suited for marketing during the pandemic. The role of online product reviews during the COVID-19 environment cannot be underestimated given the significant increase in new product availability, their perceived quality and consumer purchase intention.

There has been much discussion about online reviews relating to demographics, psychographics and technological acceptances. However, in this chapter, we fill the gap and contribute to literature by examining the impact of the COVID-19 environment on the nature of consumer behavior as evidenced by online reviews and the subsequent need for more product- and service-related information to make informed purchase decisions.

Specifically, the purpose of the chapter is to explore how the COVID-19 may affect consumer behavior (e.g., online search for information and reviews), retailer operation (e.g., online distribution for fast and reliable delivery), and government policy (e.g., online safety and quality assurance-related regulations). The implication of this study for the business manager is in the recognition that the nature of online search and reviews could be a predictor of product quality, hence an opportunity for modifying or developing products and services that are ideal for businesses during the pandemic. In the next section, we explain the impact of the COVID-19 on consumer behavior, retailers and governments, followed by a conclusion and implication for managers.

IMPACT OF THE COVID-19

The premise of the chapter is based on the concept of relationship marketing theory which postulates the need to focus on individuals in order to form one-to-one

relationships that generate information with a long-term focus on business and growth strategy. In this context, relationship marketing exerts an integrated effort to identify, maintain, and build a network of consumers that is strengthened for the mutual benefit of both consumers and businesses through individualized value-added contacts over a long period of time (Shani & Chalasani, 1992). Using this theory, online product reviews may represent the relationship between consumers and businesses, and a database of information about consumers' reviews of a firm's products and services that the business can use to improve or modify them. In this context, COVID-19 is the scenario in which the consumer behavior may occur.

Consumer Behavior

COVID-19 has forced most consumers to search for more product-related information online as they are avoiding going to malls so that they do not contract the virus. One of the ways to search for such information is via online product reviews. Online reviews can be provided by consumers who have used the products or by online influencers or retailers themselves—Amazon has a vine program in which qualified reviewers can review products and, in exchange, get them for free. Online reviews can relate to product description, personalized advice or customer service; each of these options has the potential to add value to a prospective customer's about the product quality which may lead to purchase intention. However, during the COVID-19 environment, there has been a significant increase in online product availability (e.g., health-related products, foods, so on), and hence online product reviews. Positive online reviews are particularly desirable during the COVID-19 as many products are new for customers to make purchase decisions with complete information because they may lack full information on product quality, seller reputation, and the available options. On the other hand, consumers may be delighted by the fact that now there are more opportunities for them to shop online and thus write product reviews themselves.

The COVID-19 pandemic has also created a very competitive online business environment. Firms are under pressure to offer new products and services online in order to maintain their market share and profit. Because many firms will be offering products or services for the first time, there may be gaps in demand and supply chains, or delays in product deliveries in saleable conditions. Most supply channels and customer service call centers now have exceedingly long waiting times. Customers, unused to the new realities of businesses, are more likely to write online reviews. This consumer behavior may result in more negative reviews, particularly for new health-related products such as hand sanitizers, masks, so on. than the usual products. As such, customers feel empowered to use technology to be able to write reviews anonymously. In fact, firms can use this empowerment as a strategy to give customers a sense of control over a company's products and enable them to virtually engage in a

meaningful and challenging way, and effectively share their knowledge with retailers and potential customers (Fuchs & Schreier, 2011).

Customers had to modify their shopping behavior to comply with health restrictions. Based on the research, here is some of the modified consumer behavior in the context of shopping and retailing. First of all, consumers who were not used to online shopping had to do it to avoid contact with other people due to the need to maintain social distancing. Once customers were online, they were presented with a plethora of options to choose from both in terms of number of online retailers and product categories and subcategories. Therefore, unless the brand had a destination website, customers had no idea preferences in an online environment as to which retailer to choose. Invariably, customers chose an online retailer and product that provided the maximum value and satisfaction from the purchase. Indeed, COVID-19 created a new segment—no preference segment for selecting an online retailer. This segment is expected to grow in size and demand given most firms have allowed their employees to work from home, which has allowed them to move back to villages and work there as opposed to having to live in a town or city. Naturally, villages or remote areas do not have superstores, so this segment is expected to order online. There is also a growing trend for customers to order groceries, vegetables and fruits online, forcing online retailers to be very competitive and rapid in delivery of the products. Although ordering online and having the items delivered may not be a challenge for those who live in advanced countries, it may be found relatively easy to order online but deliveries may be delayed due to the lack of infrastructure and transportation systems (particularly during COVID-19) for those living in developing countries.

Retailers

COVID-19 has impacted retailers equally. The intention of online product reviews is to facilitate exchanges of experiences and opinions about products and services. Websites such as Yelp.com and Epinions.com are dedicated to online customer reviews (Robson *et al.*, 2013). However, the reliance on online reviews has led to a change from consumers relying on knowledge from trusted specialists to relying on knowledge whose source is often anonymous. It is also relatively simple for a retailer or manufacturer to manipulate online reviews, as they can anonymously submit strategically biased information to potential customers. Complementing its own products anonymously or talking ill about its competitors' products is the simplest strategy that a retailer can use to manipulate online reviews. It is expected that a firm's motivation to manipulate online reviews is due to the need to increase its revenues (Dellarocas, 2006). Although writing fake online reviews is not new, COVID-19 might have made it more competitive to look superior to competitors'

products. In fact, some online platforms have recruited people to write false positive reviews in exchange for money (Byrne & Post, 2013). As such, governments may need to intervene through consumer affairs policies.

Further, the COVID-19 has somehow masked the importance of sustainability in the reuse of containers. People are hesitant to reuse their cups while having tea or coffee due to the fear of contracting the virus, leading to a significant increase in the use of single-use cups under the public health restrictions. Even after the health restrictions are lifted, it would be challenging for firms to secure infrastructure to recycle and decompose the packaging and get it out of the waste system. However, biodegradable material or mono-material may increase recycling efficiency and thus sustainability. In this context, partnering with Loop, Tim Horton has initiated a program in which customers would need to deposit a fee to use the cup or container which would be refunded when the customers return or drop off the cups at the designated locations. The concept of reusability is equally applicable to other food containers as well. Brands need to strike a balance between the desire to protect the environment and sustainability, and the need to provide superior customer experience and be commercially viable.

Governments

The outbreak of the COVID-19 has posed new challenges relating to online shopping. Customers may not know the quality of the online products they are buying, how the products, particularly relating to health and food, were handled, or if the supply chains were infected with the virus. The changing behavior towards online shopping has created a need for governments to promulgate quality-assurance-related policies and regulations for online merchandising. It is observed that online fraudulent activities, misinformation and fake news have increased significantly during the COVID-19 and caused confusion among customers. For example, a recent study in China finds that online meat products could be potentially hazardous unless safety is assured (Liu *et al.*, 2019). A government intervention may be needed to ensure particular temperature control at which meat can be transported and sold. Indeed the food security and risk involved in online purchasing may limit customers' choices. Although a country-of-origin certificate may build confidence among online shoppers in advanced countries, it may be challenging if products originate from developing countries or emerging markets. Distribution of food items, particularly fresh fruits and vegetables, in small towns and cities can also be challenging.

During the COVID-19 pandemic, the online threat to consumers, retailers and governments cannot be ignored. Cybersecurity-related threats to businesses have increased significantly as evidenced by the increase in arrivals of scam and unsolicited emails or attacks on servers. Even government security systems appear to be attacked

in US and Iran, among other nations. Although some cybersecurity risks can be mitigated by regularly applying security-related updates and patches and installing anti-virus software, it is also advisable to prepare data protection and management programs for backup and recovery purposes. Carter (2020) further suggests, based on the recommendations of Deloitte, the five recommended R's to consider when modernizing systems: (1) *Platform* relates to upgrading software and transitioning to the new cloud-based platforms or any platform which is virtual and secured. (2) *Revitalizing* can be thought of as adding another layer of capability that enhances the data management process and the usability of the digital solution with the aim to enhance employee engagement. Employees can use the data to predict and prescribe solutions for customers' problems. (3) *Remediate* can address issues relating to complexities arising during the implementation of the new security system. Objective of the new cloud-based or virtual platform is to increase usefulness of the data through the application of technology to find solutions to clients' particular needs while minimizing the costs of maintaining the security system. (4) *Replacement* may be required when a part or whole IT system needs to be replaced for security, efficiency and economy. The aim is not to replicate the existing system or the old way of doing things but rather focus on identifying new capabilities and solutions in the new system. (5) *Retrench* strategy may be adopted, meaning the existing system can be operational for time being and hence there is no need to do anything for now.

However, a long-term plan is needed to upgrade the cybersecurity system given the need for firms to allow their employees to work remotely and securely. In fact, securing remote devices and computers for employees is not as easy as protecting computers in offices. One way of securing remote devices is to install digital certificates on computers or devices and link them to the user's identity on the server. The use of multiple passwords on multiple devices also leads to more cybersecurity. Mappala and Pasco (2021) found that some firms have adopted the use of robotic process automation even in accountancy.

CONCLUSION

The purpose of the chapter was to explore the impact of the COVID-19 on: (1) consumer behavior as evidenced by the increased number and impact of online product-related reviews; (2) retailer and manufacturer behavior as evidenced by the manipulation of some reviews; (3) governments whose supports are needed to regulate to ensure that quality products and services are being sold in a safe online environment. Consumers make purchase decisions based on their perception of a product being recognized positively by online reviews. Marketing managers may use the consumer behavior and psychological traits to their advantage to create an online environment that reinforces positive perception of the products and services. As such,

customers trust online reviews posted by other customers more than reviews posted by retailer-driven communication content writers or departments which are likely to evoke negative reactions and are perceived as manipulative marketing tactics (Racherla *et al.*, 2013). It appears that even though online reviews may lack credibility, such reviews have a positive impact on business performance. Online reviews are an important source of information for businesses to create competitive advantage. Managers can use the customer analytics to track effectiveness of online reviews, posted by either consumers or retailers.

Indeed, visiting brick-and-mortar stores is a hassle for many customers as they need to wear mask, move in unidirectional aisle, sanitize hands, maintain social distancing and wait in the long queue outside the store. Waiting outside in cold countries is as such unhealthy regardless of the prevalence of COVID-19. Thus, the pandemic has resulted in the formation of a new segment labelled as no preference segment. This segment is defined as that which is value and process conscious. Value addition is important during COVID-19, as many people have either lost their jobs or have reduced income, so it is logical for them to shop for value-based products. Managers should endeavor to deliver on this aspect of shopping. They should also be particularly interested in tracking these customers through analytics and data visualization in terms of their length of stay on the websites or pages, number of clicks and whether their visits resulted in purchases. This segment also opens the door for retailing perishable products online particularly for customers living in remote areas. There is a trend of people moving from crowded cities to sparse villages or small towns where the need to maintain social distances is relatively easy. Cybersecurity-related concerns should be alleviated to minimize the hesitancy of customers when ordering online.

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CHAPTER 4

Economic Conditions of the Cambodian Urban Informal Workers during the COVID-19 Pandemic

Tapas R. Dash and Shruti Dash

INTRODUCTION

The impetus for this study comes from a field observation on informal workers in different urban areas in the Phnom Penh city during the COVID-19 pandemic. The prevailing pandemic has devasted economies around the world, and in particular, the informal workers, who are generally employed on a seasonal, casual, or temporary basis, and lack social protection, have suffered the worst. To mitigate the social and economic impacts of the pandemic on poor and vulnerable households, the Royal Government of Cambodia launched a nationwide cash relief program in June 2020. It is believed that an effective mitigation program to counteract the negative impact of COVID-19 requires evidence-based research, and this has prompted us to carry out the present study.

Emerging from Wuhan in December 2019, the "coronavirus disease 2019" (COVID-19) pandemic has drastically altered the world economy and affected every aspect of life. While the head of the International Monetary Fund (IMF) views that the world has faced the worst economic crisis since the Great Depression of the 1930s, and emerging markets and developing countries were the hardest hit (British Broadcasting Corporation [BBC], 2020), the International Labour Organization (2020a) describes the coronavirus pandemic as the worst global crisis since World War II. The World Bank (2021) has estimated –3.5 percent growth of the global economy for 2020. The rapid spread of the virus has not only led to the disruption of supply chains and freezing demand limiting the flows of travel, trade, and investment (Organisation for Economic Co-operation and Development [OECD], 2020), but has also slowed down economic activities in almost all countries due to lockdown and social containment measures. While nearly half of the world's 3.3 billion workforce were at risk of losing their livelihoods (World Health Organisation [WHO], 2020), in Southeast Asia alone, with every passing month, tens of millions of more workers become vulnerable of sliding into poverty, including many in the middle class. As the pandemic goes on,

temporary job losses have become permanent, and household incomes have plummeted (The Asia Foundation, 2020).

The literature revolving around the effects of the COVID-19 pandemic on economies across the globe reveal how the informal sector, and particularly the informal workers, have truly been devastated. Informal workers make up over 60 percent of the global workforce, representing two billion people (International Labour Organization [ILO], 2018), and are the most vulnerable in the labor market as the majority lack social protection, access to quality health care, and access to productive assets. The full or partial lockdown measures implemented across nations have had a large impact on the livelihoods of the people. Almost 1.6 billion informal economy workers out of a worldwide total of two billion and a global workforce of 3.3 billion, have suffered massive damage to their capacity to earn a living (ILO, 2020b). According to the OECD (2020), the economic shocks will have more medium-term impacts on poverty and welfare, especially among the more vulnerable in society and those who work in the informal economy. A particular concern is the humanitarian and economic toll that the global recession takes on economies with extensive informal sectors that make up an estimated one-third of the GDP and about 70 percent of total employment in emerging markets and developing economies (World Bank, 2020). The pandemic is a major economic and labor market shock. It has led to the unemployment and underemployment of informal workers, particularly the informal wage workers in the agricultural sector, who are about 90 percent of the total agriculture workers in developing economies, employed on a casual, seasonal, or temporary basis, and frequently sidelined by policymakers (Food and Agriculture Organization [FAO], 2020).

The global pandemic has posed an unprecedented threat to the prosperity of Asian countries. Its effects on employment in Asia and the Pacific occur through the reduction in production, increase in trade barriers, declination of global demand, and restrictions on movement causing massive job and income losses, disproportionately affecting people in informal employment, especially daily and hourly laborers, and domestic and cross-border migrants (United Nations Development Programme [UNDP], 2020). The member states of the Association of South East Asian Nations (ASEAN) are not the exceptions to this situation. The data from eight ASEAN member states (except the Philippines and Singapore) indicate that the rate of informal employment ranges widely from 37 percent in Thailand to 90 percent in Cambodia (ASEAN, 2019), and that the rate of informal employment in Cambodia is higher for women (93.8 percent) as compared to men (87 percent). In this context, the counter measures to COVID-19, the partial lockdown, and restrictions on the movement of people have put a huge economic burden, in particular, on women and girls engaged in informal activities with limited access to food, finance, healthcare, and other services.

As mentioned earlier, due to COVID-19, the risks of illness and economic fallout continue in Cambodia. In the light of severe contractions of economic activities and rising unemployment, including large scale devastations to livelihoods, it is imperative to conduct a systematic study on the economic conditions of the urban informal workers before and during COVID-19 as these workers compose a large percentage of the workforce and thus, they require special attention from the government for their protection and survival. Equally, the study is essential to help make timely interventions when preparing for future shocks and responding to economic downturns by reviving activities.

The overall purpose of this chapter is to assess the impact of the COVID-19 pandemic on the informal workers in the capital city of Phnom Penh. In particular, we intend to compare the economic conditions of these informal workers on the basis of their monthly average income, expense, savings, borrowings, and average hours of work per day both before and during the pandemic, when partial lockdown and restrictions on movement are in force. In addition, we contemplate to explore how informal workers in the study area think in favor of other alternatives to overcome the crisis and lead their lives. Therefore, understanding the economic conditions of the informal workers before and during the pandemic, and exploring how they consider alternatives to carry on with their lives, should be a welcome addition to the literature. Furthermore, the study is a necessity to both the government and non-governmental organizations that consider appropriate interventions for the protection of lives in the worst affected sectors of the society.

In the following sections, we present the literature concerning the impact of the COVID-19 pandemic on the economy and society along with the study methodologies, empirical results, and discussions, followed by the implications for individuals, organizations, and agencies, and the directions for future research.

LITERATURE REVIEW

In order to better understand the possible economic outcomes of COVID-19, McKibbin and Fernando (2020) have explored seven different scenarios using a modelling technique which demonstrates how a contained outbreak could significantly impact the global economy in the short run. The global pandemic has devasted the lives and livelihoods of people in almost all countries in the world. Assessing the impact of COVID-19 on poverty and food insecurity, Laborde *et al.* (2020) have projected around 150 million people to fall into extreme poverty and food insecurity, whereas Kharas and Hamel's study (2020) has showed 690 million people likely to be in poor households in 2020, compared to their previous estimate of 640 million people. The adverse impact of the pandemic has landed far more severely on the vulnerably placed informal and unorganized workers as well as on people below the poverty line,

and has thereby, exacerbated existing inequalities in the economic system (The Pioneer, 2021). In addition, 1.6 billion learners—approximately 91 percent of the world's enrolled students have been affected due to the closure of schools around the world (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2020). The research in the developing nation of Brazil has unveiled the economic impacts of the social isolation and lockdown which have mainly withdrawn informal sector workers from the workforce and led to short-term technological effects indirectly impacting formal sectors due to intersectoral links regarding input and output (dos Santos *et al.*, 2020). The research in another Latin American country, Colombia, has revealed a huge economic loss measured by the decline in the nation's GDP due to the lockdown imposed by the national government. While the formal sector workers have had some loss of income, the informal sector workers have had a complete loss of income which has led to a significant drop in the household demand for goods and services (Bonet-Morón *et al.*, 2020).

A study of the internal migrant workers in the informal sector of India has disclosed that the workers who had previously migrated from lower Human Development Index (HDI)-scored states to higher HDI-scored states in search of better paid jobs, have faced tough challenges with the higher informalization of work that has caused them to become homeless, food deprived, and solely dependent on the government for support, having no way to go back to their homeland (Das, 2020). Based on the official data of the periodic labor force survey 2017–18, the estimation of Mehta and Kumar (2020) has shown that the worst affected informal workers in India were around 40 million, mostly the casual or daily wage workers involved in the top ten vulnerable occupations in urban areas. However, according to ILO (2020b), in India, with a share of almost 90 percent of people working in the informal economy, about 400 million workers in the informal economy are at risk of falling deeper into poverty during the crisis. In Thailand, the marginalized and socially excluded informal sector workers have faced severe challenges in regard to their lessened income, reduced savings, and inability to pay enough for food, rent, and other day-to-day living expenses, or basic necessities (Wichaya *et al.*, 2020).

Infectious diseases and rural livelihood in developing countries, particularly in resource-poor communities, have shown interrelations of many causes and consequences on health, poverty, and livelihood (Mphande, 2016). In rural areas, due to lockdowns and restrictions of movement as well as disruptions of agri-food supply chains and markets, the livelihoods of especially the self-employed and wage workers are at risk (FAO, 2020). A study in Indonesia has revealed that the informal workers, both in agriculture and non-agriculture, have been affected by the global pandemic. It has also highlighted the impacts of the pandemic on informal employment and incomes, readiness in dealing with the pandemic, and the livelihood conditions of informal workers. Most workers have experienced a decline in incomes, both in the agriculture and non-agriculture sectors, and while as many as 64.4 percent of the

respondents working in informal agriculture have experienced a decline in incomes, 26.7 percent of the respondents have even lost their incomes as the market system and supply chains were disrupted (Pitoyo *et al.*, 2020).

To monitor the household-level impacts of COVID-19 in Cambodia, the World Bank, in collaboration with the National Institute of Statistics (NIS), had designed and implemented the High Frequency Phone Survey (HFPS) of households. The first-round survey data collection had started in mid-May 2020, and the same households were called back every eight weeks and tracked over 10 months. The HFPS samples were drawn from the nationally representative Living Standard Measurement Study Plus (LSMS+). The survey had followed up with 1,364 households in LSMS+ but was successfully completed for 700 households with a response rate of 51 percent. The highlights from the first-round survey had revealed that about 71 percent of respondents were able to continue working, while 12 percent of respondents who had been working prior to the COVID-19 outbreak, had stopped working due to the closures of business and COVID-19-related restrictions. The remaining 15 percent of respondents had not worked before and after the outbreak. Further, the COVID-19 outbreak has significantly affected non-farm household businesses as about 73 percent of them had reported a decline in revenues in April 2020 as compared to March 2020, while eight percent had no revenue at all. Again, COVID-19 induced economic slowdown has resulted in a reduction in income from all sources except pensions. More than 80 percent of the respondents have reported a decline in their total household income, and the most affected households have been those relying on non-farm family businesses. To cope up with the income losses, six in 10 households have resorted to reducing both food and non-food consumption, while other households have credited purchases (37 percent of respondents) or borrowed cash from friends and family (27 percent). The reduction in food consumption has resulted in some Cambodians facing food insecurity (Karamba *et al.*, 2020).

The second-round of the HFPS of households conducted during August–September 2020 had gathered information from a sample of 1,667 households. It was revealed from the survey that employment had remained steady between May and August 2020 as there were fewer disruptions to work activities. The share of respondents who were working was 71 percent in May 2020 (first-round survey) and this was moderately the same in August 2020 (second-round survey) at 70 percent (Karamba & Tong, 2020). However, despite the relatively steady employment, losses to household income have remained widespread, and the non-farm business activities have been negatively affected due to weaker demand in the market. Among the household businesses who had reported less or no revenues, about 88 percent of them have reported having fewer or no customers.

The third-round of the HFPS of households implemented during October–November 2020 had gathered information from a sample of 1,665 households. As revealed, the share of the respondents who had worked in the last seven days had slightly declined to 65 percent in October 2020 as against 70 percent in August 2020. About 54 percent of the households had reported having made less or no revenues in October compared to 64 percent in August, and 81 percent in May. 84 percent of the households with a non-farm business had reported having fewer or no customers as the main reason of not generating income by their businesses. In addition, 51 percent of the households had experienced a decline in income from August to October 2020 as compared to 63 percent who had experienced a decline between May and August 2020, and 83 percent between the COVID-19 outbreak and May to June 2020 (Karamba *et al.*, 2021).

The main findings from the fourth-round survey based on a sample of 1,687 households conducted during December 2020 – January 2021 show that 72 percent of the respondents had been employed in December, remaining below its pre-pandemic level when 82 percent of respondents were working. The negative impacts of the COVID-19 pandemic on non-farm family businesses remain substantial—58 percent of the households operating non-farm businesses had reported having made "less" or "no revenue" relative to the previous month. About one in two households continued to report that their household income had declined relative to the last survey. An increasing share of households have had to borrow, delay payment obligations, and take on additional income-generating activities to cope up with the COVID-19 crisis. Around 60 percent of the households had perceived their current well-being and economic status to be lower than the previous year. Food insecurity had remained unchanged between October and December 2020 (Karamba *et al.*, 2021).

The fifth-round of the HFPS of households implemented in March 2021 was based on a sample of 1,688 households. The results have shown that employment has remained relatively unchanged at 69 percent in March 2021. The negative impacts of the COVID-19 pandemic on non-farm family businesses have remained substantial. As reported, half of non-farm household businesses have continued reporting earning "less" or "no revenue" relative to the month prior in March 2021. 78 percent of the households operating a non-farm business have reported having fewer or no customers as the primary reason for not generating revenue or generating lower revenue. The lower demand has disproportionately affected the households. Again, 45 percent of households have experienced a fall in income between December 2020 and March 2021. Thus, widespread reductions in household income have carried on (Karamba *et al.*, 2021).

COVID-19 has significantly impacted the Cambodian economy and prosperity of the people. Based on a phone-based survey, UNDP (2021) has revealed that women

saw a sharper fall in their average income. The highest 18 percent of female informal workers have reported unemployment, and their average weekly income has continued to decrease 23 percent in October 2020. In order to assess the socio-economic impacts of the COVID-19 crisis on vulnerable workers in the informal sector such as the entertainment, construction, transportation, and street vending sectors in Cambodia, the study by Action Aid Cambodia and BBC Media Action (2020), focusing on 416 workers in Phnom Penh and Siem Reap, have revealed that 97 percent of female workers affected by COVID-19 have faced lessened monthly average income from US$250 to US$106, while 23 percent of them have earned less than US$1.90 per day. For the male workers, 93 percent of them have been affected and their monthly average income has decreased from US$340 to US$163, while 16 percent of them have earned less than US$1.90 per day. In addition, the study has found that these groups have been left behind by most of the existing interventions due to their mobility, working condition, and lack of coverage by a social protection scheme. Similarly, a rapid assessment by World Vision International Cambodia (2020) which had included a household survey, a survey of the leaders of agricultural cooperatives, and a series of key informant interviews in selected provinces in Cambodia, has revealed the severe impact of COVID-19 on livelihoods, food security, and education, especially among the most vulnerable families. More than 72 percent of the respondents have lost or experienced a reduction of their incomes, and the most vulnerable families have been workers from construction and the garment industry, returnee migrants, petty traders, small scale farmers, and families with debts. Similarly, 80 percent of the surveyed leaders of agricultural cooperatives have reported a decline in income for various reasons such as lower selling price and productivity, challenges in accessing markets, etc. In addition, 71 percent of the respondents have stated their limited ability to meet food expenses, while more than one-third of the respondents have mentioned about no food stock at home.

COVID-19 has exposed the underlying flaws of Cambodia's current economic model, resulting in livelihood crises for many people. The economic impacts of the pandemic are severe for the working-classes and small businesses, especially for women in both the formal and informal economic sectors, rural communities, sex and entertainment work, and the garment manufacturing sector. For some garment workers, factory closures have led to the loss of jobs and income; for some others working in factories operating at half capacity, they have been dependent on their factory wages and subsidies from the government to make ends meet. However, in both cases, women have been experiencing difficulties in paying their room rents and repaying their debts to microfinance institutions, commercial banks, and money lenders (Ros, 2020). In the light of COVID-19, to understand the returning migrants' challenges and vulnerabilities, the International Organization for Migration Cambodia (2020) has conducted a phone-based survey among 242 respondents in five provinces

during June 2020. The results have revealed that while nearly 40 per cent of the respondents have reported to have no income, another 41 per cent have had an average monthly household income of US$100 to US$500. Nearly all of the respondents have expressed concern in their ability to find employment as their income levels have decreased. The study has revealed that since their return to Cambodia, returning migrants have faced various socio-economic vulnerabilities and challenges. A recent survey (March–April 2021) by World Vision International Cambodia (2021) among 621 households and 619 children aged 11–18 years old in four different locations (Preah Vihear, Siem Reap, Kampong Chhnang and Phnom Penh) in Cambodia has highlighted a reduction in the average income per week per household from US$63 before the pandemic to US$35 currently. Moreover, 22 percent of the respondents have reported a drop in their income up to US$50 per week among those who earned US$50 and above. While a significant number of jobs have been lost in all sectors, most remarkably, the findings uncover that households in Phnom Penh have been more affected than the provinces and as a result, have faced increasing difficulties to cover their necessary living expenses.

Thus, the review of empirical studies has emphasized how a health crisis has devasted all the economies across the globe, including Cambodia, and how the worst sufferers typically belong to marginalized groups within populations such as migrants, displaced people, and informal workers, who face a trade-off between safeguarding their lives and livelihoods. In this context, our intention is to fill up the gap in literature by assessing and comparing the economic conditions of the informal workers both before and during the COVID-19 pandemic in the study area.

METHODOLOGY

Sample Design

We have purposively selected the capital city of Cambodia as our area of study. The reason for focusing on Phnom Penh is mainly due to the presence of diversified business activities and opportunities for informal workers to engage in various activities.

The most prevalent informal economic activities in Phnom Penh such as street vending, street-side vehicle repairing, dressmaking and tailoring, hairdressing, roadside gasoline selling, spa and massage therapy, auto rickshaw driving, car-motor washing, and housekeeping were taken into account for the study. As the exact population of the informal workers in Phnom Penh was not available, we used the Cochran (1963) formula to calculate an ideal sample size given the desired level of precision (5 percent), desired confidence level (95 percent), and estimated proportion of the population (50 percent). Based on the formula ($n = Z^2pq/e^2$), the sample size for the study was

determined as 384. The percentage representation of the different types of informal activities in the sample are shown in Figure 4.1. We have used snowball sampling for the selection of sample respondents for the interviews.

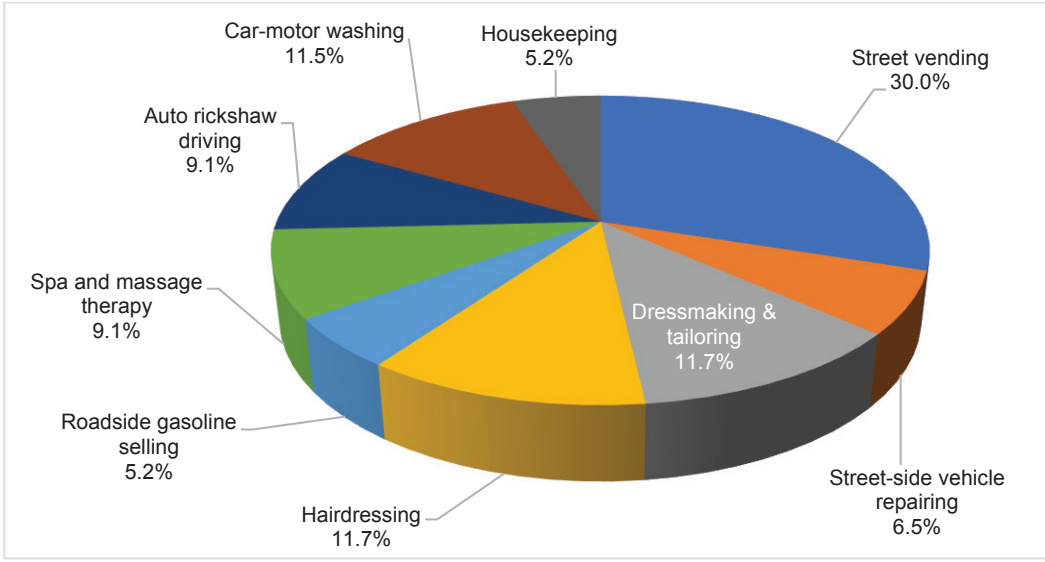

Figure 4.1: Representation of Economic Activities within the Sample of the Study (%)

Source: Field Survey.

Among the 384 participants in our study, a majority of them are street vendors (30 percent) as a large number of informal workers usually opt for street vending due to convenience in starting work and so, they are higher in population and more accessible for research as well. This is followed by an equal number of respondents in dressmaking and tailoring work and hairdressing activities (11.7 percent). Those in car-motor washing come next (11.5 percent), followed by both auto rickshaw drivers and spa and massage therapists (9.1 percent), street-side vehicle repairing mechanics (6.5 percent), and the remaining two categories of housekeepers and roadside gasoline sellers (5.2 percent).

Methods of Data Collection

Primary data have been collected from the sample respondents through direct personal interviews and telephonic interviews. While conducting the physical interviews, we followed the government stipulated COVID-19 protocol. We used a semi-structured questionnaire in collecting the primary data. As the participation of the respondents in the survey was voluntary, no financial incentives were provided to them.

Data Analysis

We have used both quantitative and qualitative methods in analyzing the data gathered from the respondents. The mean values of monthly income, expense, savings, borrowings, and hours of work per day, over a period of six months before the COVID-19 pandemic (prior to December 2019) and during the COVID-19 pandemic (October 2020 to March 2021), were compared to visualize the changes in the economic conditions of the informal workers in the target area. To examine this, we carried out the 'paired t-test'. We sought qualitative information from the respondents through open-ended questions to mark their understanding on the complex situation of the pandemic and thoughts on paths to overcome the crisis. Data gathered from the respondents along with their opinions are analyzed as per the objectives of the study.

EMPIRICAL RESULTS AND DISCUSSIONS

Socio-Demographic Profile of the Study Participants

The socio-demographic profile of the sample informal workers in terms of their sex, age, marital status, educational levels, number of members in the family, and number of earning members in the family are discussed below.

Gender Representation of Sample Workers

With regard to the gender representation of the selected samples, we overall have a higher number of female respondents (55.5 percent) than male respondents (44.5 percent) in the study. However, looking into this category wise, we find some work to be gender biased. While auto rickshaw driving and street-side vehicle repairing are completely male dominated fields (100 percent), housekeeping and spa and massage therapy work are mostly female dominated (100 percent). Roadside gasoline selling is majorly done by men (75 percent), whereas street vending is largely carried out by women (69.6 percent). Dressmaking and tailoring (48.9 percent male; 51.1 percent female), hairdressing (44.4 percent male; 55.6 percent female), and car-motor washing (43.2 percent male; 56.8 percent female) are almost taken up equally by both men and women (Figure 4.2).

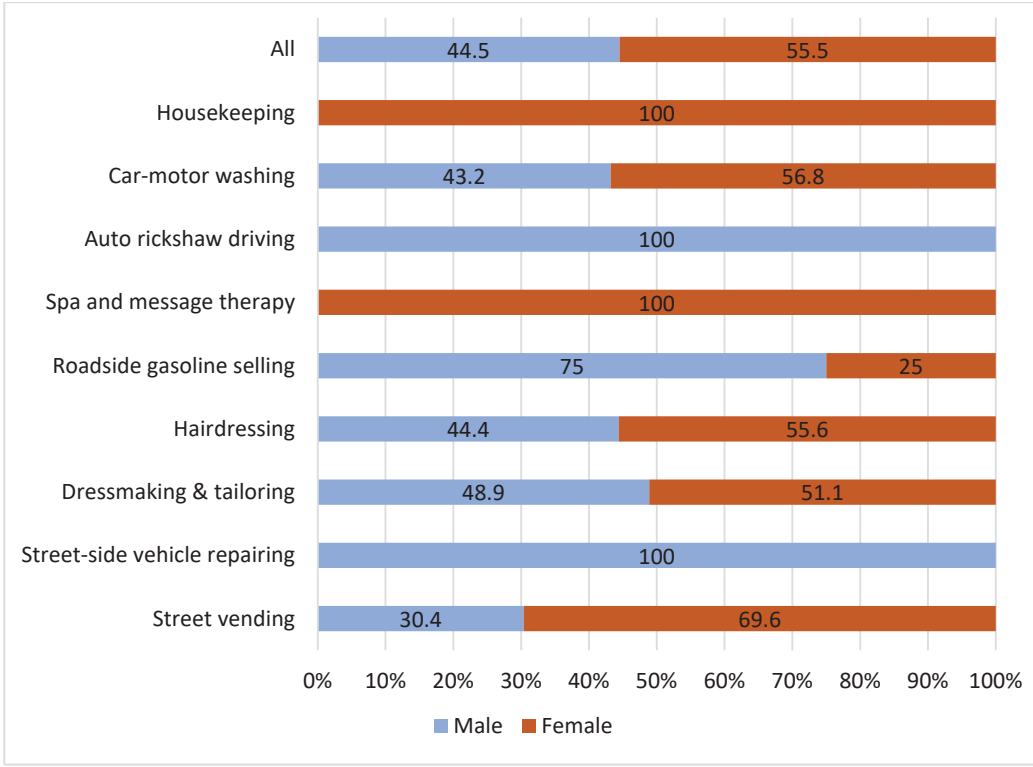

Figure 4.2: Gender Representation of Samples (%)

Source: Field Survey.

Age Distribution of Sample Workers

The sample respondents are categorized into three age-groups: 18–30 years; 31–43 years; and, 44–56 years. Among these age-groups, while the highest percentage of the respondents belong to the youngest group of 18–30 years (80.5 percent), the lowest percentage of the respondents are part of the oldest age group of 44–56 years (4.2 percent). Considering the marital status of the sample respondents, a large number of them are single (68.2 percent), followed by about a quarter who are married (24 percent). The other surveyed workers are divorced (5.2 percent), and the least number of participants are separated (1.3 percent) and living with their partners (1.3 percent).

Educational Level of Sample Workers

As revealed, the highest percentage of respondents have attained primary level education (37.2 percent), followed by 33.1 percent and 12.2 percent of the surveyed workers who have completed secondary level education and vocational education

respectively. The representation of workers from high school and higher education are 8.1 percent each. Furthermore, 1.3 percent of the sample participants do not have any formal education.

Family Size and Earning Members of Sample Workers

The sample respondents came from families with differing sizes, with the largest having eight family members and the smallest having two members. 27.6 percent, 24.7 percent and 20.3 percent of the study participants are part of a three-member, five-member, and six-member family respectively. More than one-fourth of the respondents have families of either two members or four members. The remaining 1.6 percent have the largest families of seven members or eight members (Table 4.1).

The earning members in the families of the sample workers vary from one to five. It is observed that the highest, 37 percent, of the respondents' families have two earning members, followed by 24.7 percent of the surveyed workers' families only having one earning member. Just less than one-fifths of the surveyed workers each have three earning members (19 percent) or four earning members (18 percent) in their families. The least 1.3 percent have five earning family members (Table 4.1).

Table 4.1: Family Size and Earning Members in the Family of Sample Workers

Members in each family	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*All*
% of families of workers	–	9.9	27.6	15.9	24.7	20.3	1.1	0.5	100.0
Earning members in each family	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*All*
% of families of workers	24.7	37.0	19.0	18.0	1.3	–	–	–	100.0

Source: Field Survey.

Number of Years of Work of Sample Workers

Looking into the number of years the sample informal workers have been doing their current job, an almost equal number of participants have said to be doing their job for less than a year (32.3 percent) and more than three years (31.5 percent). This is followed by the respondents who have been continuing their present work for one to two years (25.8 percent), and only about one-tenth (10.4 percent) have been involved with their work for two to three years. As revealed from the study, higher percentage of female workers (45.1 percent) work for less than a year, whereas 53.2 percent male participants seem to work for more than three years.

Number of Days in a Week Sample Workers Work

So far as, the number of days in a week in which the participant informal workers work, most of them (87.5 percent) do so every day of the week, noting a higher percentage of female respondents (90.6 percent) than male respondents (83.6 percent). 11.5 percent of the sample informal workers work for about five to six days a week, and the least number of them (one percent) solely work for three to four days. This data reveals the plight of the informal workers who they have no choice but to work throughout the week because of their very low earnings.

Type of Location of Work of the Sample Workers

When questioned about the premise/location where the sample informal workers carry out their work, most of the male and female respondents have said to have a permanent location by the roadside (70.3 percent), followed by a fixed location in a market (15.9 percent). However, some of the participants do not have any specific location for work (6.8 percent), and the least number of respondents work by or at the bus/taxi station (4.2 percent), garbage area (1.5 percent), and hawking (1.3 percent) as shown in Figure 4.3. The major reason of choosing to work at a particular place, especially by the roadside or at the market is for greater accessibility of the customers with a hope to enjoy higher sales.

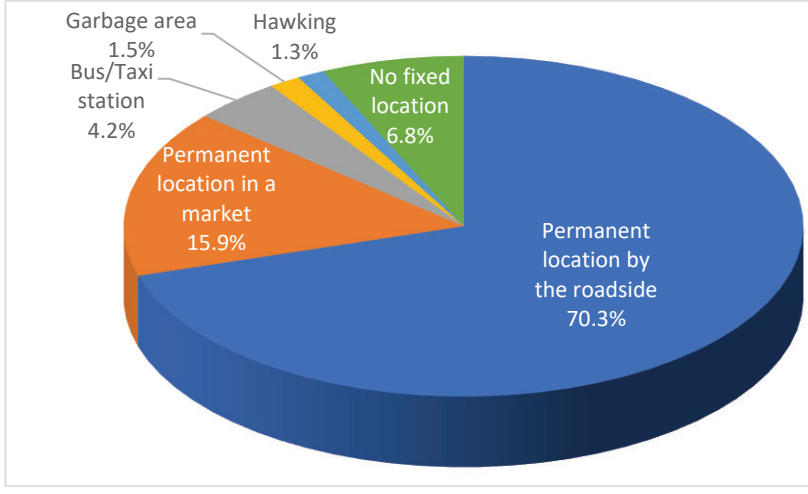

Figure 4.3: Type of Location of Work of the Sample Workers (%)

Source: Field Survey.

Value of Personal Assets of the Sample Workers

As revealed by the data, a majority of the informal workers have personal assets worth less than US$1000 (61.7 percent), which is mostly the case for female workers (75.6

percent) as compared to male workers (44.4 percent). This is followed by about one-fifth of the respondents who have assets of a total value of US$1000 to less than US$2000 (20.3 percent: male 27.5 percent; female 14.6 percent). The remaining sample workers have assets worth US$2000 to less than US$3000 (10.9 percent: male 15.2 percent; female 7.5 percent), and US$3000 and above (7.1 percent: male 12.9 percent; female 2.3 percent). Thus, considering all the categories, male workers hold a higher total value of personal assets as opposed to their female counterparts.

Old Age Provision of the Sample Workers

Coming to the topic of provisions made for old age, most of the sample respondents currently do not have any plans for their old age (81.8 percent), with an almost equal number of female respondents (82.2 percent) and male respondents (81.3 percent). In addition to this, a few of the participants are unsure of their old age situation at the present (2.6 percent). Nonetheless, some of the sample informal workers have made provisions for their old age already (15.6 percent), which consists of a higher number of male workers (18.7 percent) than female workers (13.1 percent). The ability to make plans for old age depends on numerous factors such as a stable source of earnings, a fixed flow of income, considerable savings, foreseeable economic conditions, and more, which the informal workers lack, unlike workers in the formal sector.

Economic Conditions of Workers Before and During the COVID-19 Pandemic

The economic conditions of the sample respondents have significantly worsened due to the COVID-19 pandemic. Activities in the informal sector have been disrupted due to the imposition of full and/or partial lockdown of business units and restrictions on the movement of people in the city. As a result, daily hours of work have fallen, and there has been a huge decline in the income and savings of the workers, which is reflected through their lower expenditure and higher borrowings.

So far as the monthly mean income is concerned, it has fallen by 50.35 percent, from a monthly mean income of US$244.66 before the pandemic to US$121.48 during the pandemic (Table 4.2). A fall in more than half of the monthly mean income is observed for the workers engaged in various business activities: street-side vehicle repairing; dressmaking and tailoring; hairdressing; spa and massage therapy; and auto rickshaw driving. Further, the workers engaged in street vending and roadside gasoline selling have also experienced a fall in their monthly mean income close to 50 percent during the pandemic. Nonetheless, among all the categories of activities, the monthly mean income of the housekeeping workers has the lowest percentage (15.93) fall as most of them engaged in housekeeping have continued

their work in spite of the lockdown. However, as some of the housekeepers have been engaged for fewer hours of work during the pandemic as compared to earlier, there has also been a fall in their monthly mean income. The fall in the monthly mean income of the informal workers has a negative impact on their monthly mean expenses. As shown, their monthly mean expenses have fallen by 33.85 percent, from the monthly mean expense of US$199.92 before the pandemic to US$132.25 during the pandemic. The highest percentage fall in the monthly mean expenses, that is above two-fifth, has been the case for workers engaged in hairdressing activity. For workers in other economic activities such as dressmaking and tailoring, auto rickshaw driving, spa and massage therapy, and roadside gasoline selling, the fall in their monthly mean expense has been more than one-third as compared to prior the pandemic. Similar to how the workers in housekeeping have the lowest percentage fall in their monthly mean income, they also have the lowest percentage (8.33) fall in their monthly mean expense. By comparing the percentage fall in the monthly mean income and the monthly mean expense of workers engaged in all categories of economic activities, it is revealed that the percentage fall in the monthly mean expense has been less than that in the monthly mean income. This occurred as the workers need to spend a minimum amount for their daily expenses, and due to the fall in their monthly income, they are bound to either use their previous savings or end up with borrowings.

The monthly mean savings of the workers have also fallen by 96.61 percent, from monthly mean savings of US$53.45 before the pandemic to US$1.81 during the pandemic (Table 4.2). While the workers engaged in roadside gasoline selling as well as spa and massage therapy have failed to generate any savings during the pandemic, the monthly mean savings of the other workers like those in street vending, street-side vehicle repairing, dressmaking and tailoring, hairdressing, auto rickshaw driving, and car-motor washing, except for housekeeping, have fallen by more than 90 percent during the pandemic. In addition, the informal workers have been especially affected in terms of their borrowings, which have on average increased by 877.88 percent, from a monthly mean borrowing of US$2.08 before the pandemic to US$20.34 during the pandemic. Furthermore, workers from all categories have been compelled to borrow funds during the pandemic to support their daily subsistence.

It is not a surprise to see the fall in the daily mean hours of work of the informal workers during the pandemic as compared to previously. The daily mean hours of work have fallen by 45.71 percent, from 10.5 daily mean hours of work before the pandemic to 5.7 daily mean hours of work during the pandemic. For all the categories of workers, the fall in the daily mean hours of work during the pandemic has been 40.0 percent and above. Consequent to the fall in the daily mean hours of work by 45.71 percent, the monthly mean income of the workers has fallen by 50.35 percent (Table 4.2).

Table 4.2: Economic Conditions of Informal Workers Before and During the Pandemic

Types of Business Activities	*Monthly Mean Income (USD)*			*Monthly Mean Expense (USD)*			*Monthly Mean Savings (USD)*			*Monthly Mean Borrowings (USD)*			*Daily Mean Hours of Work*		
	Before Pandemic	*During Pandemic*	*% Change*	*Before Pandemic*	*During Pandemic*	*% Change*	*Before Pandemic*	*During Pandemic*	*% Change*	*Before Pandemic*	*During Pandemic*	*% Change*	*Before Pandemic*	*During Pandemic*	*% Change*
Street vending	181	94	–48.07	151	104	–31.13	41	2	–95.12	3	22	633.33	11	6	–45.45
Street-side vehicle repairing	235	114	–51.49	190	134	–29.47	54	1	–98.15	3	29	866.67	10	6	–40.00
Dressmaking and tailoring	369	161	–56.37	279	171	–38.71	96	2	–97.92	0	16	–	10	6	–40.00
Hairdressing	272	121	–55.51	228	135	–40.79	54	1	–98.15	1	22	2100.00	10	6	–40.00
Roadside gasoline selling	191	99	–48.17	162	108	–33.33	38	0	–100.0	7	21	200.00	10	6	–40.00
Spa and massage therapy	274	126	–54.01	229	145	–36.68	53	0	–100.0	2	25	1150.00	9	5	–44.44
Auto rickshaw driving	403	186	–53.85	321	201	–37.38	88	1	–98.86	0	23	–	10	6	–40.00
Car-motor washing	164	101	–38.41	143	105	–26.57	32	1	–96.88	2	12	500.00	11	6	–45.45
Housekeeping	182	153	–15.93	156	143	–8.33	31	12	–61.29	3	8	166.67	12	6	–50.00
All (N = 384)	244.66	121.48	–50.35	199.92	132.25	–33.85	53.45	1.81	–96.61	2.08	20.34	877.88	10.5	5.7	–45.71

Source: Primary data.

A comparison of the monthly mean income levels of informal workers before and during the pandemic has revealed a higher percentage of sample respondents (40.9 percent) in the lower income range (US$1–100) during the pandemic as compared to the percentage of respondents (0.5 percent) before the pandemic in the same income range (Table 4.3). Similarly, a higher percentage of sample workers (34.9 percent) has been found in the lower bracket of monthly mean expense (US$1–100) during the pandemic as compared to the percentage of respondents (1.3 percent) before the pandemic at the same expense range. Likewise, an increasing percentage of informal workers has been observed during the pandemic without any savings as compared to the percentage of workers before the pandemic. As shown in Table 4.3, while 6.0 percent of the sample workers have had no savings before the pandemic, 91.1 percent of the workers have reported to have no savings during the pandemic. Again, during the pandemic, while 6.3 percent of the workers have had monthly mean savings within the range of US$1–50, it was 64.6 percent of the workers before the pandemic in the same range of savings. Conversely, by comparing the monthly mean borrowings of workers before and during the pandemic, it has been revealed that the percentage of workers in the higher level of borrowings has gone up remarkably during the pandemic. For example, while only 4.2 percent of the workers have had monthly mean borrowings of US$21–40 before the pandemic, this percentage has increased to 33.1 during the pandemic. Also, the percentage of workers without borrowings has decreased from 94.5 to 44.3, which indicates the rise of the level of indebtedness of the informal workers (Table 4.3).

A comparison of the economic variables before and during the COVID-19 pandemic has accentuated its negative impact on the lifestyle and standards of living of the informal sector workers. While the mean income, mean expense, and mean savings have fallen significantly during the pandemic as compared to before the pandemic, the mean borrowings have drastically increased. The monthly mean income reached US$121.48 during the pandemic from US$244.66 prior to the pandemic. Thus, the t-value has been calculated as 31.528. Consequent to the fall in the monthly mean income, the monthly mean expense and savings had fallen from US$199.92 to US$132.25 and from US$53.45 to US$1.81 respectively. Therefore, the t-value for expense has been derived as 26.845, and the t-value for savings has been measured as 27.864. However, as the monthly mean borrowings have increased from US$2.08 to US$20.34 during the pandemic, the t-value has been found to be 18.230. All the three t-values mentioned are significant at the 0.01 (one percent) level of significance (Table 4.4). As such, it has been clearly revealed that while the income, expense, and savings of the sample workers have badly fallen during the pandemic, their borrowings have sharply gone up due to the negative effect of the pandemic.

Table 4.3: Informal Workers (%) in Different Levels of Income, Expense, Savings, and Borrowings Before and During the Pandemic

No.	Income Range (USD)	Informal Workers (%)		Expense range (USD)	Informal Workers (%)		Savings Range (USD)	Informal Workers (%)		Borrowings Range (USD)	Informal Workers (%)	
		Before Pandemic	During Pandemic		Before Pandemic	During Pandemic		Before Pandemic	During Pandemic		Before Pandemic	During Pandemic
1.	1–100	0.5	40.9	1–100	1.3	34.9	No savings	6.0	91.1	No borrowings	94.5	44.3
2.	101–200	57.0	56.3	101–200	60.7	61.2	1 –50	64.6	6.3	1 –20	0.3	8.9
3.	201–300	13.5	2.9	201–300	26.0	3.9	51–100	20.6	2.6	21–40	4.2	33.1
4.	301–400	21.9	–	301–400	12.0	–	101–150	7.3	–	41–60	0.8	10.9
5.	401–500	7.0	–	401–500	–	–	151–200	1.6	–	61–80	0.3	1.8
6.	–	–	–	–	–	–	–	–	–	81 –100	–	1.0
Total		100.0	100.0	–	100.0	100.0	–	100.0	100.0	–	100.0	100.0

Source: Primary data.

Table 4.4: Impact of the Pandemic on Economic Conditions of Informal Workers

No.	*Economic Variables*	*Mean USD* ($\overline{X}$)	*t-value*	*df*	*Sig. (2-tailed)*
1.	Income before pandemic	244.66	31.528	383	.000**
	Income during pandemic	121.48			
2.	Expense before pandemic	199.92	26.845	383	.000**
	Expense during pandemic	132.25			
3.	Savings before pandemic	53.45	27.864	383	.000**
	Savings during pandemic	1.81			
4.	Borrowings before pandemic	2.08	18.230	383	.000**
	Borrowings during pandemic	20.34			

Note: ** Significant at 0.01 level.

Source: Primary data.

Alternative Solutions to Overcome the Crisis

The results of our study show that while there has been a drastic fall in the sample workers' income, at the same time, to meet the minimum requirements of daily expenses during the pandemic, more than half of these workers (55.7 percent) have borrowed funds from their friends and relatives, whereas before the pandemic, only 5.5 percent were borrowers (Table 4.3). A large percentage of sample workers (92.4 percent) felt an excessive economic burden of maintaining their families due to the disruption of business activities and restrictions on movements.

In this context, we have tried to explore from the sample workers any alternatives they may think is appropriate to overcome the crisis. In response to this, 53 percent of the female informal workers have expressed their interest to acquire technical and vocational skills through short-term training. Also, 33 percent of the female workers engaged in street vending, car-motor washing, or spa and massage therapy have shown interest to change their jobs in favor of other activities like housekeeping or hold the thought of moving back to their homelands to carry out agricultural activities. More importantly, 43.8 percent of the sample informal workers were not able to specify what they would like to do if the disruption of business activities further continued due to the pandemic.

To mitigate the social and economic impacts of the pandemic on the poor and vulnerable households, as a temporary measure, the government of Cambodia had

launched a nationwide cash relief program in June 2020, initially for a period of seven months. But as the pandemic continued, the relief program had been extended until March 2021 and may extend further. The program provided cash transfers to households identified by the government as part of the Identification of Poor Households Program, known as "IDPoor". As a government initiative, the cash transfer program has been designed to help strengthen social protection in Cambodia in the face of COVID-19, and as of April 2021, 2.7 million Cambodians have benefitted from this program (Vanyuth, 2021). In addition, non-governmental organizations, the private sector, philanthropists, other entities, and individuals have extended their support to the poor families to meet their daily needs.

We have found that the urban informal workers, facing work constraints, have started moving to rural areas to carry out agricultural activities. However, it is quite known that agriculture cannot absorb more labor with underlying disguised unemployment. As such, we intend to suggest some kind of employment scheme by the government for the marginalized labour to reduce the level of prevailing unemployment. This would be an alternative method of earning income for livelihood, and to support family. Also, as the micro, small, and medium enterprises create huge employment opportunities in the country, they need to be supported with liberal credit provisions to enable them to resume their economic activities in a phased manner. Moreover, a provision to reskill workers through short-term training with stipendiary support would help informal workers aiming to shift to other occupations. Finally, a provision to supply necessary food items such as rice at a subsidized rate by the government would help the poorer sections of society.

CONCLUSION

Informal workers are generally employed on a seasonal, casual, or temporary basis. However, their contributions to the national economy through market and non-market activities are enormous, even if not well valued. Vulnerability prevails among them due to the nature and conditions of their jobs and the lack of appropriate social protection. During the ongoing pandemic and its resulting economic shocks, these workers have become even more vulnerable. The full and/or partial lockdown and restrictions on the movement of people to control the spread of the virus have disrupted business activities and brought further risks to the informal workers in terms of losing jobs and income. In our attempt to understand the economic conditions of the informal workers, we believe that the disruptions of business activities have brought significant risks to them in terms of losing jobs and income as most of the informal workers are engaged in work without a valid employment contract or any social protection measures. Taking into account nine categories of informal economic

activities in Phnom Penh city with a sample size of 384 workers, we have mainly tried to compare the change in their monthly mean income, expense, savings, borrowings, and daily mean hours of work both before and during the pandemic. Moving forward, we have considered six months prior to the pandemic and during the pandemic to measure the mean values of the variables.

The empirical evidence shows that consequent to the fall in the daily mean hours of work by 45.71 percent, the monthly mean income of the workers has fallen by 50.35 percent during the pandemic. In addition, the monthly mean expense and savings of the informal workers have plummeted during the pandemic as compared to before the pandemic by 33.85 percent and 96.61 percent respectively. Informal workers have also been negatively affected in terms of borrowings which have on average has increased by 877.88 percent. Moreover, during the pandemic, we have found that a higher percentage of sample respondents have moved to the lower ranges of income and expense. While 6.0 percent of the sample workers have had no savings before the pandemic, it has increased to 91.1 percent during the pandemic. Similarly, while only 4.2 percent of the workers have had monthly mean borrowings of US$21–40 before the pandemic, this percentage has increased to 33.1 during the pandemic. Finally, the t-test results have emphasized that during pandemic, the income, expense, and savings of the sample workers have significantly fallen in comparison to before the pandemic, while borrowings have immensely soared. Overall, the study reveals deteriorating economic conditions of the informal workers during the COVID-19 pandemic as compared to earlier times. Based on the study findings, we recommend a few alternative solutions to overcome the crisis.

Our study is not free from limitations. First, the work is focused on informal workers engaged in business activities solely in Phnom Penh city, and therefore, our findings may not be generalizable to other areas in Cambodia. However, we assume that similar results will be found in other urban areas with comparable environmental, economic, and socio-political structures. Attempt should be made in future studies to extend the analysis to other urban centres in the country. In addition, we have only taken nine categories of activities, and it would have been better to include all kinds of economic activities undertaken by the informal workers. However, in the absence of a systematic micro-level study focusing on the impact of the COVID-19 pandemic on the urban informal workers in the capital city of Cambodia, the empirical findings of this study have implications for both the government and non-governmental organizations, including the private sector that should consider appropriate interventions for the protection of the informal workers and their families. Mitigating the social and economic impacts of the pandemic on informal workers requires evidence-based research, and this study, therefore, has made an attempt to contribute to that direction.

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CHAPTER 5

The Impact of COVID-19 on Business Performance of Logistics Firms in Cambodia

Md. Monirul Islam

INTRODUCTION

Cambodia's exports of goods and services outpaced the country's economic growth and outperformed global export growth over the past years. Exports of goods and services increased dramatically during the past years, from about US$4.2 billion in 2009 to US$14.7 billion in 2019 (O'Neill, 2021). The solid export growth resulted in improved livelihoods for Cambodian households. Trade is a medium for productivity-led growth in a small economy like Cambodia. It gives companies access to wider markets and boosts foreign direct investment. But the COVID-19 pandemic had badly affected the freight forwarding services in Cambodia, and particularly logistics firms, which are involved in the movement, storage, and flow of goods, have been directly affected by the global pandemic. For Cambodia, there was no remarkable gains in freight transport in the early 2020. According to the Cambodia Freight Forwarders Association (CFFA), COVID-19 pandemic has seriously hurt Cambodian logistic providers, with 10–15 percent will soon be bankrupt (VietnamPlus, 2020). As stated by the president of CFFA, "the dramatic decrease in buying orders led the traffic of goods and product exports to drop about 70–80 percent. In addition, more than 100 logistics firms have been struggling to survive due to the financial hardship, with an estimated 60 percent fall in revenue" (VietnamPlus, 2020).

Logistics companies connect firms to markets by providing many different services, including transportation, freight forwarding, warehousing and inventory management. They play an important role in global manufacturing, which is complex and multi-locational. For example, Apple inc. uses the components from more than 200 suppliers from many different countries (Ross, 2020). Today's global value chain requires uninterrupted flow of goods between and within the countries. These can be achieved by firms outsourcing their logistics functions to third-party logistics service providers.

Both national and international logistics firms in Cambodia play a crucial role to keep the import and export steady. According to the World Trade Organization, in 2019, while Cambodia had imported US$20,720 million of products, it had exported US$14,700 million of products (Groupe Crédit du Nord, 2021). The main imported

products were petroleum oils, fabrics, motor vehicles, parts/accessories for motor vehicles, coals, and the main exported products were garments and rice. There are four main borders for Cambodia to import and export goods; Sihanoukville and Phnom Penh ports are gateways of freight movement, and Bavet and Poipet have more industrial goods (Salpiseth, 2018). In 2019, Cambodia had imported US$3,161 million and exported US$6,027 million of services. Despite the presence of COVID-19 pandemic, in 2020, there was an increase of 16.7 percent of export value as compared to 2019, and the top five destinations for exports were the United States, ASEAN countries, China, Japan and the United Kingdom (Ministry of Commerce, 2021).

COVID-19 AND THE LOGISTICS SECTOR

Supply chains can be extremely complicated, with several stages ranging from the provision of intermediate goods to the consumption of final goods in consumer markets. Supply chain disruption may occur due to natural calamities and/or human made disaster. Globally many disasters occurred in the past. For example, the tsunami in Japan – A magnitude-9 earthquake shook northeastern Japan, unleashing a savage tsunami (Oskin, 2017). Similarly, the outbreak of transmittable disease, Coronavirus (COVID-19) has brought a global disaster not only to human lives, but also to economic activities like manufacturing operations, supply chain and logistics (Ivanov & Dolgui, 2020). COVID-19 also impacted the automotive, tourism, aviation, oil, construction, telecom, healthcare and food industries (Chamola *et al.*, 2020).

The impact of COVID-19 was first felt in China due to its contribution to global manufacturing. Wuhan, the epicenter of the pandemic has more than 200 of Fortune Global 500 firms' presence (Deloittee, 2020). Manufacturing disruptions in China have rippled through global supply chains. China's main sea ports, cargo was backlogged, travel constraints led to a lack of truck drivers picking up shipments (DHL, 2020), and ocean freights cancelled sailings (MSC, 2020). As China provides the bulk of the components as well as major subsystems to manufacturers globally, the resulting shortage of components from China impacted manufacturing operations overseas. Industries from all over the world including automotive, electronic, pharmaceuticals as well as consumer goods, were affected (Betti & Ni, 2020).

As globalization has been embraced, so did supply chains. Supply chains are now spread through nations, territories, and continents (Tse *et al.*, 2016), and as they grow and become more complex, the possibility of a supply disruption grows (Tang & Musa, 2011). Every nation deals with the pandemic that cause by COVID-19, including the loss of life and the new way of living that we have seen since April 2020. Due to the reliance of domestic firms on foreign firms for raw materials, the manufacturing sector has been seriously impacted during the pandemic period.

The virus outbreaks all over the world causes lockdown and border closure that restricted the movement of goods. Additionally, safety measures such as social distancing was introduced to ensure the safety of workers. For example, in European Union, trucks formed 37-mile-long lines on the A4 highway after Poland closed its border with Germany in mid-March 2020 (Ankel, 2020). The impact of pandemic on freight capacity in three key global transportation areas such as ocean, air, and land were seriously felt.

Ocean Freight

The situation for ocean freight has also been compromised due to the pandemic. Total container volume from Chinese ports dropped by 10.1 percent at the beginning of the outbreak (DHL, 2020). Limitations of ocean freight around the world, impacted both key exporter such as Brazil, China, India, Bangladesh and Mexico as well as importer like the European Union (Agility, 2020). Interestingly, when the factories were closed in China during their period of mass quarantine, there was a drastic drop in shipments leaving the country. In reaction to this situation, many ocean carriers reduced their capacity by not sending out as many liners, which led to a dearth of containers in Europe (Shepard, 2020). According to DHL (2020), poor demands continue to affect route between Asia and Europe, USA and Latin America.

The COVID-19 pandemic also impacted Cambodia's export through ocean freight. As commented by the Cambodia Logistics Association (CLA) president, "the volume in goods transport now is in the ballpark of just 30-40 percent of pre-COVID figures. Freight transport activity is only slightly up from three to four months ago. Even though the COVID-19 situation has improved, goods deliveries at my company have not gone back up, as shipping volumes remain low compared to before the beginning of the COVID-19 outbreak" (Pisei, 2020).

Air Freight

According to the International Civil Aviation Organization (ICAO), for the year 2020 compared to 2019, there was an overall reduction of 50 percent of seats offered by airlines leading to a reduction of 2,699 million passengers (-60 percent). This accumulates approximately US$371 billion loss of gross passenger operating revenues of airlines (Hasegawa, 2021). Further, the COVID-19 impact on world scheduled passenger traffic for the year 2021 (preliminary estimates) compared to 2019 shows an overall reduction of 40 to 41 percent of seats offered by airlines which will lead to an overall reduction of 2,229 to 2,277 million passengers (–50 to –51 percent). This will bring approximately US$327 to US$333 billion loss of gross passenger operating revenues of airlines (Hasegawa, 2021). However, as shippers and government turn to

air cargo for essential goods, air freight rates have increased (Shepard, 2020). Many air service providers utilized their passenger aircraft for cargo operations to deliver essential cargo to those who are affected by the virus and to brave medical officers who are fighting off the pandemic at the front line. Such operations also help drive the global supply chain forward by answering the continually growing demand for air freight services. There are other airlines who adapted the situation and temporarily converted their passenger aircraft to freighters, to keep their business running (Vorakamnueng, 2020). In case of Cambodia, it's domestic and international air freight volume was reduced by about 30 percent in the first half of 2020 compared to 2019, and the Kingdom served 1.95 million air passengers during the period, tumbling 67.5 per cent from the year-ago period (Vireak, 2020).

Land Freight

Land transportation was generally remained functional except for some countries under severe lockdown. Trucking capacity was strained because of additional demand for their services, especially food and medical supply transportation under lockdown, leading to higher rates (Ames, 2020). Other economic sectors that require land transportation such as manufacturing did not run at full capacity due to lockdown. As a result, land freight rates had fallen in some countries (Clevenger, 2020). According to the founder and chief executive officer of Trucker Tools LLC, a Reston, Virginia-based logistics technology provider, the impact of the pandemic has created massive challenges in freight yards and warehouses, where many facilities struggling with coronavirus conditions have cut their staffing levels and reduced operating hours at loading and receiving docks (Ames, 2020). The Cambodian land transportation between neighboring countries were disrupted for a short period of time and it went back to normal with some additional rules (Bangkok Post, 2020).

Impact of Supply Chain Disruptions and Lockdowns on Freight Forwarding Firms

Without any clear timeline for the restrictions to end during the pandemic, it was anticipated that operational limitations will lead to distribution delays, congestion, and higher freight prices. However, not all sectors were affected equally. E-commerce businesses were seeing increased activity as customers opted for essentials to be bought online (Bhattacharjee *et al.*, 2020). But other sectors were badly affected such as auto and consumer goods. Of course, low fuel price should provide some relief to the transportation industries (Reinicke, 2020).

The lockdown has brought the entire domestic supply chain to a grinding halt in many economies around the world. According to the chief economist of Dun and

Bradstreet India, from the factory gate to the warehouse, or from the warehouse to the end users, the entire supply chain in India is severely jeopardized (Khan, 2020). More badly the small trucking businesses were affected due to the lack of backup or contingency plan. Contrary to that, top logistics businesses experienced a strong impact. However, in April 2020, DHL and CEVA logistics declared *Force Majeure* – a clause that allows contracts to be null or void (Gillis, 2020). By declaring force majeure, CEVA Logistics said "it reserves the right to modify all or part of its services, to change its working procedures and any previously agreed rates and prices, to levy surcharges, or otherwise to take any measures necessary to adjust its business operations and its obligations to its customers, suppliers and other stakeholders, in response to the prevailing circumstances."

Response to the Crisis

Governments in many countries responded to the crisis by designating ports, shipping and trucking services as essential and exempted them from lockdown (The Hindu Business Line, 2020). Although many airports were closed to passenger flights but cargo flights were allowed to operate.

Logistics companies have responded to this crisis in many different ways. They have introduced new safety protocols to protect their staffs' health by having social distancing, disinfecting work areas and also providing protective gears (Davis, 2020). Many companies were started using other alternatives to their current transport system. Airlines had converted their passenger aircraft to cargo. As per the announcement in mid-March 2020, Korean airline transported agricultural and medical supplies to China and Vietnam (Pozzi, 2020).

In the light of the global supply chain disruptions, we intend to examine the impact of COVID-19 on the operations of international freight forwarding firms in Cambodia. Therefore, during the pandemic, with the lockdown of most business activities and restrictions of movement, this chapter intends to explore the business performance of international freight forwarding firms in Cambodia which includes both air and ocean freights.

STUDY METHODOLOGY

The study used a descriptive research design to collect primary data from the purposively selected four international freight forwarding firms in Cambodia. Approximately 130 freight forwarding firms are actively involved in business in the Kingdom, and among them, 32 firms are international. Data relating to revenues of the selected four firms (13 percent of the total international firms) over the period

2017 to 2020 including their operating conditions and challenges were gathered through a personal interview with the company officials. While all the study firms have their services in ocean freight, only two of them handle air freight operations. To maintain confidentiality, instead of mentioning the real names of the firms in the study, we analyzed the collected data of the firms by specifying them as firm A, B, C and D.

In addition to the primary data, relevant secondary data were collected from the official statistics of the Royal Government of Cambodia (RGC), Asian Development Bank (ADB), World Bank and International Monetary Fund (IMF) including the local news websites.

DATA ANALYSIS AND DISCUSSION

Cambodia's gross domestic product (GDP) growth rates for the year 2020 and 2021, both estimated and forecasted, before and after the COVID-19 are shown in Figure 5.1 and 5.2 respectively. Prior to the COVID-19 pandemic, in 2019, Cambodia's economy was growing at a rate of 7.1 percent (World Bank, 2020). However, as shown in Figure 5.2, it has been estimated by all of the four sources (RGC, ADB, World Bank, and IMF) that the growth rate of the economy in 2020 will dramatically be fallen (negative) after the COVID-19. Among all the sources, for 2020, the highest negative growth rate (-4 percent) of the economy was estimated by the ADB.

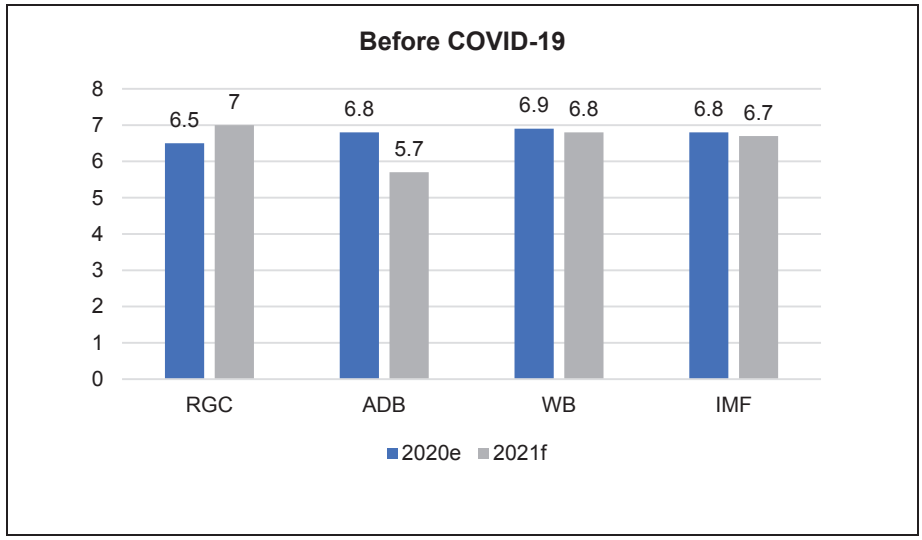

Figure 5.1: Cambodia's GDP Growth Rate (Estimate and Forecast) Before COVID-19

Source: Official Statistics of RGC, ADB, World Bank and IMF, 2020.

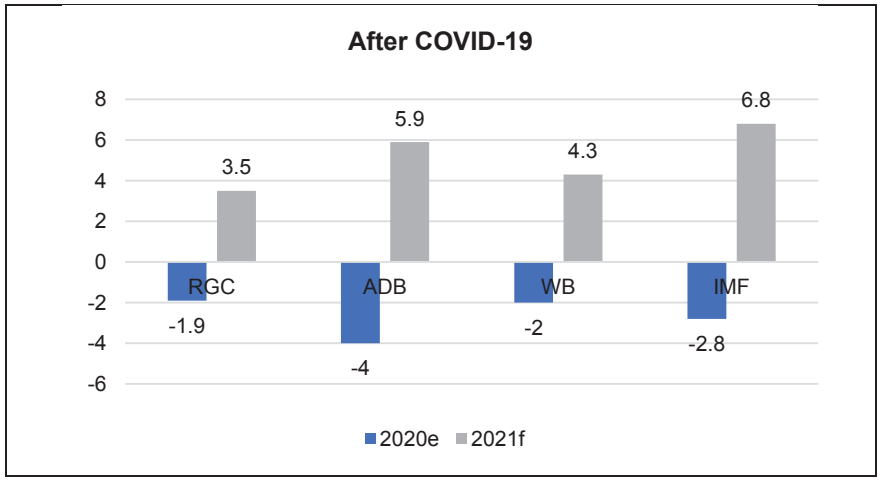

Figure 5.2: Cambodia's GDP Growth Rate (Estimate and Forecast) After COVID-19

Source: Official Statistics of RGC, ADB, World Bank and IMF, 2020.

The sectoral contribution to Cambodia's GDP in 2019 is presented in Figure 5.3. Among the three sectors, the contribution of the service sector to the country's GDP was the highest. As against the agriculture and industry, in 2019, 38.9 percent of the country's GDP was contributed by the service sector, which includes, tourism, financial services, information and communication technology (ICT), postal services, transport, logistics, and so on.

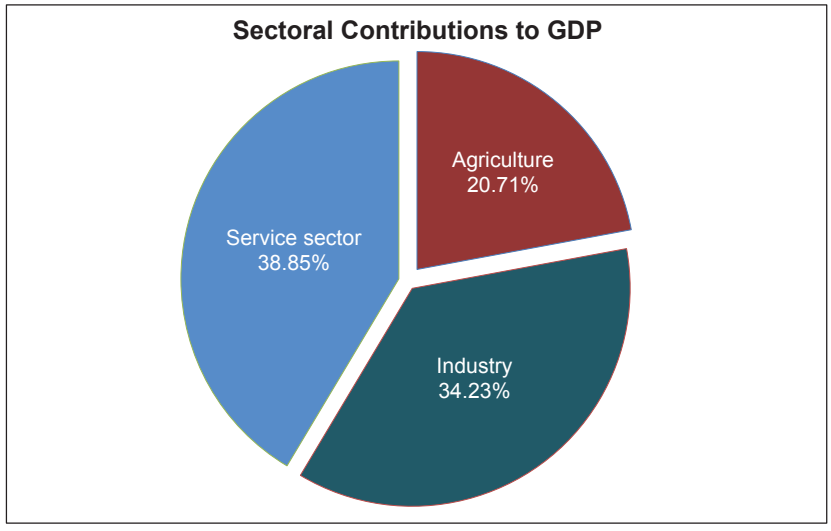

Figure 5.3: Contribution of Different Sectors to Cambodia's GDP in 2019

Source: Statista 2020.

Business Performance of the Freight Forwarding Firms in Cambodia

The business performance in ocean freight of the four freight forwarding firms (13 percent of international freight forwarding firms) in Cambodia in terms of number of containers shipped and revenue earned are shown in Table 5.1. As revealed, the number of containers of all firms was drastically reduced in the year 2020 compared to the previous three consecutive years. Though firm- B was one of the major freights forwarding international firms in Cambodia, their number of containers in 2020 was also reduced by more than 61 percent compared to the previous year 2019.

Table 5.1: Number of Containers Shipped and Revenue Earned by Firms Through Ocean Freights

Firm	*Year*	*Number of Containers (TEU: Twenty-foot equivalent unit)*	*Revenue in Millions (USD)*	*Percentage Change in Revenue Compared to Previous Year*
Firm A	2017	3,142	1.44	–
	2018	3,094	1.67	15.97
	2019	3,471	2.11	26.35
	2020	1,800	1.12	–46.92
Firm B	2017	20,573	84.34	–
	2018	24,324	99.72	18.24
	2019	27,004	110.07	10.38
	2020	10,475	42.94	–60.99
Firm C	2017	1,350	0.57	–
	2018	1,632	0.69	21.05
	2019	1,574	0.66	4.35
	2020	563	0.14	–78.79
Firm D	2017	3,763	1.73	–
	2018	3,542	1.62	6.36
	2019	3,982	1.83	12.96
	2020	1,352	0.62	–66.12

Source: Data collected from freight forwarding firms.

The business performance of all firms in terms of revenue generated was contracted in 2020 compared to 2019, 2018 and 2017. Among all firms under the study, in 2020, the fall in the revenue of the firm - C was the highest (78.79 percent), followed by the firm-D (66.12 percent), firm - B (60.99 percent), and firm - A (46.92 percent). By taking into account the mean revenues of all four firms in different years, we found that there was an increase in revenue by 10.6 percent in 2019 compared to 2018. However, due to the pandemic, in 2020, the firms on an average experienced a fall in revenue of more than 60 percent compared to 2019.

Among the four firms under study, firm A and firm C also handle air freights in addition to ocean freights. Table 5.2 shows their performance in terms of weight of air cargo handled and revenue generated over the period 2017 to 2020. As revealed, compared to 2019, in 2020, firm C's air cargo weight handled was fallen by 62.4 percent as against a fall of 55 percent of firm - A. Though firm- C enjoyed an increase of 50 percent of its revenue in 2018 over 2017, however, due to the COVID-19 pandemic, the firm had faced a fall of more than 65 percent of its revenue in 2020 compared to the previous year. Likewise, the firm-A also experienced a fall of 46.9 percent of its revenue in 2020 compared to 2019. Considering the mean revenues of both the firms in different years, we found that there was a fall in revenue by 21.1 percent in 2019 compared to 2018, and further a higher percentage fall in average revenue (41.4 percent) was observed in 2020 compared to the previous year.

Table 5.2: Weight of Air Cargo Shipped Through Air Freight and Revenue Earned by Firms

Firm	*Year*	*Weight of Air Cargo (Tons)*	*Revenue in Millions (USD)*	*Percentage Change in Revenue Compared to Previous Year*
Firm A	2017	1,069	2.16	–
	2018	992	2.25	4.17
	2019	814	1.66	–30.12
	2020	366	1.13	–46.9
Firm C	2017	354	0.46	–
	2018	253	0.69	50.0
	2019	396	0.66	–4.35
	2020	149	0.23	–65.15

Source: Data collected from freight forwarding firms.

The above findings of the study corroborated the findings of other studies in different parts of the world. For example, a study conducted in Poland revealed that while 14 percent of freight forwarding firms were slightly affected due to the global pandemic, 16 percent of them were severely, 21 percent of them moderately, and 49

percent of firms were affected significantly (Klopott, 2020). Thus, the poor performance of the business of the logistics firms was due to the lockdown and other restrictions imposed by the government to control the spread of COVID-19 pandemic.

CONCLUSION

The spread of coronavirus has disrupted the movement of goods worldwide. The operations of freight forwarding firms which handle the movement of goods between countries through ocean, air and land, were suffered due to lockdown, border closure and reduced demand for shipping. In this regard, we made an attempt to assess the business performance of the selected international freight forwarding firms in Cambodia in the midst of COVID-19 pandemic.

Our study reveals a noticeable and severe impact of the COVID-19 pandemic on the business performance of the international freight forwarding firms in Cambodia. Most of them while performing well prior to the emergence of COVID-19, their businesses were disrupted due to the reduced economic activities around the world. We found a significant decline in the revenues and frequency of shipping of all firms in both ocean and air freights. However, these firms revealed that they are quite optimistic with regard to the resumption of their business operations when the pandemic will be under control.

We believe that managers of logistics firms garnered invaluable experience during the COVID-19 pandemic. As such, based on the lessons learned, taking the opportunity, it is to reconfigure the business and operating models for a new reality. The transition to a "next normal" will require the managers to reinvent their business models, even as they continue to respond effectively to the aftershocks of the crisis (Hatami *et al.*, 2020).

Our study is not free from certain limitations. It was quite challenging to gather relevant information from the logistics firms as most of them were not willing and ready to share. In the midst of pandemic, it was quite difficult to find the active freights forwarding firms in Cambodia. Based on the willingness of the firms, we only surveyed and covered 13 percent of the international freight forwarding firms in the country. In future, other indicators of business performance and a larger sample size comprising of both domestic and international freight forwarding firms could be considered for study.

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CHAPTER 6

The Impact of COVID-19 on the Garment Sector in Cambodia

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INTRODUCTION

As of 2020, business plans, studying, traveling, working-life have been completely ruined by an infectious disease called "COVID-19" which took their first spotlight in Wuhan, China. Since it is a disease that could heavily infect the lungs, it can spread more easily and much worse and faster than expected. Consequently, many schools, restaurants, movie theaters, and other public places have been closed. With fear and concern, people have to practice social distancing, washing their hands, wearing masks, and avoiding the crowds. In the worst-case scenario, some cities were in lockdown due to immoderate cases going up. In terms of the marketplace, when everything is closed, the demands for many products and services including clothing started to shrink significantly in the first few months. Therefore, companies, corporations, and local businesses whether they were medium or large, it somehow affected them in various ways. Some enterprises had a hard time making meet ends struggling to survive and some are encountering bankruptcy. Ever since COVID-19 existed, not only has it affected people's lives, it also affects the nation as a whole. It is quite worrisome that most of the fundamental sectors in Cambodia such as the garment, tourism, agriculture, and transport have now run into numerous difficulties. Regarding transportation, neither imports nor exports are being traded, some countries even closed their borders for their safety. Not to mention tourism where some airlines have declared bankruptcy because tourists are nowhere to be found. The garment factories in Cambodia and across Southeast Asia were also severely affected by the pandemic. The majority of the population in impoverished countries are mostly blue-collar workers because they have limited access to education, which is the reason why Europe or any other parts of the world like having their products being made here with low wages provided and they can make more profits. However, with the demands from Europe and other parts of the world diminished, these workers are facing massive layoffs and the unemployment rate, especially in developing countries such as Cambodia increased dramatically.

OBJECTIVES OF THE STUDY

Our research aims to investigate how COVID-19, directly and indirectly, impacted the Cambodian garment industries, especially the effects on the owners of factories and workers including the subcontractors. We also explored the solutions and policies to minimize the damage, and made recommendations on how the government could mitigate this crisis.

STUDY METHODOLOGY

The data used in this research were gathered from various secondary sources such as online news articles, newspapers, organizations' reports, and case studies from institutions like Cambodian League for the Promotion and Defense of Human Rights (LICADHO) and Human Rights Watch (HRW). We decided to take this approach due to the restrictions imposed on movement during COVID-19. In addition, we took advantage of other available reports and official documents of the Ministry of Economy and Finance (MEF), and Ministry of Labor and Vocational Training (MLVT).

RESULTS AND DISCUSSION

The Effects of COVID-19 on the Garment Sector in Cambodia

The garment industry plays a vital role in Cambodia's economy as this sector had accounted for 80 percent of Cambodia's export and employed around 800,000 people (Pierson, 2020). However, this sector is also one of the most vulnerable sectors to the COVID-19 which resulted in closing down of 180 factories and removing approximately 150,000 workers out of their jobs temporarily (Heng, 2020).

Impact of COVID-19 on Factory Owners

In February 2020, the problem started as the factories in Cambodia did not receive any raw materials for production. This was due to the spread of COVID-19 in China, the main supplier which accounted for 60 percent of the total raw materials to garment factories in Cambodia. Although factories in Cambodia had started receiving supplies again in March 2020, the markets and demand for clothes diminished rapidly. COVID-19 had spread to major markets such as Europe and the United States. The people living there had to stay at home due to the lockdown and many of them lost their jobs and/or received lower earnings. These factors contribute directly to the shrinking of demand for new clothes.

According to the Garment Manufacturers Association in Cambodia (GMAC), the main reason why factories had to close their doors was that they have lost their

income as the factories only get paid when clothes are delivered (Pierson, 2020). Many cases affected the industry such as the orders were canceled, or the brands did not accept the products that had already been made, or the products were accepted and delivered but payments had not been received (Lipes, 2020a), or the buyers even demanded discounts for products that already been delivered (Human Rights Watch [HRW], 2020). For instance, C&A, a Belgian-German-Dutch chain of fast-fashion clothing retailer, by citing *force majeure* had issued a letter to a supplier in Cambodia stating that the company would cancel all the orders that was supposed to be completed in March until June 2020, and this cancellation would apply immediately. *Force majeure* is a common clause in contracts which frees both parties from liability when an extraordinary event beyond the control of the parties prevents from fulfilling their obligations under the contract. The vice legal director at the European Centre for Constitutional and Human Rights, however, argued that the term *force majeure* cannot be used in this particular circumstance as the German retailer was facing economic difficulties, not an impossible event. She further commented that "in my opinion, one could argue that the risk of pandemics was not unknown in recent years and was not unforeseeable. Brands should have prepared" (as cited in The Star, 2020).

An article released by HRW stated that there are several clothing brands and retailers that have canceled orders without undertaking responsibility financially. As a result, suppliers across Asia including ones in Cambodia were not able to pay the wages to the workers. A former manager of a garment factory in Cambodia told HRW that brands usually were the ones who came up with all the terms and conditions and they were not willing to negotiate with the suppliers. In his experience, the brands did not make advance payment and their payment usually came after the products were delivered (Human Rights Watch, 2020).

The factories owned by the multinational companies (MNCs) are not being hit the hardest but most of the factories in Cambodia are the smaller factories, and subcontractors which have been badly damaged as a result of their limited financial resources (Hoekstra, 2020). Subcontractors are tiny businesses operating in a significantly smaller workplace such as private homes, warehouses, or industrial buildings. These factories are usually located in remote areas, do not display their name, and change locations regularly to avoid their responsibilities to their workers (Peter, 2017). Furthermore, according to HRW, these factories are not being monitored carefully. They usually keep their operation secret from their workers and the public organizations as well as the government. Most of the time, the products that were assembled by these subcontractors did not have any tags or brand identifiers on them until they arrived at the bigger factories (Griffin, 2016). There are also speculations that suppliers were using subcontractors to evade any regulations

including the increase of minimum wage and laws protecting workers' rights (Peter, 2017).

According to a report by the International Labor Organization (ILO) the gap between the number of export-oriented factories issued by the Ministry of Commerce (MOC) and the number of garment factories registered in the National Social Security Fund (NSSF) were widening significantly. Between 2014 and 2016, 244 garment factories are not export-oriented which raises the question of who they are producing for. In their report, the ILO concluded that the domestic market and demand for these garment products was still small and insignificant. Therefore, they believe that these factories are subcontracting companies that are not monitored by ILO's Better Factories Cambodia and receive less attention from agencies in Cambodia (ILO, 2017). We believe that the number of subcontracting factories rose significantly since 2016 though there is no available data on those subcontractors.

Even though factories in Cambodia were already at a financial disadvantage, the factory workers are demanding a hike in their wage. According to the president of the Cambodian Alliance of Trade Unions (CATU), the unions will urge the government to increase the minimum wage of garment workers. However, the GMAC which represents the factory owners announced that they wanted to delay the negotiation on the minimum wage as the sector is already devastated and needs recovery (Lipes, 2020a). Consequently, the MLVT recently announced that the new minimum wage would increase from US$190 to US$192 in 2021 (Lipes, 2020b).

The Impact of COVID-19 on Garment Workers

While Cambodia has been active in curbing the spread of COVID-19, many workers are still affected as they find it difficult to sustain their living standards. After the emergence of the pandemic, nearly 130 factories in Cambodia have been forced to close, involving at least 100,000 workers. The salaries of employed workers have been reduced, and workers' unions are now under pressure (Frye, 2020).

The Unemployment Effect and Workers' Living Conditions

The onset of coronavirus caused Cambodia's garment industry to be disrupted, affecting hundreds of thousands of workers. According to domestic workers in Phnom Penh, several factories had introduced a lottery scheme to decide who is going to be employed. Workers must work harder to earn enough money to support themselves with their new minimum wage. Inflation needs to remain at a minimum if the government does not raise the minimum wage so that workers can live with their existing incomes. In June 2020, GMAC called on Cambodia's government to suspend annual arbitration on the minimum wage, claiming that the sector must first rebound from a lack of orders from international buyers as factory shutdowns were triggered by

the coronavirus outbreak. A worker from a garment factory, W&D (Cambodia) Co. Ltd., said that she needs at least US$200 to cover her daily expenses. She continued that her current income, which is US$192 is not enough to maintain her decent living conditions (Lipes, 2020b).

Moreover, the industry is now facing the effect of the EU elimination of duty-free, quota-free entry to its market under the 'Everything But Arms' (EBA) structure for 20 percent of exports in Cambodia (Lipes, 2020b). Another worker from the Hung Wah (Cambodia) Garment Manufacturing Ltd., believes that the removal of EBA had an immensely negative effect on her career opportunities such as layoffs, lack of overtime, and shortened hours. Some often complain that it is challenging to feed the whole family because the monthly earning does not cover everything they need to pay regularly, including housing, food, medication, and education for their children (Hunt, 2020).

The difficulties in living have lured many Cambodian workers to be indebted by the loan sharks. One of the factory workers said that she would force herself to work to support her family. She described how her two sisters had closed their food shop, forcing her to repay huge debts to cover family medical bills. A program manager for the Center for Alliance of Labor and Human Rights (CENTRAL) said that "it was easy to fall into poverty even before COVID-19." He continued that he saw employees sleeping outside of warehouses, and some had to sell their homes to support their families. Trade unions are stressing the government to compel the microfinance institutions to compromise repayment schedules (Blomberg, 2020).

Working Conditions of Workers of Subcontractors

While there is research conducted to investigate the impact on garment workers in the export-oriented factory, little attention has been paid to the subcontractor workers. Subcontractor factories were usually located in rural areas, had no name, looked like homes, had little ventilation, and mostly recruited people, especially women who did not want to separate from their family. These workers had been through tough experiences such as discrimination against pregnant women, fixed duration contracts, near impossible quota on the number of products needed to be produced, and very low wage (Griffin, 2016). By interviewing these subcontractor workers, HRW obtained some critical information that these workers did not know their factory names, whether they were registered in NSSF or not, no identification card and unaware of the brands that are sourcing their products. Furthermore, HRW speculated that these unidentifiable factories might even use abusive labor practices that violate the laws domestically and internationally (Kashyap, 2016).

Workers are paid on a piece-rate basis which can be described as the payment depending on how many products each worker produced, different from the

common paid-by-the-hour method which pays workers based on how many hours that the workers have been working (Kashyap, 2016). Those subcontractor' employers usually ramp up the quota when workers nearly hit the quota so that the workers can barely finish it and work to their limit. In one of an investigation conducted by an Non-government Organization (NGO), they found out that those workers sometimes had only a 15 minutes lunch break and had to continue producing at home if they failed to meet the quota. Despite the work that the workers put in, they were never paid for working overtime, and they often had to pay for the electricity bills for the sewing machines at home. Further, due to noncompletion of their quota, they have been warned and their contracts were terminated (Griffin, 2016). If they were already struggling in their work before this pandemic, this COVID-19 will surely worsen their situation but without any sufficient data, we could not estimate the impacts of COVID-19 on these subcontractor workers.

ACTIONS AND RECOMMENDATIONS

To mitigate the crisis and its adverse impacts on the garment factory owners, the government had exempted the employers from paying for the worker's insurance and the NSSF. Besides, the MEF has already prepared a US$300 million subsidy to help essential sectors including garments to sustain and recover at a faster rate (Sim, 2020). The General Department of Customs and Excise also announced that they would cooperate with the factories and other actors to shorten the import process of raw materials by assessing and issuing documents immediately (Medina, 2020). There are also some suggestions made by the brands that advised the suspended factories to shift their production lines to start making personal protective equipment and medical supplies whose demand had skyrocketed (Human Rights Watch, 2020).

Cambodia might feel huge pressure due to the decline of the garment industry, however, the government is the worker's biggest support with an announcement of reserve funds. Clothing factory workers who are unemployed will receive a payment of US$70 each month (Heng, 2020). Companies that want to halt employment contracts need to submit documents to the MLVT. In Kandal Province, out of all the 164 factories, 44 are now in suspension. Among the 44 factories, only 14 issued themselves to receive support funds from the government. This pandemic created uncertainty for not only the owners but also the workers and their families because, in Kandal province alone, the estimated earnings of the workers are around US$35 million per month only from the garment sector. The amount of money workers is expected to receive is based on the days of suspension. They are issued to receive US$15 for a suspension of 7–10 days, US$30 for 11–20 days, and US$40 if the suspension is more than 21 days. Although they are not employed anymore, the Ministry of Health (MOH) takes extreme measures in tackling the virus by educating

workers to practice good hygiene both in the workplace and at home. As such it can be concluded that the government did a wonderful job in supporting the factory workers. However, the vital question is, can the workers and their families survive on US$70 per month while their original salary before the pandemic was much more than that (Sen, 2020).

Being a developing country, Cambodia comprises of both farming and nonfarming communities. Undoubtably, these people borrow money from the microfinance institutions and were having trouble paying it back even before the pandemic strikes. With today's COVID-19 situation, the workers are struggling to even keep food on their plates, let alone pay their loans. HRW stated that the government is not effective in protecting borrowers and as such they are forced to sell land and properties to make ends meet. The HRW's deputy Asia's director suggested the authority to postpone debt payments from workers affected by the coronavirus as well as hold financial institutions accountable that failed to protect the workers' interest. The lack of concern from the government can result in workers falling into wider debt, poverty, and illegal borrowings from loan sharks. With this accusation, comes a response from one of the government's spokesperson, saying that the situation that is described by HRW does not match with the actual one in Cambodia. He added that Cambodia's National Bank has already come up with a plan to aid people. The Cambodia Microfinance Association (CMA) spokesperson stated that microfinance institutions have introduced a special payment plan of around three to six months. With this new debt repayment policy, some pressure can be lifted from the workers' shoulders. However, the microfinance institutions also noted that the debts will not be excused as it is illegal to do so (Lipes, 2020c).

The president of the Cambodian Labor Confederation (CLC) said that as long as the pandemic is growing, unemployment rates among garment workers will also increase. The government is finding ways to reduce unemployment rates by developing the country's infrastructure. Therefore, garment workers that are affected by the pandemic can find jobs in the agriculture and construction industries. The authority is also taking extreme action against the causes of factory closure as some owners use the COVID-19 excuse to shut down their struggling factories without paying workers compensation. The president of the Building and Wood Workers Trade Union Federation of Cambodia (BWTUC) stated that the government should be more concerned about the worker's safety as well as set a higher minimum wage as construction works are dangerous and tiring. Women are known to be most affected when working to build infrastructures as they are in immediate danger of sexual harassment and not given time off for labor. At the moment, all we can do is hope that the garment industry will recover soon, and therefore, the women can return to their original job (Khy, 2020).

To prevent this crisis from reoccurring in the future, the Royal Government needs to inspect the contracts made between the buyers and the suppliers in Cambodia. They must ensure that there will be someone who will take financial responsibility or share the responsibility between all actors including the government, the suppliers, and the brands making the orders. Moreover, the government has to push the brands to make advance payments to help local suppliers to deal with financial issues or debts as well as be transparent and request the microfinance institutions to postpone more debts that the factory workers have borrowed. The government should also consider implementing measures to reduce inflation so that the workers can repay their debt and improve their living conditions.

CONCLUSION

To conclude, this research has shown the negative impacts of COVID-19 on garment factories stakeholders, specifically the employers and employees. Although this pandemic was an external factor that could not be avoided, brands, suppliers and the government are partly responsible for this crisis. These impacts could have been less severe if the buyers and suppliers had negotiated and shared their responsibilities on workers when making the contracts. However, we also found that most of the research conducted by other groups or experts have been focusing on the workers in the export-oriented factory and little attention has been paid to the workers of the subcontractors in the rural areas.

Our research is not free from limitations. One of the most significant limitations of our research is the absence of the primary data in the study. Further, we carried out our research within a limited time period. These limitations no doubt affected our study. We recognize the limitations of data of COVID-19 impacts on worker's economic, physical and mental health and living conditions, and conditions of workers working under the subcontractors. In addition, there are limited evidence to separate the impacts caused by EBA withdrawal and the impacts caused by COVID-19 on garment workers. Future research attempts should therefore be made using primary data, focusing more on the workers of the subcontractors, especially to understand their economic difficulties in this COVID-19 era to provide meaningful recommendations and plan of actions.

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Part-II

COVID-19: The Society

CHAPTER 7

Effectiveness of Synchronous Online Learning Compared to Face-to-Face Learning Among Higher Education Students in Cambodia during the COVID-19 Pandemic

Casey Barnett and Yem Bunthorn

INTRODUCTION

Economic Impact of Lost Learning

The International Monetary Fund reported that global gross domestic product (GDP) contracted by 3.5 percent in 2020 compared to positive growth of 2.8 percent in 2019 (International Monetary Fund [IMF], 2021). This economic loss means more people will suffer the effects of poverty. The economic loss is largely due to COVID and its effects which include safety measures such as restrictions on gatherings and movement.

One safety measure implemented by countries has been the prohibition of face-to-face learning in schools. However, the closure of schools may have ongoing negative economic consequences for years to come. A study by the Organisation for Economic Cooperation and Development (OECD) estimates that "due to lost productivity, one year of lost primary and secondary school learning will result in an economic loss equivalent to 202 percent of future GDP" (Hanushek & Woessmann, 2020, p. 9).

Empirical studies are showing that learning loss arising from school shutdowns is proportional to the duration of the shutdown. For example, a study of national exam results for approximately 350,000 students in the Netherlands found that an 8-week shutdown resulted in a learning loss equivalent to the same period of the shutdown (Engzell *et al.*, 2021).

With awareness of the negative effects of lost learning, many countries have encouraged schools and universities to continue teaching online. In Cambodia, the Ministry of Education, Youth and Sport issued an instruction to all educational institutes to end physical classes from 16 March 2020 (Ministry of Education, Youth and Sport [MoEYS], 2020). As of 1 August 2021, the prohibition of face-to-face

learning in Cambodia continues. In place of face-to-face learning, the Cambodian government has encouraged online learning. This raises the question of whether online learning can be as effective as traditional face-to-face learning. Thus, keeping this in mind, we intend to fill up the gaps in knowledge through the present empirical study.

In the following sections of this chapter, we present the literature concerning the effectiveness of online learning in Cambodia and Southeast Asia, followed by research questions and hypotheses, study methodology, results, discussion including conclusion and suggestions for future studies.

LITERATURE REVIEW

Effectiveness of Online Learning

An influential meta-study published by the U.S. Department of Education, *Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Studies*, found that students did modestly better in online learning than with traditional face to face learning (Means *et al.*, 2010). That meta-study identified over one thousand empirical studies published between 1996 and 2008 comparing online learning with traditional face to face learning. After screening the studies for sufficient data, the authors made use of data from 45 studies and found "a significant average effect size of +0.20 in favor of online learning" (Means *et al.*, 2010, p. 18).

The findings of the 2010 U.S. Department of Education meta-study may be of limited applicability to fully online university courses. Of the 45 studies included in the U.S. Department of Education meta-study, only seven of them assessed fully online, full semester-length university courses (Smith & Bailey, 2010). An examination of those seven studies concluded that "there was no significant difference in the effectiveness of online learning versus traditional face to face learning" (Smith & Bailey, 2010, p. 9).

A number of studies conducted since the 2010 U.S. Department of Education meta-study have reinforced the finding that there is no significant difference in learning outcomes when comparing online learning with traditional classroom instruction. For example, Ni (2013) conducted a study comparing three groups of graduate students in online classes with three groups of students in traditional face-to-face classes for a single subject taught by a single instructor; she determined that student performance was independent of mode of instruction. Ni's study also found that there was a higher rate of drop-outs for the online courses in her study; however, she found that "failure rates and drop-out rates for online classes differed according to course subject" (pp. 207–208). A similar study by Paul and Jefferson (2019) assessed the performance of 548 students in an environmental science course taught by a single

professor from 2009 to 2016, finding no significant difference in student performance between online study and face-to-face studies.

In both of these studies, students self-selected the modality of study. This makes it difficult to extrapolate their findings to students in general because students who study better online are likely to have chosen online study and students who study better face-to-face are more likely to have chosen face-to-face study.

Empirical Studies of Online Learning in Cambodia and Southeast Asia

Recent studies of online learning in Cambodia have surveyed students about experiences and challenges rather than assessing learning outcomes compared with a control group. These studies report common challenges of online learning in Cambodia such as limited internet access and interruptions when studying at home (Em, 2021), and student approaches to studying online (Corrado *et al.*, 2021).

Two studies of online learning in Cambodia have reported quantitative data on drop-out or failure rates, with mixed findings. For one online non-credit workshop delivered to 32 Cambodian university students in Siem Reap province, not one student completed the assigned tasks (Crews & Parker, 2017). In contrast, an eLearning project teaching business skills in Cambodia reported "among 272 Cambodian higher education students a drop-out rate of only 11 percent and a failure rate of 14.7 percent among those who completed the course" (Abdon *et al.*, 2007, p. 7).

Studies of online learning in other Southeast Asian countries have also reported mixed effects of online learning versus traditional face to face learning. A study of 261 Thai university students found that self-reported effectiveness of learning was lower with online learning (Janmaimool & Nunsumnanon, 2021). However, it should be noted that in the Thai study, learning effectiveness was a subjective measure reported by students and was not determined with examinations or other objective learning assessment. In contrast, a similar study of 95 university students in Indonesia concluded that students perceived online learning to be effective (Djumingin *et al.*, 2021). Studies in Southeast Asia have included surveys of the perceptions of computer science or technology students; as might be expected, such students were favorably disposed to online learning (Mobo & Sabado, 2019; Al-rahmi *et al.*, 2015).

HYPOTHESES

Contribution to the Literature

This study makes four important contributions to the literature comparing the effectiveness of online learning to face-to-face learning. First, it adds to the few empirical studies of semester-long bachelor degree courses. Most studies of online

versus face-to-face learning do not look at courses that are granted credit towards a higher education degree. Second, this study looks at the effectiveness of online learning for a range of subjects. This is important because it has been shown that there is varying effectiveness of online learning according to course subject. Third, it avoids the potential bias arising from students self-selecting whether to study online or face-to-face learning. This study avoids that bias because the sample of students had no choice of whether to study online or face-to-face. Fourth, to our understanding, this study is the first empirical study of the effectiveness of synchronous online learning versus face-to-face learning in Cambodia. Previous studies in Cambodia have only either surveyed student perceptions or measured performance in online courses without comparison to a control group of face-to-face students.

Research Questions and Hypotheses

We examine the following research questions and null hypotheses:

1. Is there a significant difference in mean final Business Ethics course scores between students in synchronous online classes and students in face-to-face classes?

   $H_{0,be}$: There is no significant difference in mean final Business Ethics course scores between students in synchronous online classes and students in face-to-face classes.
2. Is there a significant difference in mean final Cambodian Business Law course scores between students in synchronous online classes and students in face-to-face classes?

   $H_{0,cbl}$: There is no significant difference in mean final Cambodian Business Law course scores between students in synchronous online classes and students in face-to-face classes.
3. Is there a significant difference in mean final Cambodian Tax course scores between students in synchronous online classes and students in face-to-face classes?

   $H_{0,ct}$: There is no significant difference in mean final Cambodian Tax course scores between students in synchronous online classes and students in face-to-face classes.
4. Is there a significant difference in mean final Computer Science course scores between students in synchronous online classes and students in face-to-face classes?

   $H_{0,cs}$: There is no significant difference in mean final Computer Science course scores between students in synchronous online classes and students in face-to-face classes.
5. Is there a significant difference in mean final Microeconomics course scores between students in synchronous online classes and students in face-to-face classes?

$H_{0,m}$: There is no significant difference in mean final Microeconomics course scores between students in synchronous online classes and students in face-to-face classes.

6. Is there a significant difference in mean final Political Science course scores between students in synchronous online classes and students in face-to-face classes?

   $H_{0,ps}$: There is no significant difference in mean final Political Science course scores between students in synchronous online classes and students in face-to-face classes.

7. Is there a significant difference in mean final Psychology course scores between students in synchronous online classes and students in face-to-face classes?

   $H_{0,ps}$: There is no significant difference in mean final Psychology course scores between students in synchronous online classes and students in face-to-face classes.

As previous studies have found differences in the effectiveness of online learning according to course subject matter, these hypotheses are tested course by course.

METHODOLOGY

Measurement of Learning Outcome Achievement

Achievement of learning outcomes is measured by a cumulative measure of assessments of course learning outcomes. Each course in this study has a specified set of course learning outcomes. Students' achievement of those outcomes is measured by a variety of assessments including participation, assignments, projects, simulations, discussion, midterm exams and final exams. The scores of these assessments are combined into a single measure of achievement of learning outcomes ranging from 0–100. The proportion that each assessment contributes to the final measure of achievement of learning outcomes is different from course to course, but remains the same from teacher to teacher.

Participants

In this research we considered all courses taught in the bachelor of accounting and finance program at CamEd Business School, a private accredited institute of higher education in Phnom Penh, Cambodia. CamEd Business School teaches two semesters per year, from January to June and from July to December. In the January to June 2019 semester, all courses were taught face-to-face. In the January to June 2021 semester, the same courses were taught fully online in a synchronous manner such that students attended class via Zoom or Google Meet for the same number of sessions and hours as they would have in the traditional face-to-face lessons. Therefore,

this study has chosen to compare student performance in the January to June 2019 face-to-face courses with student performance in the January to June 2021 synchronous online courses.

We have included only courses that met the following three conditions:

1. The instructor of the course in each semester was the same.
2. The proportion that each type of learning assessment contributed to the measurement of final course scores remained the same for each semester.
3. The final examination for each course was prepared in a consistent manner as defined by whether the exam was prepared by the institution or prepared by an external party.

Out of 31 courses taught at CamEd Business School in the January–June 2019 and January–June 2021 semesters, there were seven courses that met the three conditions.

Data Analysis

For its simplicity and understandability, we chose to test the mean final scores of students in face-to-face classes with the mean final scores of students in online classes. We chose an independent two-tailed t-test of means, an approach similarly used in a number of earlier studies (Teclehaimanot *et al.*, 2007; Peterson & Bond, 2004). Because we had a relatively large sample size and access to a continuous variable in the form of student final scores, we chose a test of means instead of a chi-square analysis of grade distribution used in some studies (Paul & Jefferson, 2019; Ni, 2013).

All analyses were performed using IBM SPSS with a 5 percent level of significance and course scores as the test variable and the mode of study as the grouping variable. To choose between the student t-test and Welch's t-test for unequal variances, we first conducted Levene's test for equality of variances. For the samples for which equality of variances could not be assumed, we selected Welch's t-test for unequal variances.

The data is available to the public via this link: shorturl.at/etNQW.

RESULTS

Table 7.1 summarizes the course titles, the number of students in each course, the mean final course scores, standard deviations and test values. The mean score in Table 7.1 represents the mean final score for the course. The mean final score for the course is the sum of a variety of learning assessments such as quizzes, participation, assignments, midterm exams, and final exams.

Table 7.1: Sample Size, Mean Course Scores, and Standard Deviations

	Course Title	*Face-to-Face*			*Synchronous Online Learning*			*Levene's Test for Equality of Variances*	
		n	*Mean Score*	*SD*	*n*	*Mean Score*	*SD*	*F*	*Sig.*
1.	Business Ethics	176	81	8.4	293	88	7.1	2.584	0.109
2.	Cambodian Bus. Law	199	81	10.1	302	79	9.7	0.364	0.547
3.	Cambodian Tax	195	79	10.4	167	72	9.7	2.759	0.098
4.	Computer Science	315	76	11.2	332	76	16.7	43.328	<.001
5.	Microeconomics	435	69	13	477	62	12.3	0.538	0.463
6.	Political Science	595	87	9.7	668	84	13.9	55.436	<.001
7.	Psychology	247	75	10.2	363	77	15.3	22.248	<.001

Note: Bus. = Business; SD = Standard deviation
Source: Authors.

As shown in Table 7.1, the mean course scores for two courses improved (Business Ethics and Psychology), the mean course scores for four courses worsened (Cambodian Business Law, Cambodian Tax, Microeconomics, and Political Science), and the mean course score for one course stayed approximately the same (Computer Science). The smallest sample size was 167 students (Cambodian Tax, online learning) and the largest sample size was 668 students (Political Science, online learning).

For each pair of samples, we conducted Levene's test for equality of variances to determine whether equality of variances could be assumed. As shown in Table 7.1, the results of Levene's test were significant ($p < .001$) for Computer Science, Political Science, and Psychology. Therefore, for these three courses, we used Welch's t-test for unequal variances. For the other courses, we used the student's t-test.

As shown in Table 7.2, we do not reject the null hypothesis for three courses; we reject the null hypothesis for four courses. At a 5 percent level of significance, the synchronous online learning mean final scores for three of the seven courses were not significantly different when compared to the face-to-face mean final scores. However, the synchronous online mean final scores for four out of seven courses were significantly different when compared to face-to-face learning. Among these four, three courses show a lower average score for synchronous online learning and one course shows a higher average score for synchronous online learning.

Table 7.2: Independent Samples t-Test for Equality of Means

	Course Title, Assumption of Variances	*t*	*df*	*Two Sided p*	*Mean Difference*	*Reject the Null Hypothesis*
1.	Business Ethics *equality of variances assumed*	–8.796	467	<.001	–6.377	Yes
2.	Cambodian Business Law *equality of variances assumed*	1.286	499	<.199	1.159	No
3.	Cambodian Tax *equality of variances assumed*	6.546	360	<.001	6.963	Yes
4.	Computer Science *equality of variances not assumed*	–0.680	645	.497	–.763	No
5.	Microeconomics *equality of variances assumed*	8.134	910	<.001	6.696	Yes
6.	Political Science *equality of variances not assumed*	3.608	1192	<.001	2.410	Yes
7.	Psychology *equality of variances not assumed*	–1.992	608	0.047	–2.060	No

Source: Authors.

DISCUSSION

The results show that for three of the courses the level of student learning is not significantly different when comparing face-to-face learning to synchronous online learning. However, for four other courses there is a significant difference between student learning in synchronous online learning compared to face-to-face learning.

Based on these results, synchronous online learning has the potential to be:

1. As effective as face-to-face learning (3 of 7 courses in this study)
2. More effective than face-to-face learning (1 of 7 courses in this study)
3. Less effective than face-to-face learning (3 of 7 courses in this study)

The differences in the mean learning achievement as measured by final course scores in this study differ from course to course. This may be due to four key idiosyncratic factors.

First, instructors used different teaching methods and utilized synchronous online teaching tools to a greater or lesser extent. Instructors in this study were teaching

synchronous online for the first time in their careers. Some instructors may have been well versed in synchronous online teaching methods and other instructors may have been less skilled in synchronous online teaching. Instructors making use of online educational tools such as Kahoot!, polleverywhere, Quizizz and exploiting Google classroom functions would be expected to have better results than instructors who simply continued to deliver traditional lectures via an online platform. We would expect differences due to differences in pedagogical approaches to decline over time as instructors and education managers gain experience.

Second, the assessments that contribute to the final course score may not be consistent or objective. It is expected that there is a degree of subjectivity in marking assignments, projects and some exam statements. As a result, some of the variation in mean course scores may be attributed to intentional or unintentional subjective bias when marking and grading student work.

Third, assessments of student learning performed outside of a controlled exam environment may reflect the results of collaborative efforts and not individual student learning. Students working on projects and assignments may receive collaborative assistance from classmates, tutors and academic advisors.

A fourth idiosyncratic factor is the effort of students. When students join a course, they are presented with learning objectives and they are informed about the various assessments they will undergo to earn a course score and grade. Therefore, if students feel that learning in one mode of instruction is insufficient, they may respond by spending more time reading and reviewing to achieve the desired level of learning. This idiosyncratic factor would tend to obscure the differences between synchronous online learning and face-to-face learning.

CONCLUSION

This study has found that it is possible for synchronous online learning to be as effective, more effective, or less effective than traditional face-to-face instruction. On a whole, these findings support the notion that student learning achievement is less dependent on the mode of instruction and more dependent on idiosyncratic features such as instructor pedagogy, course subject, curation of learning activities and use of learning applications for engagement and feedback. Because synchronous online learning can be as effective or more effective than face-to-face learning, it must not be dismissed in favor of face-to-face learning. Educators and policymakers should not regard synchronous online learning as a necessary evil during the COVID-19 pandemic but as a valid mode of instruction that has potential for widespread, ongoing use.

We encourage research into the features of online learning that best contribute to higher levels of student learning achievement. Already, promising research has shown that online learning gamification tools can even enhance face-to-face learning (Holbrey, 2019). If we are able to identify the tools and methods of online learning that result in better learning outcomes, we can better support students. More efficient learning results in a higher level of skills acquired, a more productive workforce, and greater economic growth. Unfortunately, most research into the effectiveness of online learning uses correlational methodological design rather than methodology that determines causal relationships (Lockman & Schirmer, 2020).

Therefore, we propose future studies use methodologies that isolate and identify the idiosyncratic factors that have a causal relationship with online learning achievement. To better isolate idiosyncratic factors, learning achievement can be measured with standardized objective assessments such as final exams instead of potentially less accurate measures such as semester grades. Also, future studies may wish to take measures to reduce or eliminate subjectivity in assessment marking through increased use of objective questions and detailed marking rubrics. To determine causation, researchers may make use of methodological design such as that of Arias *et al.* (2018) which, controlling for factors such as human capital potential and pre-test performance, uses regression analysis with learning achievement as the dependent variable.

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CHAPTER 8

Creating Shared Value in Cambodia

Kenneth Paul Charman

INTRODUCTION

This chapter presents the initial findings of a survey of firms in Cambodia based on structured interview and questionnaire to explore the intentions of local firms in Cambodia to address social needs as part of their business model. Addressing social needs whilst simultaneously making a profit is a practice that would be interpreted as creating shared value. The Cambodian firms were located and interviewed by students taking the course. This was the first time that this survey was carried out. The timing of the study was highly appropriate during the COVID-19 pandemic as the sudden downturn in economic activity combined with the pressure on public services to cope with the pandemic, not to mention the concerns of the population facing the spreading threat of COVID-19, has focused attention on social needs as well as business performance. Whereas prior to COVID-19 business performance would more likely be primarily be assessed in terms of growth, market share and profit margins, during and post-COVID-19 the contribution of a firm's activities to the social good has arguably become more of the focus of attention. What the firm is actually doing and how this contributes to the needs of the community it serves is now a question more likely to be asked, rather than whether the firm has simply been able to find a profitable niche and source of growth.

This survey is based on the components of creating shared value which provide a framework and is intended to provide an indication as to whether firms in Cambodia consider that they are contributing to social needs. The survey has included many small firms, a few large international firms and covers a range of sectors. Many of the firms are young, having been established in the last one-to-five years. Most operate either within Phnom Penh and/or in the regions of Cambodia. The results indicate that there is a strong sense of social awareness amongst firms even if they were not aware of the shared value concepts. The majority of the firms had specific intentions to address social needs as part of their business and this was consistent over a wide range of sectors. The survey can be used as supportive data in the development of a comprehensive framework to measure shared value based on firms' intentions to address social needs. The fact that this survey was carried out during 2020, the period of the COVID-19 pandemic is unlikely to have influenced firms' strategies per se.

However, during the COVID-19 period of crisis, it focuses attention on contribution to addressing social needs and can help focus future research into Creating Shared Value.

THE CREATING SHARED VALUE FRAMEWORK

CamEd Business School is an active member of the Harvard Business School Microeconomics of competitiveness Network ('MOC'), and teaches courses developed by MOC to the undergraduates as part of an overall business ethics programme. The main thrust of creating shared value is that firms address social needs whilst at the same time making a profit. Although the literature contains a number of approaches to definition and measurement, shared value distinguishes itself from other forms of business which address social needs (e.g., social entrepreneurship, bottom of the pyramid, Non-Government Organizations) because shared value is the only form of business focusing on social needs which encourages competitive advantage and puts no bounds on limits to profits.

As the subject of 'Creating Shared Value' is still relatively new, having been put forward as a concept by Porter and Kramer (2011), there is still little survey data available, especially at the local level. The objective was to undertake an exploratory survey of businesses in Cambodia to determine whether firms are conscious of shared value principles and, more importantly, whether they are, or are intending to address social needs as part of their business. It was expected that there would be a noticeable intention of firms to address social needs, especially as the timing of the survey was during the period of the COVID-19 pandemic. The development of the survey included no preconception as to the extent of whether business owners and managers would hold social needs at the core of their business strategies. The survey is exploratory but based on the likely factors that may be included in a framework being developed to measure 'shared value'.

The reason for an exploratory study is that the literature on shared value has followed a number of paths since its inception (Porter & Kramer, 2011), and has yet to find a clearly established and agreed definition and means of measurement. A comprehensive literature review of over 300 articles, carried out in 2016 on shared value published since 2011, concluded that there was no clear consensus on the definition of shared value. Only around half of the articles used the Porter and Kramer (2011) definition that shared value is addressing a social need whilst simultaneously making a profit, whilst the other half put forward different, albeit similar definitions. However, most definitions of shared value appeared to be similar enough to conclude that making profits whilst addressing social needs is the focus of shared value (Dembek *et al.*, 2016).

The concept of creating shared value itself has been praised as a genuinely new and standalone concept to help guide businesses to address social needs (Bosch-Badia

et al., 2013; Epstein-Reeves, 2012; Moon *et al.*, 2011). Others have criticized shared value as not really being distinguished from corporate social responsibility or adding little value to the existing business concepts such as social entrepreneurship, which associate business with social needs (Crane *et al.*, 2014; Aakhus & Bzdak, 2012).

Expected outcomes of creating shared value are as varied as the definitions. In addition to the general 'benefit' measure put forward by Porter and Kramer (2011), outcomes of shared value extended, inter alia, to the economic and financial measures (Brown & Knudsen, 2012), financial measures (Pirson, 2012), and to environmental value (Shrivastava & Kennelly, 2013). Aside from these there has also been some consideration to include concepts in creating shared value such as wellbeing included in measuring shared value (Dembek *et al.*, 2016). The inclusion into the shared value of wellbeing, a subject incorporated into Social Progress (Porter *et al.*, 2014-21) and available at the website of the Social Progress Imperative (www.socialprogress.org) is important because wellbeing would have to be measured, and any framework to measure shared value would have to include appropriate measures for wellbeing and related subjects included in social progress such as fulfilment of basic needs and creation of opportunities. It may be necessary to include a range of different measures for shared value comprising some qualitative and some quantitative in order to achieve an appropriate measure for each component. By undertaking an exploratory study this paper can contribute to the understanding of what needs to be measured and how, based on the original work of Porter and Kramer (2011).

THE STRUCTURED INTERVIEW SURVEY

The purpose of the survey was to learn more about firms of any size (small, medium or large, start-up or well established), which are specifically aiming to 'create shared value' (i.e., addressing a social need whilst simultaneously making a profit). The survey contained a cross section (and random) sample of firms in Cambodia which have some stated intention to address a social need as part of their business. The companies were located and interviewed by students of CamEd Business School as part of their assignment for the course 'business ethics—creating shared value'. The interview results were recorded on a standard format questionnaire recording both closed and open-ended questions. The open-ended questions were designed to allow respondents to elucidate on closed ended questions (e.g., the closed question related to whether a firm addressed a social need, followed by an open-ended question to clarify or give an example of what that social need actually was). All the interviews were carried out during October 2020. The following sections provide the overall results of the survey.

RESULTS AND DISCUSSION

Respondents Background

A total of 36 responses were received. Of these, 41 percent of respondents were owners of their firm and 28 percent managers. The business sectors covered were wide ranging, including 22.2 percent consumer discretionary goods, 13.9 percent each consumer staples and financial services, 11.1 percent health care. Other sectors interviewed included information technology, consumer services, utilities, real estate, energy and materials. A full breakdown of the firms interviewed is shown in Table 8.1.

Table 8.1: Firms Interviewed in the Survey

Sector	*No.*	*Examples Include (brief description)*
Construction/Repair	4	Supplies for repairing roads (asphalt, road safety signs) Producer of hollow and solid bricks Construction materials Auto repairs
Manufacturers (including recycling)	4	Producer of cotton and paper bags Sells clean water to residents of region in Cambodia Paper and packaging company with waste-paper Environmentally friendly char-briquettes: recycled biomass waste
Drinks and Food Manufacture	3	Instant noodles Sugar juice (food and drinks manufacturer) Beer producer and retailer
Banking and Finance	5	E-banking, Banking and finance, life assurance
Trade/Wholesale	3	Import and export company E-commerce platform connecting buyers and sellers Sells refrigerator, air conditioners
Other Retail	2	Diamond jewellery retailer Natural and ethical beauty brands
Coffee Shops and Food Retail	7	Coffee franchise Tea and coffee shops Mobile food delivery Restaurant Serves drinks and food, snacks, and meeting rooms
Other Retail	2	Diamond jewellery retailer Natural and ethical beauty brands
Travel (Regions)	2	Homestay living with local people in rice fields village Travel information and reservations
Healthcare	2	Clinic and pharmacy for people in the neighbourhoods Clinic providing healthcare
Education	2	Education institute University

Source: Primary data.

Most of the companies, (80 percent) were in Phnom Penh and 18 percent in the regions of Cambodia, with one firm located in another country. A total of 53 percent of firms served customers in Phnom Penh whilst 40 percent served customers in the regions of Cambodia. Most of the firms were small. A total of 12.8 percent had only one employee, 10.3 percent had 2–5 employees, and 30.8 percent had 6–20 employees. A total of 23.1 percent of the firms interviewed had 21–100 employees and 23.1 percent 101–1000 employees; 12.8 percent had over 1000 employees reflecting established multinational firms with activities based in Cambodia. Most firms were young, with 30.8 percent having been established before 2010, 32 percent 3–6 years old, and 35 percent of firms being established two or less years old having been established in 2018 or after (the survey was in 2020).

Shared Value Business Intentions and Targets

The target customers income group was 38.5 percent lower middle income and 41 percent upper middle income. In shared value we would expect to see a number of the customers in the lower middle-income range, often reflecting a niche considered underserved to lower income groups. A total of 52 percent targeted customers in Phnom Penh and 33.3 percent targeted customers in the regions of Cambodia. Only two firms were targeting companies abroad. A total of 53 percent were not targeting customers by age, gender or any particular category. In response to the market they serve, a total of 35.9 percent considered that they were serving a new or unserved segment. This is also important in terms of shared value where the identification of shared value is often the underserved niche for lower income consumers that has not been served before.

A total of 89.7 percent of those interviewed stated that they were addressing a specific social need. This is a very high percentage and highly indicative of a strong social conscience in business. Open ended comments which clarify the type of social needs that the respondents considered that they were addressing included:

- "……health and wellbeing …….. life plan……. trying their best to make it more and more accessible to people with lower level of wealth."
- "…… nutrition. It aims to provide healthy and fresh…… drink for people who concerns about their health."
- "……education, improvement in quality of life through development and encouragement of house ownership and entrepreneurship."
- "…….. The (cosmetics) shop satisfies safety needs for consumers, while its production has positive impacts on environment, and job availability for poor people."

The survey intends to know the perceptions of firms on whether the product or service benefit the community they serve, and in response to this, a total of 94.9

percent said that they considered that their product or service would benefit the community. Some open-ended comments from respondents referred to the specific nature of their contribution to the local economy:

- "The company creates 182 job opportunities to the community."
- "People will get more deeply understanding about illness and know how to protect themselves and could also decrease spending on unnecessarily medicines that could affect to them."
- "The company recycles used road facilities so they reduce the waste of product consumption."
- "Since the shop is supporting the farmer and help with their training in growing vegetable, the shop will also support the community by buying organic vegetable to use in their shop as ingredient for the food."

There was obvious scope considered and ambition to expand to new markets. A total of 12.8 percent saw the market as local in future, but 33.3 percent saw the market as national and 53.8 percent as international. Consistent with shared value expectations, 64.1 percent saw the market as being averagely profitable, whilst 23.1 percent saw the market as being very profitable and 12.8 percent saw the market as being low profitability. A total of 56.4 percent had targets other than profit by which to assess their business. Some open-ended comments relating to their plans for expansion included:

- "Increase customers reach, increase numbers of loans taken for Small and Medium Enterprises (SMEs), improved technology and public awareness."
- "……increasing market demand and increasing in understanding of health benefits from sugarcane drink."
- "The on-going transactions and number of customers using the app…."
- "Reduce unemployment rate, improve staff soft skills,"
- "……. encourage staff to reach their own goals,"
- "…..provide good quality organic product……."
- "To use domestic waste to produce cotton paper. (We want) to have imported waste in the country….."

The Impact of the Shared Value Approach

Building resources to accomplish strategic objectives is important in any strategy. A total of 58.3 percent said that they were building resources for their sector. Respondents commented:

- "We are building physical resources, school, teaching facilities and teaching materials."
- "Sustainable resource of coffee and food,"

- "The types of resources are resulting by distribution system and advertising on Website, Facebook, Instagram, etc."
- "Highly responsible and timely delivery for customers and business partners."

A total of 79.5 percent said that they were building new competences for their sector. These included the following examples based on the comments given by respondents:

- "Soft skills/Communication skills/a service mindset"
- "Digital skills"
- "The type of new competences and skills that is not familiar for workers in Cambodia. Because not many factories that used waste to produce the cotton paper in Cambodia."
- "Sharing knowledge and consult to local people about the health care"
- "Serving in the shop will help them improve their communication and barista skills."
- "Accounting and finance skills"
- "Service mindset, Technical skills"
- "Retail banking skills"

A total of 89.5 percent said that this created for them a platform for future growth. In response to their contribution to a growing local economy in the region they serve, a total of 82.1 percent considered that their business was contributing to the local economy in the region where they operate. Respondents commented:

- "It is a long-term business where the owner wants the village people to grow together with the business."
- "The company provides employment to local people."
- "Provide job opportunities"
- "Result in pension, health care expenditures, education expenditures."
- "Culture awareness => Economy by foreign visitors, increase people's working lives"
- "The local economy benefits from the factory is collecting tax and contributing the total export in the country."

The question of impact on public sector services was also broached by the survey, as it is natural to assume that if the private sector firm is benefitting the local economy, this might take the pressure of the public sector in some way by providing a product or service that the public sector would otherwise provide. For example, one of the firms interviewed supplied fresh water to remote villages, which is a service that would otherwise be primarily the realm of the public sector to provide. A total of 35.9 percent considered that they were freeing up public services in some way and 36.8 percent felt that they were contributing to reductions in public expenditure. This impact on public policy is another dimension to the concept of shared value.

Similarly, contributions to public policy objectives are a direct reference to social need. A total of 35.9 percent considered that they were contributing to the public policy objective of employment, 17.9 percent to health of the nation, 17.9 percent to economic development, with a small number considering that they were contributing to education, and art and culture. Although this was a small survey, it is clear that there is ground to be explored in larger surveys as to the public sector policy impact of shared value strategies, even if the contribution of firms is small, it may provide models for future development of public service provision through shared value concepts.

Finally, the survey asked respondents if they considered that they were contributing to any of the components of social progress. The components of social progress are taken directly from the Social Progress Imperative (www.socialprogress.org). The components of the Social Progress Index comprise Basic Needs, Wellbeing and Opportunity. The survey asked about contribution to basic needs. A total of 15.4 percent considered that they were contributing to basic nutrition, 15.4 percent to basic medical care, 15.4 percent to water and sanitation, and 17.9 percent to personal safety. Again, this is an area for further research based on the view that shared value should include reference to aspects of wellbeing (Dembek *et al.*, 2016).

CONCLUSION

The results of the survey were supportive of the shared value concepts and demonstrated a significant awareness and intention of firm' owners to contribute to social needs. This was only a small survey but there is evidence which needs to be explored further that firms in Cambodia are contributing to social needs and to the principles of shared value. Many have stated that they are only expecting average profits, so financial intentions are also consistent with an intention to serve social needs. However, this was just a first time that this survey was carried out and much more rigorous work needs to be done.

The next steps could include a wider range of respondents and could build local case studies using a template based on this survey. Future surveys could include reference to economic measures of shared value as well as public policy impact, and wellbeing and opportunity. Recent mainstream concepts such as happiness and stress could also be included. This survey represents a minor contribution as a first survey but it is also possible that it is significant in pointing to similar or complementary surveys in the future. Contributions to shared value in terms of exploratory surveys such as this can point the way to fuller definition and interpretation of the meaning of shared value and also to the ways in which shared value can best be measured.

Undertaking the survey in 2020 in the middle of the COVID-19 pandemic was timely, although the survey did not refer to COVID-19. It is likely that the results of

this and other such surveys will be given more attention because of their contribution of business to social needs which have resulted from the COVID-19 pandemic. For example, food delivery services have become a social need due to the need for people to self-isolate. Logistics is seen as a necessary business to serve distribution of products to communities rather than just a growth sector. Internet payment services are seen as important to keep the economy working as more people tend to work at home. These businesses are now perceived as providing social needs, the very criteria required for creating shared value.

This timely opportunity to undertake a survey exploring the intentions and strategies of firms to address social needs can further progress in understanding the role of business in society and can also be used to develop the concept of creating shared value. The results and recommendations from this survey will be further processed and the survey repeated and expanded using the MOC Network to gain examples from different countries and regions. COVID-19 has focused attention on business and social need and the concepts of creating shared value are very consistent with business and social need, recognizing that businesses need to make profits, but social needs are fundamental and in the age of the COVID-19 pandemic it is appropriate to consider both.

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CHAPTER 9

A New Flow of Money Toward Social Issues: From an Analysis of Japanese Social Crowdfunding Platform

Koichi Nakagawa and Genjiro Kosaka

INTRODUCTION

As a supplementary mechanism that goes beyond the limits of conventional financial systems, crowdfunding platforms, such as Kickstarter and Indiegogo, have become important funding sources. Crowdfunding enables the generation of funds for business ventures that find traditional profit-based means difficult (Bruton *et al.*, 2015; Davis *et al.*, 2017; Moss *et al.*, 2015). Typical examples are social businesses that address public issues. In crowdfunding, even traditionally hard-to-fund projects such as environmental protection, heritage preservation, welfare for the disabled, and disaster recovery, can be funded by people who agree with their activities. On crowdfunding platforms, money is moved according to a logic that differs from conventional financial systems. Previous studies have revealed the differences between conventional investment and crowdfunding (Allison *et al.*, 2015; Belleflamme *et al.*, 2014; Cholakova & Clarysse, 2015; Mollick, 2014).

A notable feature of crowdfunding platforms is that projects with prosocial orientations are likely to be supported (Allison *et al.*, 2013; Gorbatai & Nelson, 2015; Pietraszkiewicz *et al.*, 2017). The prosocial orientation of a business refers to its attempt to solve issues related to social welfare through commercial activities (Yunus, 2009). The prosocial orientation of projects in crowdfunding is preferred because the investment motive in crowdfunding is based on altruism, whereas the conventional investment motive is based on self-interest (Allison *et al.*, 2015; Belleflamme *et al.*, 2014; Cholakova & Clarysse, 2015). In line with this thought, previous studies have pointed out that linguistic expressions of prosocial orientation in campaigns have a significant impact on the success of funding. For example, words indicating virtuous orientation (Moss *et al.*, 2015), altruism (Pietraszkiewicz *et al.*, 2017), and political rhetoric such as accomplishment rhetoric and blame rhetoric (Allison *et al.*, 2013), have been reported to foster the success of fundraising.

However, two gaps in the existing research need to be filled. First, although the effectiveness of the linguistic styles that express prosocial orientation has been clarified, only a few studies have analyzed the influence of the social issues dealt with in a campaign on its successful funding. People evaluate a prosocial orientation not only using prosocial language but also by the types of social issues that are addressed (Amel-Zadeh & Serafeim, 2018; Eccles & Viviers, 2011; Hillman & Keim, 2001). Moreover, a prosocial orientation can include different types of social issues such as poverty reduction, medical care, cultural property protection, and support for artists. As previous studies have suggested, crowdfunding is a setting in which prosocial orientations matter; however, not all prosocial orientations are equal. Not only the degree of prosocial orientation expressed in rhetoric and narratives in campaigns but also the types of social issues addressed in campaigns are determinants of the success of fundraising in prosocial crowdfunding. Second, although past research has suggested that funds are invested in a subject that is perceived to be highly prosocial, what makes people perceive that an issue has a prosocial orientation that is high enough to induce investment behavior has not yet been clarified. That is, we need to explore the logic that explains the social issues in which people invest.

LITERATURE REVIEW

Crowdfunding as a Supplemental Financial Market

Collecting funds for new business ventures has been a long-standing problem for entrepreneurs (Kotha & George, 2012). Crowdfunding, which involves raising small amounts of money from a large group of people, has attracted a great deal of attention as an alternative and additional fundraising method for startups. In 2018, about US$90 billion was invested in crowdfunding platforms around the world (Technavio, 2018). While crowdfunding makes it possible to invest in projects that could not be funded through conventional investment schemes, different strategies are required to achieve success; moreover, the nature of funding is different in crowdfunding compared with conventional methods (Short *et al.*, 2017).

Previous studies have found some key success factors in crowdfunding such as the founder's characteristics (Courtney *et al.*, 2017; Gorbatai & Nelson, 2015; Greenberg & Mollick, 2017; Heller & Badding, 2012; Johnson *et al.*, 2018), the campaign's innovativeness (Chan & Parhankangas, 2017; Davis, *et al.*, 2017; Moss *et al.*, 2015; Stanko & Henard, 2017), the founder's social capital (Belleflamme *et al.*, 2014; Buttice *et al.*, 2017; Mollick, 2014; Roma *et al.*, 2017), and the rhetorical or linguistic style of the campaign (Allison *et al.*, 2013; Courtney *et al.*, 2017; Gorbatai & Nelson, 2015; Parhankangas & Renko, 2017).

Prosocial Orientations Addressed in Crowdfunding Campaigns

Among the success factors in crowdfunding, scholars have recognized the significant power of prosocial orientation. Successful campaigns do not emphasize the profitability of the project (Jancenelle & Javalgi, 2018); instead, they focus on its social values and moral concerns (Calic & Mosakowski, 2016; Gleasure & Feller, 2016; Jancenelle & Javalgi, 2018; Meyskens & Bird, 2015). Allison *et al.* (2015) showed that campaigns involving social aspects were likely to achieve their funding goals earlier, while campaigns involving commercial aspects were less successful. Calic and Mosakowski (2016) argued that campaigns oriented to sustainable and environmental causes were more likely to succeed, as they perceived to be legitimate and creative.

Previous studies have revealed why campaigns with prosocial orientations are more likely to succeed in fundraising. In crowdfunding investment, campaign backers help and support entrepreneurial challenges. However, campaign backers are driven not by extrinsic motivations but by intrinsic motivations and altruism (Allison *et al.*, 2015; Belleflamme *et al.*, 2014; Cholakova & Clarysse, 2015), which applies to incentive-based crowdfunding platforms. Although backers may be self-interested in helping to fund incentive-based crowdfunding, they also may be motivated by altruism or the desire to express the feeling that he or she likes someone or an organization (Bretschneider & Leimeister, 2017). Their investment decisions are also influenced by subjective norms as well as desirable social norms (Shneor & Munim, 2019). A backer's intrinsic motivation and altruism often outweigh economically rational reasons, and they are more likely to invest in campaigns under the uncertain condition of whether a campaign is likely to succeed than under a certain condition (Dai & Zhang, 2019). Therefore, backers prefer prosocial campaigns that are in the public interest over those that are in private interests.

In parallel with the search for the reasons for the positive effects of altruism and prosocial orientation on crowdfunding, previous studies have examined the effects of rhetorical tactics that appeal to the prosocial orientations of campaigns. Allison *et al.* (2015) showed that campaigns whose language was framed as an opportunity to help others were more likely to collect funds. Pietraszkiewicz *et al.* (2017) also showed that the use of words related to prosocial behavior in campaign texts led to successful fundraising. Jancenelle and Javalgi (2018) investigated founders' profile descriptions, and their results suggested that founders who cued moral foundations such as fairness and reciprocity, collected funds quickly. In summary, entrepreneurial narratives and rhetorical tactics that appealed to the prosocial orientation of their projects were positively associated with success in crowdfunding.

The question that arises here concerns whether both the rhetorical expression of prosocial orientation and the social issue the campaign addresses affect decisions to invest. The focus of previous studies has been primarily on the effects of prosocial

word usage in campaigns. Words indicating virtuous orientation (Moss *et al.*, 2015), altruism (Pietraszkiewicz *et al.*, 2017), and the use of political rhetoric such as accomplishment rhetoric and blame rhetoric (Allison *et al.*, 2013), have been reported to foster the success of crowdfunding campaigns. Although linguistic choices and tactics have the power to evoke the willingness to support a campaign, people also decide which project to invest is based on the genre of the social action of the project (Amel-Zadeh & Serafeim, 2018; Eccles & Viviers, 2011; Luke *et al.*, 2013). In fact, crowdfunding campaigns address a range of social issues such as poverty reduction, medical care, cultural property protection, and support for artists. It is possible that differences exist in the degrees to which those issues attract backers. However, the types of issues that are perceived as prosocial and worthy of investment have not yet been investigated. To address this question, in this chapter, we apply the theory of empathy to hypothesize the kinds of issues that are recognized as prosocial and those that are not.

THEORY AND HYPOTHESIS

Social Issues as Determinants of Campaign Success

First, we introduce the hypothesis that the type of social issue matters in determining investments in campaigns. Previous studies have found that the amount of investment in social enterprise is affected by the area of interest (e.g., Amel-Zadah & Serafeim, 2018; Luke *et al.*, 2013; Ryan & Lyne, 2008). Research on crowdfunding also showed that campaign categorization provided by the platform influenced funding success (Moss *et al.*, 2018; Sitruk *et al.*, 2020). Studies have also shown that fundraising success varies depending on the type of prosocial orientation such as environmental orientation and sustainable orientation (Calic & Mosakowski, 2016). Although our main concern is to identify the logic that determines which issue is more likely to attract funding, it is necessary to verify that fundraising on prosocial crowdfunding platforms depends on the social issues addressed by campaigns. Therefore, we formulate the following hypothesis:

> ***H_1**: On prosocial crowdfunding platforms, the success of campaigns in obtaining funding varies depending on the issue being addressed.*

Empathy as an Antecedent of Altruism

Because people invest in prosocial campaigns and the success of funding differs according to issue, we applied a theory that explains people's commitment to prosocial behaviors without the economically rational maximization of self-interest: the empathy-altruism hypothesis (Cialdini *et al.*, 1997). It is known that even if a transaction involves personal financial gains and losses, a person behaves altruistically

toward the counterpart in such transactions (Fehr & Gachter, 2000; Jones *et al.*, 2007). The reason is that people feel happy when they perceive others' joy, and they have a strong biological need to feel sad when they perceived others' distress (Dunn *et al.*, 2014; Harbaugh *et al.*, 2007). This human biological characteristic is called empathy, and the empathy-altruism hypothesis states that people act altruistically when they are driven by empathy (Brief & Motowidlo, 1986; Davis, 2018; De Waal, 2008; Eisenberg *et al.*, 2007).

Empathy refers to the ability to reproduce someone's experience in one's own brain and understand their thoughts and feelings even without firsthand experience (Decety & Jackson, 2004). Empathy is a product of social learning. Indeed, the crucial difference between humans and apes is in the level of social learning. There is no significant difference between the brains of human infants and apes in terms of space, quantity, and causality, but there is a difference in the function of social learning (Herrmann *et al.*, 2007). A human infant's social learning takes place in an environment with others, including family members, friends, and even strangers. Social learning can occur through the observation or mimicry of others' behaviors, through which the infant can obtain the skill of empathy (Bandura, 1963). Thus, based on an inherent characteristic of their brains, humans not only act rationally based on self-interest but also are altruistically driven by empathy for others.

When do we act selfishly and when do we act altruistically? Previous studies have shown that altruistic behaviors such as helping and sharing, are widely observed in our usual lives, even in infants (Decety & Jackson, 2004). Economists have found that even when people are motivated to act selfishly, they choose actions to share benefits with their counterparts (Fehr & Gachter, 2000). Studies have shown that in an ultimatum game in which only the winner could gain all benefits, the participants in the experiment exhibited gain-sharing behavior (Forsythe *et al.*, 1994).

In prosocial crowdfunding platforms, on campaigns deal with social issues and backers willing to invest in them, altruism is common and self-interest motives are not likely to work (Allison *et al.*, 2015; Bretschneider & Leimeister, 2017). Because investing in activities that address social issues is a prosocial behavior, investors' motivations are assumed to be derived from empathy for that activity (Pedwell, 2012). Existing studies have examined backers of crowdfunding who are likely to avoid investing in prosocial campaigns that signal commercial profit, risk taking, and market orientation (Allison *et al.*, 2015; Jancenelle *et al.*, 2018). The findings showed that when people perceived issues of prosocial campaigns that had economic potential, those issues were not likely to be subject to altruistic behavior, and they would not receive funding. We therefore present the following hypothesis:

H_2: *On prosocial crowdfunding platforms, when the issues addressed in the campaign are perceived to have higher economic potential, fundraising is more likely to fail.*

Different Effects of Emotional Empathy and Cognitive Empathy

Next, we examine the issues that trigger human empathy associated with the desire to help. For this purpose, we further examined the empathy-altruism hypothesis in line with developments in psychology and brain science.

The research on human empathy has identified two types of empathy: emotional empathy, which occurs instinctively and unconsciously, and cognitive empathy, which is based on a conscious judgment regarding whether empathizing with an individual is morally appropriate (Decety & Lamm, 2006; Reniers *et al.*, 2011; Smith, 2006).

Emotional empathy and cognitive empathy work differently; indeed, the two types of empathy are derived from different regions of the human brain (Cuff *et al.*, 2016). Emotional empathy is evoked when an individual recognizes the distress of others. Hoffman (2001) referred to this recognition as rudimentary empathic responding, as these unconscious emotions have been in place since early childhood when ethics and morals have not yet been learned or understood. Various experiments have shown that even infants exhibit prosocial behavior when they see others in distress (Hoffman, 2008; Pavey *et al.*, 2012; Tomasello, 2009). Emotional empathy occurs unconsciously as a reaction when a person is faced with another person's distress. Even if the cause of that distress is the person's behavior, we unconsciously empathize with them (Goubert *et al.*, 2005; Yamada & Decety, 2009).

In contrast, cognitive empathy, which has a more developed psychological structure, judges whether a person should receive empathy (Decety & Jackson, 2004). This process involves an individual's logical thinking process, which is obtained throughout life and study, to understand whether the person's trouble is due to compelling reasons or to conduct (Decety & Yodar, 2016). In this mechanism, even if a person is suffering, adults with a well-developed psychological structure can avoid feeling empathy when the cause of suffering is the person's conduct. Instead, cognitive empathy evokes the willingness to help others who suffer for compelling reasons (Bloom, 2017; Decety & Yodar, 2017). In conscious thought, we selectively empathize with those who are in a difficult situation for unavoidable reasons such as disaster victims, persons with disabilities or chronic illnesses, and people experiencing discrimination.

Drawing on these psychological mechanisms, we assume that cognitive empathy, but not emotional empathy, is associated with the willingness to invest in the campaign, based on two reasons. First, cognitive empathy is directly linked to actions that involve decision making, while emotional empathy is not. Cognitive empathy is conscious and involves selective perspectives on others, and it includes the judgment of whether to support others. In contrast, emotional empathy is unconscious and involves automatic affect sharing; it does not induce strong feelings that lead to decision making (Declerck & Bogaert, 2008). According to Declerck & Bogaert

(2008, p. 713), "whereas affect sharing is responsible for feeling the distress of another person, cognitive perspective-taking allows one to not become distressed and instead take the extra step to engage in helping the other person." Artinger *et al.* (2014) and Li *et al.* (2019) empirically measured participants' levels of emotional empathy, cognitive empathy, and prosocial behaviors in an economic game tested in laboratories. They found that participants' affective empathic concern did not predict their altruistic sharing behaviors in games, but cognitive perspective-taking played a significant role in altruistic sharing behavior.

Second, although emotional empathy is a feeling for people, even those do not really need help, cognitive empathy arises from a rational and logical understanding of whether the target is to be helped or not (Bloom, 2017; Decety & Yodar, 2017). Emotional empathy occurs automatically when a subject shows distress, regardless of whether it is helped (Goubert *et al.*, 2005; Yamada & Decety, 2009). For example, even if a person has been punished for unethical behavior, people feel emotional empathy when they see him or her grieving over that punishment. In contrast, we are not likely to feel cognitive empathy in facing such situations. Instead, in cognitive empathy, we can understand people's difficulty when we perceive that they face structural inequality or injustice, even if they do not express their grief. For example, when we see someone who tries to launch a local music festival to aid disaster recovery, cognitive empathy is induced based on a logical consideration, while emotional empathy does not occur because we do not perceive distressed persons.

In applying this discussion to the setting of prosocial crowdfunding, we assumed that people's feeling of emotional empathy toward campaigns issues would not invoke prosocial investment. Instead, we assumed that cognitive empathy toward campaign issues would lead to prosocial investment by backers. Thus, we present the following two hypotheses:

H_3: *On prosocial crowdfunding platforms, the degree to which an issue evokes emotional empathy is not associated with the success of the fundraising of the campaign.*

H_4. *On prosocial crowdfunding platforms, the degree to which an issue evokes cognitive empathy is positively associated with the success of the fundraising of the campaign.*

METHOD AND ANALYSIS

Procedure of Empirical Study

The objectives of this study are the following:

- To identify the differences in the success of prosocial campaigns depending on the issues they address.

- To show that issues that lead to successful fundraising are altruistic and evoke cognitive empathy.

Based on these two objectives, we conducted a two-step empirical study. In Step 1, using LDA topic modeling, we identified the topic composition probabilities of the selected campaigns and examined their influence on campaign success. Next, in Step 2, based on the data collected in a questionnaire survey, we measured people's empathy for those issues, and we compared the results with those obtained in Step 1 to determine the relationship between the empathy the issue evoked and its success in crowdfunding.

Our study was focused on prosocial campaigns conducted on Readyfor, one of the largest crowdfunding platforms in Japan. This platform was founded in 2011, and focuses exclusively on social issues. Other platforms, such as Kickstarter in the US and Campfires in Japan, focus mainly on commercial campaigns. Therefore, we assumed that backers on the Readyfor platform had mainly prosocial motivations. Another feature of Readyfor is that the campaigns are not donation-based. All campaigns must have returns of commercial goods and/or services, and thus, backers assess the feasibility of the project, whether the presenter is capable, and the attractiveness of the returns. Hence, on the Readyfor platform, backers evaluate the merit of campaigns according to their potential to provide returns. Because of these characteristics, we considered Readyfor an appropriate platform for examining the behavior of those who invest in social businesses.

Identifying Issues of Campaigns and their Effects on Fundraising Success

Step 1-1: Natural Language Processing

The subsequent sampling process was conducted in a Python 3.6.5 environment. Regarding the data collection, we obtained the HTML files of campaigns by using our custom program to examine the Readyfor site. This process began on August 1, 2018 and continued daily until December 1, 2019. In this study, we analyzed the data in every All-or-Nothing campaign that started after August 1, 2018 and ended before August 31, 2019. We identified 2,296 projects that match these criteria, which then became the study sample. An overview of the sample is shown in Table 9.1.

In the machine-learning stage of topic modeling, we set the chunk size to 300 and executed the learning process 100 times, creating the 24 topics listed in Table 9.2. Based on lists of words consisting of each topic, we gave each topic a title (Table 9.2). The probability of these 24 topics was obtained for each campaign, which was used as the independent variable.

Table 9.1: Overview of the Sample

	All Samples n = 2296		*Success Subsample n = 1282 (55.8%)*		*Failure Subsample n = 1014 (44.2%)*	
	Mean	*SD*	*Mean*	*SD*	*Mean*	*SD*
Project duration (days)	43.9	18.4	44.38	17.4	43.4	19.5
Target amount (K JPY)	1184	1907	1150	1930	1230	1880
Amount pledged (K JPY)	985	1972	1523	2457	304	586
Number of pledged backers	67	107	104	128	21	36
Campaign founder's gender		(ratio)		(ratio)		(ratio)
Male	1237	53.6%	641	50.0%	596	58.8%
Female	657	28.5%	404	31.5%	253	25.0%
Unidentified	402	17.8%	237	18.5%	165	16.2%
Campaign proposed by						
Corporation	315	26.7%	172	13.4%	143	14.1%
NPO	431	20.4%	287	22.4%	144	14.2%
School	88	10.0%	74	5.7%	14	1.4%

Note: SD = Standard deviation; NPO = Non-profit organization.
Source: Authors.

Table 9.2: Topic Models for Each Campaign Category

Topic Titles	*Pictures*	*Beauty*	*New Product*	*Dance and Act*	*Website*
Top 10 words related to the topic	Video Photograph Taking pictures Journey Starry sky Camera Tours Edit Equipment Interview	Beauty Original Set Limited Ingredient Skin Tea Make up Price Plan	Product Design Craft Craftsman Material Brand Type Size Factory Color	Dance Training Stage Studio Body Dancer Student Yoga Lesson Teaching	Website Publication Site Member Advertisement Report Fee Corporation Release Consultation
Topic Titles	*Music*	*Competition*	*Food*	*Drink*	*Regional*
Top 10 words related to the topic	Music Composition Performance Festival	Baseball Race Horse Stadium	Eating & drinking Coffee Open Store	Sake Wine Liquor Brewing	Town Sightseeing Architecture Building

	Venue Art Stage Appearance Song Concert	Championship Ranch Bike All Japan Entry Road	Customer Café Cuisine Bread Meal Foodstuff	Fermentation Mountain God Grape Patent France	Construction Ceremony Refurbishment Kyoto Place Hot spring
Topic Titles	*Agriculture*	*Childcare*	*Sports*	*International Affairs*	*Animal*
Top 10 words related to the topic	Production Food Farmer Cultivation Vegetable Agriculture Rice Harvest Farm Taste	Picture book Book Childcare Nursing Mother Parent Adult Mama Household Family	Championship Team Player Sports Soccer Entry Practice Game Rank Match	International Overseas Japanese Foreign Local English Vietnam Domestic America Asia	Cat Rescue Dog Animal Treatment Foster parents Happiness Life Pet Owner
Topic Titles	*Education*	*Nature*	*Art*	*Medical*	*Welfare*
Top 10 words related to the topic	Education Learning Teacher Exercise Student Class Child High school Program Gaming	Sea Island Wood Okinawa Village Shrine Mountain River Rain Hiroshima	Art Work Picture Workshop Artist Exhibition Museum Composition Tree Energy	Medical Cure Hospital Health Care Patient Disease Surgery Cancer Nursing	Disabled Service Woman Elderly people Welfare Function System Salon Safety Consultation
Topic Titles	*Poverty*	*Disaster*	*History*	*(Payment)*	
Top 10 words related to the topic	Cambodia Poverty Village Nepal Movie Education Thailand Philippines Donation Orphan	Disaster Damage Revival Fukushima Earthquake Disaster prevention Volunteer Tohoku Refugee	History Train Showa era Museum Meiji era At that time Maintenance Peace Exhibition Posterity	Donation Benefaction Charity Research Resident Science Income Measurement Subsidy Tax	

Source: Authors.

Step 1-2: Estimation by Regression Analysis

To estimate the impact of these topics on the success and failure of crowdfunding campaigns, we conducted a logistic regression analysis.

Dependent Variable: The first dependent variable was the simple classification of success and failure (*Campaign success*). Here, success meant that the amount of money pledged by backers surpassed the target amount set by the campaign founder. We input "1" when the campaign succeeded (n = 1282) and "0" when it failed (n = 1014), and then we examined the effect of topic probability through a logistic regression.

A potential dependent variable was the total amount of funds raised. However, considering the institutional design of Readyfor, we assumed that the success or failure of the campaign could not be properly measured by the amount of money. On the Readyfor platform, to encourage backers to invest in campaigns, the target amount of money is set somewhat higher and the "all-or-nothing" format is adopted. About 45 percent of campaigns have resulted in failure, which means that campaign founders did not take anything. Therefore, backers are incentivized to support the campaigns they believe should be realized. In this platform design, Readyfor campaigns tends to be polarized; some collect money around the target amount, and others collect almost no money. When the target amount is exceeded, the growth of the investment tends to drop sharply. According to our data, limited numbers of projects reached 200 percent of the target amount. For those reasons, we did not use the actual amount of money invested. The dependent variable in our study was the success or failure of achieving the target amount.

Independent Variable: As described above, we set the topic probability of each campaign as the independent variable. In 24 topics, we treated the topic composition probability of "Payment" as the control variable because the topic "Payment," was not a campaign issue but the explanation of the payment method.

Control Variable: We controlled for variables that previous studies found to affect fundraising success. First, because the visual image of a campaign has a positive impact on its success (Courtney *et al.*, 2017; Mollick, 2014), the number of images was introduced as a control variable (*# of images*). Because Readyfor does not use videos to promote campaigns, we did not introduce the number of videos as a variable. Second, previous studies have shown that female founders were more likely to succeed in crowdfunding (Gorbatai & Nelson, 2015; Greenberg & Mollick, 2017; Johnson *et al.*, 2018), so we controlled for the gender of the campaign founder. When the presenter's gender was female, the dummy variable *female* took the value of 1, and when the gender was male, the variable *male* took the value of 1. When a campaign was presented by an organization, and gender could not be identified, we regarded the gender as unidentified and assigned the value of 0 to both *female* and *male* variables. Third, regarding the campaign founder's affiliation, previous studies found that success was easier to achieve when the affiliated organization had a rich social network (Belleflamme *et al.*, 2014; Mollick, 2014). We controlled for campaigns run by educational institutions (*educational institution*) and non-profit organizations (*NPOs*),

as both organizational types had credibility in carrying out social activities. Fourth, when the target funding amount was large, it was natural for success to be difficult; therefore, we decided to introduce the funding amount as a control variable (*target amount*). Fifth, regarding campaign duration, we assumed that the longer the funding period, the more likely the campaign would be funded (Kuppuswamy & Bayus, 2017). However, if the period was too long, backers and potential investors might lose their interest. Thus, the length of the campaign (*duration*) and its square (*duration*^{2}) were introduced as control variables. Sixth, we considered that it would be difficult to invest in a campaign if the course price was too large; therefore, we introduced a median value (*investment course price*) of each campaign.

Finally, when the topics were dispersed among various categories, the focus of the project was difficult to understand (Sitruk *et al.*, 2020). Thus, the square sum of topic probabilities was introduced by calculating the degree of concentration on a topic (*topic concentration*).

The descriptive statistics of these dependent and control variables are shown in Table 9.3, and the correlation matrix of all variables is displayed in Table 9.4.

Table 9.3: Descriptive Statistics for Dependent and Control Variables

	Mean	*Median*	*SD*	*Max*	*Min*
Campaign success	1: success = 1282; 0: failure = 1014				
Money invested	985410	530000	1972196	56500000	0
# of backers	68	40	107	1876	0
# of images	14	12	7	70	4
Gender	1: female = 657; 0: male = 1237; unidentified = 402				
NPO	1: yes = 431; 0: no = 1865				
Educational institute	1: yes = 88; 0: no = 2208				
Target amount	1111065	750000	1889686	50000000	10000
Duration	44	41	18	92	1
Topic concentration	0.241	0.219	0.098	0.862	0.085
Investment price	22948	20000	28966	700000	1000

Note: SD = Standard deviation; n = 2.296
Source: Authors.

Table 9.4: Correlation Matrix of All Variables

Sl. No.		Vul-pain							Vul-gain						Invul-pain						Invul-gain						Control variable							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
1.	Campaign success	1.00																																
2.	Nature	-0.02	1.00																															
3.	Poverty	0.02	0.09	1.00																														
4.	Disaster	0.00	-0.02	-0.07	1.00																													
5.	Payment	0.09	-0.02	0.06	-0.04	1.00																												
6.	Medical	-0.04	-0.11	-0.16	-0.01	-0.13	1.00																											
7.	Animal	0.08	-0.11	-0.05	-0.01	-0.05	0.05	1.00																										
8.	Tradition	0.04	-0.02	-0.04	-0.01	0.06	-0.03	0.10	1.00																									
9.	Music	0.04	-0.10	-0.12	-0.05	-0.06	-0.05	-0.03	-0.04	1.00																								
10.	Regional	-0.04	-0.06	-0.14	-0.03	-0.01	-0.02	0.01	0.02	-0.05	1.00																							
11.	Sports	0.01	0.07	0.08	-0.05	0.00	-0.11	-0.05	-0.05	-0.07	-0.08	1.00																						
12.	Childcare	-0.10	-0.12	-0.07	-0.05	0.01	-0.08	-0.16	-0.11	-0.06	-0.02	-0.10	1.00																					
13.	Art	0.00	0.04	-0.01	-0.05	-0.02	-0.06	-0.02	0.00	-0.03	-0.02	-0.02	-0.06	1.00																				
14.	Dance and act	-0.10	-0.11	-0.18	0.04	-0.10	0.05	-0.09	-0.03	-0.05	0.16	-0.06	-0.01	-0.06	1.00																			
15.	Agriculture	-0.04	-0.10	-0.13	-0.03	-0.05	0.04	-0.10	-0.02	-0.04	0.05	-0.06	-0.02	-0.03	0.14	1.00																		
16.	International affairs	0.04	-0.07	0.00	-0.01	0.00	-0.03	0.10	0.03	-0.05	-0.05	-0.02	-0.07	-0.03	-0.04	-0.05	1.00																	
17.	Education	0.05	-0.02	-0.08	0.01	-0.07	-0.12	-0.05	0.02	-0.09	-0.09	-0.07	-0.17	-0.05	-0.14	-0.10	-0.01	1.00																
18.	Competition	-0.11	-0.02	-0.04	-0.02	-0.02	-0.10	-0.18	-0.08	-0.05	-0.09	-0.08	0.18	-0.05	-0.09	-0.04	-0.09	-0.09	1.00															
19.	Food	0.05	-0.11	-0.05	0.06	-0.05	0.19	0.18	0.09	-0.05	-0.02	-0.07	-0.15	-0.05	-0.04	-0.07	0.02	-0.04	-0.11	1.00														
20.	Website	0.02	0.08	-0.09	-0.06	-0.10	-0.11	-0.09	-0.09	-0.08	-0.06	-0.06	-0.09	0.06	-0.15	-0.09	-0.04	0.23	-0.09	-0.11	1.00													
21.	Drink	0.05	-0.11	-0.12	-0.07	0.00	-0.12	-0.12	-0.09	0.26	-0.06	-0.04	0.15	-0.06	-0.08	0.00	-0.06	-0.16	0.00	-0.13	-0.08	1.00												
22.	Pictures	-0.04	0.00	-0.06	0.00	0.00	-0.02	0.03	-0.03	-0.03	0.02	-0.03	-0.04	-0.02	0.04	-0.04	-0.03	-0.04	-0.02	-0.04	0.00	-0.04	1.00											
23.	Beauty	0.02	-0.14	-0.12	-0.04	-0.04	0.09	0.02	0.00	-0.06	0.14	-0.06	-0.16	0.00	0.01	0.12	-0.03	-0.16	-0.17	-0.01	-0.17	-0.11	-0.07	1.00										
24.	New product	-0.01	-0.07	0.02	0.06	-0.06	-0.06	-0.10	-0.07	-0.07	-0.10	-0.05	0.02	-0.04	-0.11	-0.08	-0.07	-0.08	0.06	-0.10	-0.09	0.00	0.00	-0.15	1.00									
25.	Welfaree	0.01	0.23	-0.01	-0.07	-0.04	-0.10	-0.07	-0.06	-0.08	-0.05	-0.03	-0.07	0.20	-0.13	-0.08	-0.04	-0.07	-0.07	-0.10	0.24	-0.10	-0.06	-0.12	-0.13	1.00								
26.	# of images	0.19	-0.06	-0.02	0.04	0.03	-0.03	0.04	0.00	0.03	0.06	-0.03	-0.08	-0.06	0.16	0.08	-0.03	-0.04	-0.08	0.10	-0.06	-0.01	0.02	0.07	-0.03	-0.09	1.00							
27.	Female	0.07	-0.03	-0.09	0.04	-0.10	0.01	-0.02	-0.06	0.14	-0.09	0.03	0.01	-0.05	-0.01	-0.01	-0.05	0.05	-0.06	-0.02	0.02	0.10	-0.02	-0.05	0.21	-0.10	0.01	1.00						
28.	NPO	0.10	-0.02	0.13	-0.05	0.12	-0.12	0.06	0.07	0.07	-0.10	0.07	0.03	-0.05	-0.16	-0.09	0.05	0.00	0.05	-0.02	-0.08	0.07	-0.04	-0.07	0.02	0.00	0.03	-0.01	1.00					
29.	Educational institute	0.11	0.03	0.08	-0.02	0.41	-0.08	-0.01	0.06	-0.04	0.01	0.02	-0.04	0.03	-0.08	-0.01	0.02	-0.06	-0.08	-0.02	0.00	-0.03	-0.02	-0.02	-0.07	0.13	0.05	-0.07	-0.09	1.00				
30.	Target amount	-0.02	0.00	-0.03	0.07	0.04	0.00	0.08	0.12	0.01	-0.01	-0.03	0.00	0.02	-0.02	-0.04	0.01	-0.05	-0.02	0.05	-0.06	0.05	-0.01	0.02	-0.04	-0.04	0.16	-0.03	0.07	0.02	1.00			
31.	Duration	0.02	-0.03	-0.03	0.04	0.08	-0.01	0.06	0.06	0.01	-0.02	0.02	0.00	0.00	-0.05	-0.03	0.02	-0.07	-0.01	0.05	-0.05	0.04	0.03	0.00	0.03	-0.04	0.06	0.01	0.05	0.05	0.28	1.00		
32.	Duration2	0.00	-0.02	-0.03	0.05	0.06	-0.01	0.05	0.06	0.01	-0.02	0.03	-0.01	0.00	-0.05	-0.03	0.02	-0.06	0.01	0.04	-0.04	0.04	0.04	-0.01	0.02	-0.03	0.03	0.01	0.04	0.05	0.28	0.97	1.00	
33.	Topic concentration	0.00	-0.10	-0.01	-0.12	-0.02	-0.11	-0.13	-0.12	0.14	-0.04	0.01	0.03	-0.05	0.06	0.04	-0.10	0.14	0.00	-0.18	0.00	0.05	-0.12	0.14	0.02	0.01	-0.06	-0.02	0.01	0.02	-0.06	-0.02	-0.02	1.00
34.	Investment price	-0.02	0.07	-0.02	-0.02	0.07	-0.02	0.00	0.00	0.02	0.00	0.00	0.05	0.00	-0.04	-0.03	-0.01	-0.03	0.03	-0.01	-0.03	0.11	0.02	-0.07	-0.01	-0.03	0.05	0.00	0.02	0.01	0.27	0.17	0.16	-0.01

Note: $n = 2.296$

Source: Authors.

Measuring Empathy with Issues

Step 2-1: Questionnaire Survey

In the second step of our study, we measured the degree of empathy with issues addressed in the campaign. We conducted a questionnaire survey online from September 9–18, 2020. Because the demography of Readyfor backers is mainly 20–40 years-old people who were interested in social issues, we targeted a similar demography in this survey. We received a total of 121 responses: 68 students from five universities participated in a social problem-solving program; nine employees atone company participated in the same program; and 44 business persons in an online community of people with an interest in social issues. The overview of the sample is shown in Table 9.5. Because perceptions of what is prosocial are dependent on the cultural context (Barkow *et al.*, 1995; Hofstede *et al.*, 2010), we choose Japanese people as the sample in this study.

Table 9.5: Overview of the Sample in the Questionnaire Survey

Affiliation		*Gender*		*Age*	
Univ B, Tokyo	13	Male	84	20–29	74
Univ A, Osaka	12	Female	37	30–39	9
Univ C, Aichi	10			40–49	21
Univ D, Chiba	14			50–59	11
Univ E, Kanagawa	19			60–	6
Company F, Tokyo, Osaka, Aichi	Tokyo 5, Osaka 2, Aichi 2				
Online community about social act	44				

Note: n = 121
Source: Authors.

The students and employees who participated in the program were not lectured on social issues in advance, and there was no risk of bias due to prior information. Nevertheless, concerns about sampling bias remained in each subgroup. We compared the values of the subsamples and found that they were consistent. We considered that the data had a low risk of sampling bias, and they represented the thoughts and feeling of people interested in social issues in Japan.

In the questionnaire, we included word lists consisting of 23 topics and their titles, as shown in Table 9.2, and we asked three questions regarding empathy with each of the 23 topics, except "Payment." The first question, "To what extent do you think projects dealing with this issue met profit goals?" was adapted from the project profitability scale (Griffin & Page, 1996). This scale was used to measure *perceived profitability*, the degree of self-interest motivation evoked by the topic. The second question, "How much do you feel warmth, kindness, compassion, and tenderness for this issue?" was adapted from Nelson and Baumgarte's (2004) scale. This scale was used to measure *emotional empathy*. Third, we asked, "How much do you think the target's distress was a result of the unpleasantness or difficulty of the situation?" which was also adapted from Nelson and Baumgarte's (2004) and used to measure *cognitive empathy*. Although Nelson and Baumgarte's (2004) original scale included multiple items, we chose one item from each scale to fit the context and to reduce the effort of respondents answering multiple questions for each of the 23 topics. We followed the translation-back translation procedure to check the accuracy of the translation of the original English-language items into Japanese. All questions were answered on a 5-point Likert scale ranging from 1 (not at all) to 5 (completely). We used the average value of 121 respondents for each question.

Step 2-2: Analysis of the Relationship between Empathy with Issues and their Impact on Funding Success

In last step of our analysis, we compared the impact on the probability of success of issues from the campaign text data obtained in Step 1 with the scores of empathy with issues obtained from the questionnaire survey in Step 2. We conducted a correlation analysis of the degree of improvement in the probability of campaign success, the coefficients obtained from regression, the degree of empathy, and that of self-interest motivation. Based on this analysis, we tested our hypothesis that cognitive empathy with the issue enhances the probability of the campaign's success.

RESULTS

In the first step of our analysis, we analyzed the types of issues that would improve the probability of campaign success. The results of our logistic regression analysis are shown in Table 9.6. Because introducing all 24 topic probabilities would have resulted in a series correlation among all topics within the regression model, we removed the topic, "*new product*", from the independent variables. This topic had the largest negative effect on the results. By removing it, the value of the coefficient of each topic probability shown in Table 9.6 meant the statistical difference from the coefficient of the topic *new product*.

Table 9.6: Results of the Logistic Regression Analyses

	Model 1	*Model 2*
Dependent Variable Method	*Campaign Success* *Logistic Regression*	*Campaign Success* *Logistic Regression*
Intercept	–1.63 (0.28)***	–3.25 (0.53)***
Independent variable		
Nature		3.15 (0.68)***
Medical		3.05 (0.65)***
Disaster		2.70 (0.87)**
Tradition		2.70 (1.10)*
Competition		2.33 (1.08)*
Music		2.21 (0.53)***
Regional		2.17 (0.74)**
Dance and act		2.09 (0.66)**
Sports		2.04 (0.68)**
Art		1.97 (1.16)+
Animal		1.94 (0.67)**
Agriculture		1.93 (0.54)***
Poverty		1.75 (0.66)**
Childcare		1.61 (0.57)**
Education		1.55 (0.56)**
International affair		1.51 (0.74)*
Food		1.46 (0.68)*
Drink		0.82 (1.08)
Beauty		0.63 (0.86)
Website		0.57 (0.60)
Welfare		0.41 (0.63)
Pictures		0.13 (1.12)
Control variable		
Payment		3.54 (0.91)***
# of images	0.06 (0.00)***	0.06 (0.00)***

	Model 1	*Model 2*
Female	0.36 (0.09)***	0.34 (0.10)**
Male	–0.07 (0.11)	–0.09 (0.11)
NPO	0.60 (0.11)***	0.44 (0.12)***
Educational institute	1.56 (0.30)***	1.17 (0.32)***
Target amount	–0.07 (0.02)*	–0.09 (0.03)**
Duration	0.377 (0.10)***	0.35 (0.11)**
Duration^2	–0.03 (0.01)***	–0.03 (0.01)**
Topic concentration	0.21 (0.44)	0.43 (0.51)
Investment price	–0.00 (0.00)	–0.00 (0.00)
Model statistics		
AIC	2990	2947
McFadden's R^2	0.05	0.09

Note: n = 2,296,
+ p. < 0.1, * p. < 0.05, ** p. <0.01, *** p. <0.001.
Source: Authors.

The results showed that the probability of campaign success varied, depending on the issues they addressed. The introduction of topic composition probability improved the explanatory power of the model (R^2 = 0.05 in Model 1, and R^2 = 0.09 in Model 2). Two-thirds of the 23 types of topic composition probabilities showed statistically significant positive coefficients. The differences in their values ranged from 1.46 to 3.15. Thus, H_1 is supported.

The following summarizes the results of the control variables. The description of *payment* improved campaign success. The variable *# of images* showed a positive effect on campaign success. Founders' characteristics such as *female*, *NPO*, and *educational institute* had a positive influence on campaign success. These results are consistent with those of previous studies (Belleflamme *et al.*, 2014; Mollick, 2014). Regarding *duration*, we found an inverse-U-shaped relationship with campaign success. Based on these results, success probability was the highest with a *duration* of 58 days.

In the second step of our analysis, we compared the coefficients of topic composition probabilities obtained from the above regression analysis with the extent of empathy the respondents felt for those topics. Table 9.7 shows the values of self-interest motive (*perceived profitability*), *emotional empathy*, and *cognitive empathy* obtained from the questionnaire survey, as well as the coefficients obtained in the regression analysis.

Table 9.7: Results of Questionnaire Survey in Step 2 and the Coefficients obtained in Step 1

Topic	*Perceived Profitability*	*Emotional Empathy*	*Cognitive Empathy*	*Coefficients at Step 1*
Nature	2.97	3.62	3.72	3.15***
Medical	3.57	3.97	4.22	3.05***
Disaster	3.02	4.03	4.40	2.70**
Tradition	2.93	3.77	3.30	2.70*
Competition	3.33	3.33	3.10	2.33*
Music	3.45	4.02	3.38	2.21***
Regional	3.58	3.86	3.37	2.17**
Dance and act	3.13	3.45	3.04	2.09**
Sports	3.04	3.50	3.34	2.04**
Art	3.12	3.73	3.30	1.97*
Animal	3.01	4.12	3.82	1.94**
Agriculture	3.32	4.09	3.70	1.93***
Poverty	3.06	4.07	4.13	1.75**
Childcare	3.19	4.37	3.64	1.61**
Education	3.16	3.64	3.34	1.55**
International affairs	3.26	3.40	3.15	1.51*
Food	3.36	3.84	3.25	1.46*
Drink	3.64	3.50	3.12	0.82
Beauty	3.58	3.28	2.68	0.63
Website	3.47	2.62	2.83	0.57
Welfare	2.98	4.05	4.20	0.41
Pictures	3.50	3.60	2.90	0.13
New product	3.56	4.07	3.41	0.00

Source: Authors.

Because the three variables obtained from the questionnaire survey were correlated with each other and could not be fed into the same regression model, correlation analyses were conducted between each variable, and the coefficients were obtained in Step 1. The results are shown in Table 9.8, which indicate a negative correlation between *perceived profitability* and the coefficient (correlation = –0.42, p = 0.05). That is, on the Ready for platform, issues associated with profitability did not attract people.

Instead, people tended to negatively evaluate the commercial nature of the campaign. Thus, H_2 is supported.

Table 9.8: Correlation Analysis of Empathy, Perceived Profitability and Coefficients

	Perceived Profitability	*Emotional Empathy*	*Cognitive Empathy*
Correlation	–0.42	0.22	0.41
p-value	0.05	0.30	0.05

Source: Authors.

As shown in Table 9.8, a weak positive correlation was found between *emotional empathy* and the coefficient that indicates the impact of issues on fundraising success (correlation = 0.22, p = 0.30). Thus, emotional empathy and impactful issues were not associated. Thus, H_3 is supported. In contrast, Table 9.8 also shows a positive correlation *between cognitive empathy* and the coefficient indicating the impact of issue (correlation = 0.41, p = 0.05). These results suggest that people are not likely to invest in a social issue for which they have warm, kind, and compassionate emotions. They are more likely to invest in an issue if they think that the target of the issue has a reason to be supported. Thus, H_4 is supported.

DISCUSSION

Theoretical Implications

The results of our study contribute to the literature on crowdfunding. First, this study clarified that the issues a campaign addresses matters in crowdfunding. Although previous studies verified that the categorization provided by the platform influences funding success (Moss *et al.*, 2018; Sitruk *et al.*, 2020), it is selected by the campaign presenter and does not match the content of the campaign. This study used LDA topic modeling to quantify campaign content as the sum of compositional probabilities found that the odds ratio of success to failure varied depending on these probabilities. This study contributes to the crowdfunding research by reexamining the influence of issues of campaigns using a more rigorous method compared with those used by previous studies.

Second, and more importantly, we found evidence that the theory of empathy predicts people's decisions to invest in issues. On prosocial crowdfunding platforms, people do not invest based on self-interest but on altruism. Of the two types of empathy, this study revealed that cognitive empathy led to prosocial investment, while emotional empathy did not. These results are consistent with the theory of empathy and with previous experiments that were designed in line with that theory (Artinger *et al.*, 2014; Li *et al.*, 2019).

Third, this study provides an explanation for the mixed outcomes of previous crowdfunding studies. In previous studies, it was pointed out that in prosocial crowdfunding campaigns, altruism was the foundation of backers' investment (Allison *et al.*, 2015; Belleflamme *et al.*, 2014; Cholakova & Clarysse, 2015). However, some studies have shown that narratives and rhetorical appeals to hardship and emotional pain were less likely to receive funding (Moss *et al.*, 2015; Naimi *et al.*, 2020). In contrast, some studies also indicated that explaining a campaign's prosocial orientation was an effective way to obtain prosocial investment (Berns *et al.*, 2020; Parhankangas & Renko, 2017). Although these results seem to conflict, the concepts of emotional and cognitive empathy used in the present study provided consistency. Appeals to emotional empathy are not effective in motivating backers, but offering logical reasons why the target of the issue should be helped, which is associated with cognitive empathy, is effective in prosocial crowdfunding campaigns.

As an additional contribution, this study provides evidence obtained from crowdfunding in Asia. Much research on crowdfunding has been conducted on Kickstarter and Kiva in the US (e.g., Mollick, 2014), while some studies have reported crowdfunding in the Netherlands and Australia (Ahlers *et al.*, 2015; Cholakova & Clarysse, 2015). However, few studies have analyzed crowdfunding in Asia. Our study revealed the current landscape of crowdfunding in Japan and showed evidence of different contexts from existing studies, which provides some insights; on one hand, we confirmed previous findings regarding the advantage of having a female founder, being an NPO, and utilizing many images. These results are consistent with previous studies, which suggests that prosocial crowdfunding has a common foundation across countries. On the other hand, we need to consider national differences in looking into the types of prosocial campaigns that are likely to evoke empathy. For example, in this study, the issue related to "*Disaster*" ranked high, both in the value of cognitive empathy and the coefficient for funding success. This result reflects the current Japanese situation in which people experience repeated natural disasters after 2011. Such national contexts should be introduced to activate international comparisons of crowdfunding.

Lastly, this study contributes to the literature on the empathy-altruism hypothesis. Previous studies on the empathy-altruism hypothesis have discussed whether emotional empathy or cognitive empathy is more strongly linked to prosocial behaviors (Artinger *et al.*, 2014; Klimecki *et al.*, 2016; Li *et al.*, 2019). While previous research has focused on economic games played in laboratory experiments, this study observed the effects of empathy on prosocial behavior in the context of actual investments in crowdfunding. Thus, the study offers evidence that cognitive empathy is a primary antecedent to people's prosocial investment behavior.

Practical Implications

This study highlights issues that are likely to be supported in crowdfunding campaigns, which can be an effective way of raising capital for entrepreneurs. Moreover, if a campaign is related to a topic that is difficult to empathize with, the likelihood of success could be increased if the campaign were designed to support an issue that is likely to be supported. For example, although campaigns related to beauty tend to be less supported, their success rate may increase if the campaign is aimed at people with disabilities or disaster victims. Thus, this study provides evidence for the keys to success in crowdfunding campaigns, which may have the negative effect of allowing campaign founders to exploit prosocial orientations for financial gain.

Nevertheless, if the results of our study are utilized ethically, they may help allocate resources to new business ventures that are socially beneficial. Further research on effective alternative funding could result in the allocation of more social resources to businesses that cannot be funded through conventional financing pathways, which would ultimately result in an increase in social welfare.

CONCLUSION AND FUTURE DIRECTIONS

This study attempts to elucidate the effects of a prosocial orientation on investments in entrepreneurial businesses through crowdfunding platforms. By drawing on the theory of empathy in social psychology, the research focused on social issues that campaigns addressed, rather than the rhetoric and narratives used in campaigns. The study applied a topic modelling method to identify types of social issues expressed in campaign documents. A questionnaire survey method was used to measure the degree of empathic feeling about social issues. The results revealed that campaigns that addressed social issues that evoked people's cognitive empathy were more likely to be supported.

The present study has the following limitations. First, we did not directly observe the psychological processes of investors who were attracted to a prosocial orientation. Previous social-psychology studies have specified a general psychological process model related to empathy and altruistic behavior (Batson, 2012; Cialdini *et al.*, 1997). Whether that model is applicable to the crowdfunding context or whether there are differences in the psychological processes involved in crowdfunding could not be addressed in this study. In future research, we will examine the psychological process model of investment behavior in crowdfunding using other methods such as laboratory experiments.

Second, we did not analyze the influence of national culture. By its definition, cognitive empathy reflects the culture in which an individual was born and raised. The results of this analysis might be affected by the cultures of Japan or East Asia. It

is possible that in Europe and the US, social welfare is highly developed, and empathy for children, the sick, and people with disabilities is a social norm. Previous studies have suggested that emotional empathy is a strong determinant of prosocial behavior in Western countries (e.g., Gummerum & Hanoch, 2012; Klimecki *et al.*, 2016). However, prosocial investment might be triggered by emotional empathy in different contexts. Regarding cultural influences, this study provided evidence that cognitive empathy determines investment in a Japanese prosocial crowdfunding platform. Further international comparisons would shed light on the generalizability of the findings of the present study.

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CHAPTER 10

Cambodian Civic Participation and COVID-19*

Catherine Cecil

INTRODUCTION

With thousands of organizations working throughout Cambodia on a wide range of issues, Cambodian civil society observed first-hand how the health crisis posed by the COVID-19 pandemic translated into economic and other challenges. East-West Management Institute (EWMI) research shows that the economic effects of the pandemic are top of mind for Cambodians. Unfortunately, other challenges to promoting civic engagement as it became more difficult to gather citizens to participate in democratic processes made it more difficult for civil society to contribute to positive solutions.

Civil society actors responded to these challenges in several ways:

- Assessed concerns of citizens and their interest in civic participation
- Pivoted to health issues
- Worked with smaller groups of citizens while seeking to support remaining citizens who were still interested in civic participation.

CONTEXT

In the wake of COVID-19, Cambodians face many pressing and complex challenges to their economic and social well-being as well as to their health. Just as the health crisis has led to economic challenges, COVID-19 has made it more difficult to promote civic participation.

Today we are hearing from representatives of major United Nations (UN) agencies and academia, with many presenters having close ties to the business community. I appreciate the opportunity to add insight from Cambodia's civil society as well.

The term civil society is used in many different ways, so I will take a moment to clarify the scope of this discussion. Civil society includes a range of groups from

* This study is made possible by the support of the American people through the United States Agency for International Development (USAID). The contents of this document are the sole responsibility of the East-West Management Institute and do not necessarily reflect the views of USAID or the United States Government.

voluntary groups at the village level to national and international non-governmental organizations like the UN, as well as academia and think tanks. Voluntary organizations linked to pagodas and social welfare of citizens have deep roots in Cambodia. Villages also have voluntary groups to organize funerals and other events. Citizens also form community-based organizations to focus on a specific location or issue, and committees to support community forests and fisheries. The first national formal Non-Governmental Organization (NGO) was established in 1991 and since that time the sector has grown. The Ministry of Interior of the Royal Government of Cambodia has reported that 5,386 NGOs and associations registered with the Ministry of Interior since 1993.[1] Most of these organizations—3,251—were NGOs. However, the Ministry said that not all these groups were active.

Those of you who are interested in additional information on the Civil Society Organization (CSO) sector may wish to consult the Cooperation Committee for Cambodia (CCC) at ccc-cambodia.org or the NGO Forum on Cambodia at ngoforum.org.kh, both of which are membership organizations.[2]

Within the formal NGO sector, these organizations provide a range of services, from humanitarian and health services to support for agriculture, education and rural development. Others conduct research analytical work on development issues.

In our Cambodian Civil Society Strengthening program, funded by the United States Agency for International Development (USAID), we primarily support NGOs, as well as a few informal grassroots networks, who seek to increase civic participation in democratic processes. We have provided direct and in-kind support to a total of 24 organizations. Many of our partner NGOs work in the space provided by decentralized government services, particularly at the commune level. Our partners work to build positive and productive relationships with commune councilors, which provides a platform for concrete discussions with citizens about priorities for commune investment projects. Our NGO partners work to ensure that citizens are involved in these decisions about repairing roads and canals and providing electricity and toilets, among other services. In some cases, our partners follow up by observing the implementation of these projects as well. As they work to expand citizen participation, the NGOs may work with Community-Based Organizations (CBOs) or other community volunteers.

Our NGO partners measure success based on many factors, from the number of citizens involved to the number who request a response from government, and of course to the number and type of government responses.

For example, in the Fiscal Year 2019 alone, our project:

- Doubled the number of individuals participating in civic engagement from 11,830 in the previous year to 24,023.
- These citizens raised 305 issues with subnational authorities.

- As a result, 47 commune councils took concrete action; and
- Held 62 commune-level public forums.
- Several Indigenous groups succeeded in gaining community land titles and redress for cases involving land grabbing, illegal logging, damage caused by mining and other issues.

Notably, our partners report that the commune councilors welcome their participation.

IMPACT OF COVID-19 ON CIVIC ENGAGEMENT

As in other sectors, members of Cambodian civil society sought to assess the impact of COVID-19 on its activities and to address the many challenges. Our partners confirmed that despite the relatively low number of COVID-19 cases compared to those in other countries, Cambodia has suffered from significant secondary effects of the pandemic.

Citizen Concerns in the Wake of COVID-19

In April 2020, EWMI beneficiaries said that they were worried about their income and livelihoods, COVID-19 itself and their inability to send their children to school, in priority order. EWMI asked 13 NGO partners to reach out to 50 beneficiaries each in their program areas to assess the concerns of their beneficiaries and the extent to which the COVID-19 situation has had an effect on their interest in program activities. Eleven of these 13 grantees reported that livelihoods and income were the top concerns, in contrast to the seven grantees who reported that fear of COVID-19 itself was a top concern.

Impact on Public Interest in Civic Participation

Responses varied, but many of the respondents said that they were still interested in earlier project activities, to participate in the Commune Investment Plan (CIP) process, protect natural resources and other activities. Nonetheless, nine of the NGOs expected reduced participation in their activities.

Hidden Effects of COVID-19 on Marginalized People

Although EWMI found the above data to be helpful in determining immediate priorities, it understands the limitations in the data. A broader survey of citizens and the current focus on counting COVID-19 cases misses the needs of people historically invisible to the count and among the most vulnerable—indigenous and ethnic minorities, refugees and internally displaced peoples, migrants, urban slum-dwellers, and people working in the informal sector. These groups are considered hard to reach,

and EWMI's survey methodology did not address this gap. For these groups, COVID-19 and the policy responses it has prompted may serve to magnify existing challenges. Ethnic minority peoples, reliant on subsistence livelihoods, also commonly live in geographically isolated border regions, meaning they are less able to reach or pay for healthcare services than mainstream national ethnicities. High levels of poverty in these isolated regions means that there is often insufficient infrastructure for water, sanitation and hygiene facilities.

Indigenous people also face more barriers to obtaining critical information, in this case, information about COVID-19 prevention and critically needed services. They typically live-in remote areas and suffer from higher rates of illiteracy compared to the general population. Women, particularly in rural areas, have higher rates of illiteracy than men, and nearly 25 percent of women aged 25 years old and older reported in a recent survey that they have little or no education.

Limitations on the Number of People Who can Gather

Very concretely, limitations on the ability to convene citizens had a significant impact on CSO activities. CSO concerns about reducing the risk of transmission, coupled with a *Prakas* in March that limited gatherings to ten people, made it difficult for CSOs to carry out their core activities, in light of their earlier reliance on organizing large gatherings. However, the situation changed as the number of cases dwindled and meeting limits were raised from 10 to 50 people.

Civil Society Response

Directly Combatting COVID-19

CSOs have played an important role in providing critical health services and raising awareness about the threat of COVID-19 and ways to prevent it. International and foreign NGOs have worked actively with Cambodian health officials in delivering a proactive, multi-pronged response. When the virus emerged, CSOs joined with subnational authorities to quickly disseminate information on prevention from the government and development partners such as USAID. This served to expand the workforce for a mass awareness campaign, mobilizing Cambodian organizations that provide health services and information to vulnerable communities and even to NGOs from other sectors. One CSO also put-up posters campaigning against discrimination against Muslims when that population was being blamed for the outbreak.

Promoting Civic Participation

Our NGO partners were able to continue their existing civic participation campaigns and to expand their monitoring efforts to COVID-related areas. In the early stages of

the pandemic, they adapted their approach by having smaller meetings or meeting people virtually. Practices vary according to local interests and concerns. Some NGOs continued to patrol community forests (often in partnership with local authorities or rangers) to prevent illegal logging while others put these patrols on hold. For the most part, NGOs continued to convene citizens to identify and prioritize needs and to bring concerns to commune councils and authorities. NGOs continued to participate in a working group formed by the Ministry of Interior to discuss possible amendments to the Law on Associations and NGOs.

With regard to new efforts, NGOs who observed government implementation of infrastructure projects expanded these activities to observe distribution of benefits under the new government cash assistance program.

Our partners also continued to seek information on any gaps between citizen needs and government responses, at a time when the government faced significant challenges in creating new avenues of assistance for jobless garment workers and tourism workers and others. Our partners acknowledge the many challenges in responding to the pandemic, and they have expressed their interest in contributing to solutions in a positive manner.

Protecting Health and Safety of Citizens and Staff

As our partners and other members of civil society have moved forward with their many activities, they have instituted their own health and safety protocols including requirements for masks, hand sanitizer and social distancing. Many NGOs included prevention information as a regular part of their agendas on other topics. It has become routine for participants at in-person meetings to sit far apart, as in other sectors. Although virtual meetings seem to be less popular among Cambodian NGOs than in other groups, many CSOs have increased their use of networks created on messaging apps.

CONCLUSION AND THE WAY FORWARD

EWMI understands that policy responses to the above challenges are best developed through engagement of the widest possible array of stakeholders. Solutions to the myriad aspects of this problem and many others will require active participation by Cambodian citizens, in order to provide not only input on the scope of the problem but also to ensure buy-in and cooperation on badly needed adaptations. Our partners have demonstrated that citizens are concerned not only about the pandemic but also about the economic effects and other effects. In addition, citizens are still willing to get involved in their communities and to make positive contributions to decisions about subnational spending, etc. As the need for relief from the economic and other impacts

of COVID-19 becomes clearer, and the government responses is institutionalized, citizens may be even more motivated to get involved.

In order to better inform these processes, a deeper commitment to engaging indigenous communities is needed. Civil society and policy makers alike would benefit from a more thorough exploration of the situation facing these communities, best conducted by the communities themselves.

From a government perspective, we also see scope for citizen engagement. There is continued support for decentralization, which has enabled citizens to get involved more easily and in a more meaningful manner. The increased funding at the commune level is a promising sign. Numerous commune officials noted that they were actually seeking input on projects to include in commune investment plans.

Civic engagement will also affect Cambodia's ability to address the next major challenge facing the country: climate change. Cambodia is recognized as being highly vulnerable to the effects of climate change. A 2018 report by the Ministry of Economy and Finance and National Council for Sustainable Development estimated that Cambodia's gross domestic product (GDP) may be reduced by 2.5 percent by 2030 and by nearly 10 percent by 2050, due to climate change. USAID estimated that climate change would cost Cambodia US$16.7 billion annually by 2030, through environmental disaster, habitat change and stress on industries such as agriculture and fishing.

At a time when resources are stretched thin to address urgent priorities, civil society is able to convene citizens and facilitate productive discussions to inform important decisions by government actors. Civil society can also provide timely feedback from citizens on the ground, to contribute to sustainable solutions that protect Cambodia's resources while promoting social and economic development.

NOTES

1. https://www.phnompenhpost.com/national/ministry-carry-out-ngo-census
2. CCC has around 170 members and NGO Forum has around 96 members, according to their websites.

CHAPTER 11

The Impact of COVID-19 on Students' Preferences of Learning Mode: A Basis for Consideration

Yem Bunthorn

INTRODUCTION

The impact of the COVID-19 pandemic has been harmful and widespread. The regrettable loss of so many human lives worldwide and the incalculable damage caused by this novel coronavirus is one of the most tragic disasters in human history. There have also been many associated changes to work practices. One of the drastic changes caused by this pandemic in countries around the world has been the change in education, and in particular, the changes in teaching and learning modes. Li and Lalani (2020) predicted that COVID-19 has changed education forever. When a change in teaching and learning modes happens so quickly, it can be hard for both the teachers and students to prepare themselves in order to adjust to the new and unexpected environment. It can be even harder for any educational institutions or schools to prepare themselves, quickly organizing the infrastructure, supporting facilities, human resources and the like, in order to cope with the new environment and to ensure a successful and rapid transition. There are so many things that the institutions have to do during this process. Cadungog-Uy (2020) proposed that schools and universities should have an important role in supporting the learners to alleviate the potential negative impact of the quick transition. However, schools and universities should do even more to prepare the stakeholders for more changes during this unpredictable situation—both as the crisis continues and when it is over. After the pandemic is over, it is uncertain whether things should go back to 'normal' as they used to be before the pandemic. In their study, Lau *et al.* (2020) noted that observers pondered whether the future might just have become the present. It is questionable whether the present online learning environment will become the future or revert to the traditional learning mode of in-classroom teaching, or whether there will be a mix of the two, and scope for unpredictably beyond this.

According to the United Nations (2020), "The COVID-19 has created the largest disruption of education systems in history, affecting nearly 1.6 billion learners in more

than 190 countries and all continents." This policy document of the United Nations suggested a few recommendations to educational stakeholders to do in order to mitigate the potentially devastating consequences that can be resulting from the pandemic. Two of these recommendations are "Build resilient education systems for equitable and sustainable development" and 'Reimagine education and accelerate change in teaching and learning.' The online learning mode, however, plays the first and most important role during this pandemic. Only if the stakeholders—especially the academics, students and support staff—are prepared ahead of time, can resilient education be ensured and change in teaching and learning be accelerated? The risk that productive societies cannot be sustained when education systems collapse, as submitted by the UN policy document, can be alleviated by the transition to online learning. What remains now is the question of the student preferences of learning modes affected by the transition. Schools need to have the capacity to respond to this requirement for flexibility.

Considering the case of Cambodia, in response to the measures to tackle COVID-19 and in compliance with the order of the Ministry of Education, Youth and Sport (MoEYS) of the Royal Government of Cambodia, well prepared higher education institutions tried to move their face-to-face physical class mode to online learning mode. The school culture plays an important role in shaping the teaching and learning habits among the academics and students within an institution, and with sufficient facilities and infrastructure, the school culture can really mold the student's preferences of learning modes. This has been reflected in the case of a well-equipped institution in the Phnom Penh city of Cambodia—CamEd Business School. With the latest infrastructure in hand, all classes at CamEd Business School were immediately switched from physical class mode to online distance learning mode. Prior to the COVID-19 pandemic the student learning mode was entirely on campus, meaning that the students were attended classes physically face-to-face in classrooms with the lecturers. The drastic change of class mode, however, did not hinder the regular operation of classes and did not stop or delay the general operations of the school. Thus, the change from physical classes to online distance learning mode was undertaken with no disruption to classes at CamEd. In terms of the delivery of classes, it appeared to be only a matter of pressing a click on a button to switch from physical learning mode to online and the change was immediate. The management meeting to discuss the capacity in order to swiftly adjust to the change was made in a quick and straightforward manner. The meeting and discussion about the change together with a capacity building orientation among the faculty members and the president of the school was also fixed and carried out without any lapse of time. No classes were cancelled or delayed due to the change of class mode affected by the COVID-19 pandemic following the restrictions imposed by the MoEYS. Thus, the teaching and learning culture contribute to the success of the transition from the face-to-face to online learning mode.

LITERATURE REVIEW

Several studies have been made in various parts of the world about the impact of the COVID-19 on education, especially focusing on students' learning habits from lower to higher education learning levels. These studies aim at providing solutions to the educational institutions/education service providers in order to respond to the demand for learning preferences that has been affected by the novel coronavirus.

The Impact of Covid-19 on Education

According to Li and Lalani (2020), the sudden shift away from traditional classroom to online learning affected by the COVID-19 pandemic has made some wonder- whether the adoption of online learning will continue to persist even after the COVID-19 is over and how it will affect the education sector around the world. The authors have predicted that hybrid learning resulting from the online learning affected by the COVID-19 will emerge with great benefits. This can mean that online learning is going to be permanent post-COVID-19 pandemic, and as such it is inferred by the authors that schools focusing on critical thinking skills and adaptability can be more important for the future success. Zhao (2020) pointed out that COVID-19, if viewed from a different perspective, can be an opportunity to rethink education, meaning that the focus should not be on improving schooling but on what, how and where the learning can occur. "The chance of large-scale and long-term changes is largely dependent on how we treat COVID-19 in education" (Zhao, 2020). Treating the COVID-19 pandemic as an opportunity to reimagine education in terms of where the learning can take place, Zhao (2020) has concluded that online learning should replace the traditional in-class learning as students can learn from anyone anywhere, where access to sources, experts and expertise are unlimited. In addition to the demand for change for online learning, Deloitte (n.d.) pointed out that the shift to remote learning due to COVID-19 is eroding the value of place, as some students will decide to live with their parents while attending the community college and others will consider institutions with robust and established online academic offerings. The study has also warned that the institutions should be clear about which requests made by the students can be accommodated and which cannot, and after all suggested that the higher education community should catalyze the online learning experience driven by the COVID-19 to enhance their digital operations that have been long discussed. This can be in line with one of the recommendations suggested by the United Nations in its 'Policy Brief' document (United Nations, 2020), which stresses the strengthening of articulation and flexibility across levels and types of education and training in order to make the system more flexible, equitable and inclusive, a new way that can bring about a set of sustainable solutions to education. Olivier (2020), claimed that customized blended learning is urgently needed for post-COVID-19 education. The

author defined what he called customized blended learning as an integration of computer-assisted online activities with traditional face-to-face teaching, and asserted that it would add a valuable new dimension to the learning process and promote self-paced learning for the students with teacher support to fill the content gaps. Similar to the idea of blended learning, Lederman (2020) also suggested a thoughtful mix of flexibility and structure.

Learning Mode versus Online Learning

Why is learning style such an important factor? Fleming and Mills (1992) in a study that focused on the student preferences of study methods found that learners are divided into auditory, visual, reading and writing, and kinesthetic. The University of Kansas, School of Education and Human Sciences, (University of Kansas, 2020) identified those four learning styles suggested by Fleming and Mills (1992) be referred to as the VARK model, also mentioned by Harada (2014) in his study on 'Modes of Learning.' VARK is an acronym for 'visual, auditory, read and writing, and kinesthetic'. This reference to different learning styles has introduced the idea that the university should take it into consideration in terms of how to prepare the infrastructure including the design of learning spaces in order to best benefit the students according to their different learning methods. The preferences of study methods suggested by the two authors are usually referred to as "learning styles."

The culture of delivery mode may contribute to shaping the receiving mode of the students which, to some extent, indirectly shapes their learning style. Confirming to this notion, the New South Wales Government (NSW, 2020), wrote that space, future and technology can enable learning modes that coexist or that can be quickly and easily transitioned. In contrast to the learning styles known as the VARK model, however, NSW (2020) has listed learning modes as collaboration, discussion, feedback and reflection, guided learning, explicit learning, demonstration, experiential learning, and independent learning. "When we are aware of, and can identify how we want learning to occur, it guides the decision making on the design of learning space and technology requirements that will best support the desired learning" (NSW, 2020).

Will the Same Conventional Classroom Mode Resume after the Pandemic?

Since March 2020, distance or online learning and teaching were made compulsory for all the teachers and students across the country due to the COVID-19 pandemic. Other countries around the world could also be affected by this drastic switch 'from traditional to online mode' earlier. However, online learning (or e-learning in other words) has been there since before the pandemic. The literature reports the trend in strengths in it and also describes its weaknesses.

According to Zhang *et al.* (2004) the e-learning has emerged as a promising solution to life-long learning and also assured that it is becoming a real alternative to the conventional classroom learning in a way that it is learner-centered, self-paced, time and location flexible, archivable, reusable and shareable. As reported by Gaebel (2020), the European University Association (EUA) in 2013 surveyed higher educational institutions that offered some kind of digitally enhanced learning and interestingly found that 82 percent already offered online courses, 39 percent had online degree programs, 91 percent provided blended learning courses, 55 percent had blended learning degree programs, and 40 percent already joint online learning with other higher education institutions. With reference to this survey, online learning has been around for a long time. It just waited for an opportunity to boom, which is very unpredictably provided by the COVID-19 pandemic. However, online learning may have some disadvantages. Zhang *et al.* (2004) mentioned that it can create anxiety and confusion, increases the preparation time for the instructors and there is a lack of feedback in asynchronous e-learning. It is true that the first time they experience e-learning or online learning, anxiety and confusion may occur, but when this learning mode becomes repetitive for a short while, they will become used to it and will probably find it more convenient. The disadvantage of online learning that is commonly known, so far since the pandemic has started has been about the unstable internet. Witze (2020), noted that when universities in Pakistan closed down in March 2020 due to the pandemic, while many instructors faced a big challenge in terms of tools to teach online, many students did not have reliable Internet.

Nevertheless, according to Witze (2020), some educators believed that the pandemic would lead to more and better online teaching and learning in both rich and lower-income countries. Regarding the transition affected by the pandemic, Klomp (2020) claimed that the COVID-19 will change the world forever, saying that it is especially true for university sector and the way higher education is delivered. He mentioned that online education was already beginning to get recognition even before the pandemic for being as effective as the conventional classroom. With public and private investments in the network infrastructure and advancements in innovative new digital learning technologies, the author was confident that online learning is viable, cost-effective and is improving ways of empowering students regardless of their location, age, gender and socioeconomic status.

The Way Forward with Online Distance Learning Mode

At the time of the research, the pandemic was still not under control. As such, as per the guidelines of the government, the way forward was to carry out the teaching and learning activities through online mode. With the prevailing uncertainty, the present

online distance learning mode might be how the future education will be structured. However, to that extent, the question may arise: "How can online learning be strengthened to ensure the productivity of both teaching and learning?"

The conclusion made by Goyal (2012) some years before today's boom of online learning mode suggested that the day was not far away when e-learning would become the future popular method of education throughout the world. The World Bank (2020) stated "The use of Information and Communication Technologies (ICT) in education can play a crucial role in providing new and innovative forms of support to teachers, students and the learning process more broadly." The challenges for countries that invest in remote learning lay the foundation for re-imagining education. Nevertheless, the study acknowledged that the major challenge for remote learning is that the inaccessibility to technology infrastructure among countries around the world is rampant. Nonetheless, according to the European Commission (2020), COVID-19 has impacted education and training that has accelerated the change and provided a learning experience. The online learning experience has always been positive (Lim, 2020), although the author mentioned some common concerns such as the effectiveness of online lectures, change in assessment methods and self-discipline. The European Commission (2020) also mentioned that the education and training system is increasingly part of the digital transformation and can harness its benefits and opportunities. To make it fit for the digital age, however, the European Commission initiated some guiding principles such as an appropriate investment in connectivity, development of high-quality content, digital literacy and so on. Pednekar (2020), however, expressed his concern that e-learning is out of reach for many disadvantaged students, yet, according to him stopping online education during post-COVID-19 is not a good idea. As stated, technology increased automation but would never replace the role of the great teachers. It could provide tools to support excellent teaching and raise the student attainment (Department of Education, 2019). In addition, as pointed out by Li and Lalani (2000), according to a professor at The University of Jordan, technology enabled him to reach out to his students more efficiently and effectively through several electronic ways including video conferencing and document sharing, and he preferred to stick to the online platform even after the pandemic and suggested that the traditional and online learning methods could go hand by hand. Butnaru *et al.* (2021), however, viewed otherwise. The authors mentioned that the online learning driven by the COVID-19 is expected to be temporary and that the format of the instructional activities will return to its original state once the crisis ends. Arnove (2020), however, argued that the pandemic offers a unique chance to imagine more equitable education systems and so, meaningful action should be taken to bring about the desired future.

STUDY METHODOLOGY

The methodology chosen to address the research question of student learning preferences in the period of the switch from in-class to online learning uses a cross-sectional survey of students at CamEd Business School, Phnom Penh, Cambodia. The following sections describe the rationale for using a survey at the selected institute and also the characteristics of the business school and relevant factors that may influence students' learning preferences.

Background to the Survey

CamEd Business School in Phnom Penh, Cambodia, provides two study programs—first is the 'Bachelor of Accounting and Finance' program and second is the 'Association of Chartered Certified Accountants (ACCA) and Certified Accounting Technician (CAT) programs. The active population in both the programs in the academic term of July-December 2020 was 2,392, among whom only 485 students (20.3 percent) were in the second program while the rest were in the bachelor program. The study applied a purposive 'Google Form' online survey with all the students in the Bachelor of Accounting and Finance Program and also those in the ACCA/CAT program. The reason for applying this online survey is that the whole population can be reached in a timely manner because of the technology-friendly environment in the teaching and learning provision at CamEd Business School. The online survey was conducted in September 2020. However, only 38.4 percent (919) out of the population (2,392) responded to the survey, among whom 66.6 percent were female and 33.4 percent were male. Data analytics of the Google Form and spreadsheet were applied in order to present the data collected by the survey and to report the findings accordingly.

Administration of the Survey

The research instrument/tool consisted of nine items in total, many of them asked the respondents to rate the level of agreement on a scale of 'strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree and strongly disagree.' One of the items that asked the respondents to rate the level of agreement contains 15 other sub items. There was one item that asked the respondents to rate the level of importance on a scale of '0–10'. While zero means not important at all, 10 means the most important. There was also one item that asked the respondents to mention the level of likelihood on a scale of 'extremely likely, likely, more or less likely, neutral, more or less unlikely, unlikely, extremely unlikely'. The last two items were open-ended questions intended to collect additional feedback on the change in preferences of learning modes from the respondents.

RESULTS AND DISCUSSIONS

Number, Gender Ratio and Current Academic Status of Respondents

Out of the whole population of 2,392, the survey managed to collect 919 voluntary responses which is 38.4 percent of the total. The responses from female respondents were 66.6 percent, about twice as many as those male respondents, whose responses made up 33.4 percent as mentioned earlier. The fact that more respondents were female can be expected as the respondents were students in the field of accounting and finance, the area of which the job market in Cambodia is commonly popular with females. Among the 38.4 percent of the respondents, only 8.5 percent were from those respondents in the ACCA/CAT program, while the rest were from those in the Bachelor program. Interestingly, the respondents in the first and second year in the bachelor program already accounted for more than 50 percent of the total of the respondents. Less responses were received from the third- and fourth-year students respectively. The reason is the total number of students in the third and fourth year were less than that in the first and second year. Another reason is most of the fourth-year students were studying and already working at the same time. They could have intentionally ignored the survey due to their own priorities at work as well as study loads, although a second and third reminder was sent to them. The current academic status of the respondents is shown in Figure 11.1.

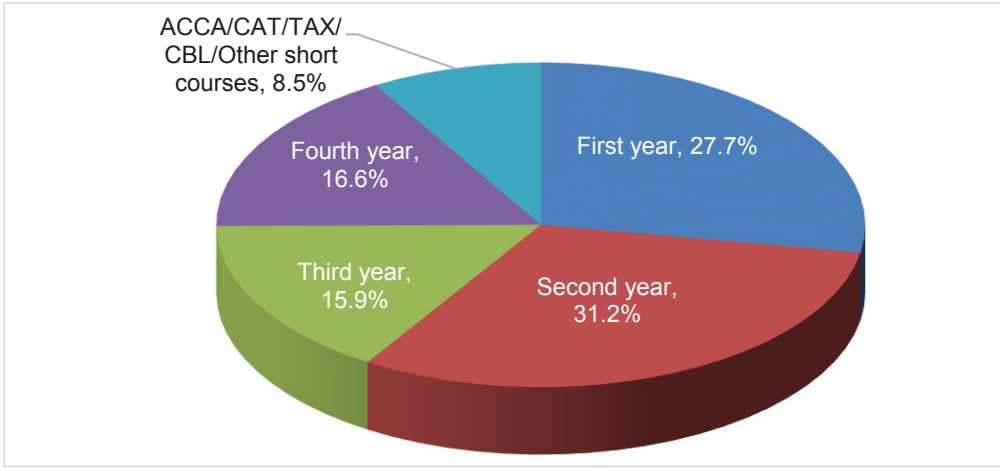

Figure 11.1: Current Academic Status of the Respondents

Source: Primary data.

The Switch to Online Teaching

The culture of delivery mode may contribute to shaping the students' learning style, which to some extent reshapes their preferences of learning mode. That can be assured

by the fact that moving from a physical to distance learning mode was not found to be a problem at the selected study school. The main reason, argued in this paper, is that the level of students' preparation for the change had been ensured through the teaching and learning culture.

All the students in the study selected school are required to have a personal laptop upon enrollment. This is the fact that can be a preliminary message to the students about their possible learning mode when they start attending classes. In line with one of the areas described in the school educational philosophy, technology-enriched environment, all classrooms are equipped with free Wi-Fi in order for every student, faculty member and staff to use. This is not to mention the technology equipment in the classroom such as Stylus tablets, LCD projectors, computers, sound systems and the like. This is also one of the ways that can benefit the students and assists in preparing students for the online learning mode. For convenience, the Wi-Fi in each classroom does not even require any password. Everyone only needs to click in order to automatically connect. Since the year 2015, the school has required the students to use an online learning management system of the Google Suite, the 'Google Classroom'. In 2017, the school president started to officially encourage the faculty members to require their students to always bring their personal laptop to class for use in classroom activities. Since 2019, the school has become more environmentally friendly by having no paper-based handouts or materials. All class materials including handouts have been distributed and shared electronically and online. All internal examinations including midterm exams and final exams have been converted to computer-based and online. Although the students were still required to have a physical presence in the exam room, they had to do it online on their laptop. From then, all class activities including practices, exercises or quizzes have been prepared and conducted online. Before the pandemic, during their class, the instructors required their students to access class materials on the Google Classroom and do practice tests or quizzes, group work, or group discussion online using the online platforms such as Google Forms, Google spreadsheet, Google Docs and Google Slides. For the online learning and online communication platforms, the school has been using the Google Suite for education, and so all the students are provided with a free email account with … @cam-ed.com as an extension upon enrollment. Everyone including staff, faculty members and students are provided with unlimited storage on their Google Drive.

With sufficient infrastructure, the learning system and culture at the study school helped shape the students' learning habits to be very familiar with and used to the online learning mode and environment. All of these factors made a major contribution to making the transition successful and easy, switching from the traditional to online learning without any delay. And because of this culture and every possible effort, hardly there were any difficulties to carry forward the online distance learning mode during the COVID-19 pandemic. The students were informed of the change and they simply accepted and followed the instruction of the new learning mode.

Response to Learning Mode Before, During and After the Pandemic

As mentioned earlier, the students' learning mode before the pandemic was physical or face-to-face. When asked to level their agreement to this statement: "You used to enjoy the physical learning mode very much before the COVID-19 pandemic," while the expectation was that everyone would say 'strongly agree' to 'some extent,' 101 respondents (11 percent) did not say if they agree or disagree at all. On top of that, 55 respondents (6 percent) said they either somewhat disagree, disagree or strongly disagree. Thus, the remaining 763 respondents (83 percent) used to enjoy the physical learning mode before the COVID-19 pandemic. It was also presumed that there are learners who enjoy online learning mode. To confirm that, the respondents were asked to provide their agreement to the next statements: "The impact of the COVID-19 has changed your preference of learning mode. You are not interested in the physical learning mode anymore." A total of 453 respondents (49.3 percent) did say that they either somewhat agree, agree and strongly agree, while the number of respondents who disagreed were less (33.6 percent). More impressively, the same 453 number of respondents (49.3 percent) preferred to choose the agree-side supporting the statement: "You will still prefer the online learning mode even when the COVID-19 is over." However, 334 respondents (36.3 percent) disagreed to that (Table 11.1).

Table 11.1: Response to Learning Mode Before, During and After the Pandemic

Questions Relating to Learning Mode	*Number of Responses*		
	Somewhat Agree, Agree, Strongly Agree	*Neither Agree Nor Disagree*	*Somewhat Disagree, Disagree, Strongly Disagree*
You used to enjoy the physical learning mode very much before the COVID-19 pandemic.	763 (83.0)	101 (11.0)	55 (6.0)
The impact of the COVID-19 has changed your preference of learning mode. You are not interested in the physical learning mode any more.	453 (49.3)	157 (17.1)	309 (33.6)
You will still prefer the online learning even when the COVID-19 pandemic is over.	453 (49.3)	132 (14.4)	334 (36.3)

Note: Figures in the parentheses indicate percentage to total respondents (919).
Source: Primary data.

Importance of Learning Modes

Since the start of the pandemic back in March 2020, it was almost two academic terms until the survey was conducted for the present study. The students must have weighed

fairly well between their personal preferences of online distance learning, traditional classroom and hybrid class modes (combination of the first two). When asked to scale the importance of online distance learning, physical classroom, and hybrid learning modes during the pandemic period, 157 respondents (17.1 percent) fascinatingly said physical/traditional learning mode is not important to them. More interestingly, 52 respondents (5.7 percent) gave it zero score, which means they do not prefer the physical learning mode at all. In online learning mode, 85 respondents (9.2 percent) said it is not important and only 19 respondents (2.1 percent) gave it zero score, which means they do not prefer the online learning mode at all. However, the majority, 712 respondents (77.5 percent), have shown that they do prefer the online learning mode. For hybrid learning mode, 191 respondents (20.8 percent) said it is not important, among which 74 respondents (8.1 percent) gave it zero score. Since the hybrid learning mode is a combination of the two other modes, 579 respondents (63 percent) provocatively considered it important and scored between 6–10 (Table 11.2).

Table 11.2: Level of Importance of Different Learning Modes

Question Relating to Importance of Learning Mode	*Number of Responses*		
During the present COVID-19 situation, if options are provided, how important to you is each of the following learning modes?	*10–6 Important*	*5 Average*	*4–0 Not Important*
1. Online learning mode	712 (77.5)	122 (13.3)	85 (9.2)
2. Physical learning mode	638 (69.4)	124 (13.5)	157 (17.1)
2. Hybrid learning mode (Combination of 1 and 2)	579 (63.0)	149 (16.2)	191 (20.8)

Note: Importance on a scale of 0–10 (0: not important, 5: average, 10: most important)
Figures in the parentheses indicate percentage to total respondents (919).

Source: Primary data.

Considering the study findings, it can be concluded that COVID-19 pandemic has brought along with it the change in the learning mode, and as revealed, a large percentage of respondents shown their preference in favor of online learning mode against the physical face-to-face and hybrid mode of learning.

Advantages of Online Distance Learning Mode

The online distance learning mode has just been gaining significant favor and popularity among educators and learners since the outbreak of the COVID-19 pandemic, although research has identified some challenges involved in it.

To confirm the trend in online distance learning mode, the study also sought to find out the positive side of it by assessing the 15 strengths as listed in Table 11.3. The respondents were asked to state their level of agreement with each of the 15 statements, from 'strongly agree to strongly disagree.' The first interesting point is in statement #3 "Online distance learning assures more safety" that attracted the highest

Table 11.3: Strengths of Online Distance Learning

	Issues Relating to Strengths of Online Distance Learning	*Number of Responses*		
	With the online learning experience since March 2020, do you agree or disagree with each statement below about the 'online learning'?	*Somewhat Agree, Agree, Strongly Agree*	*Neither Agree Nor Disagree*	*Somewhat Disagree, Disagree, Strongly Disagree*
1.	It saves more time.	790 (86.0)	60 (6.5)	69 (7.5)
2.	It saves more money.	622 (67.7)	120 (13.0)	177 (19.3)
3.	It assures more safety.	821 (89.3)	59 (6.4)	39 (4.3)
4.	It removes discrimination.	649 (70.6)	183 (19.9)	87 (9.5)
5.	It protects privacy.	667 (72.6)	133 (14.5)	119 (12.9)
6.	It ensures anonymity.	629 (68.4)	191 (20.8)	99 (10.8)
7.	It is more student-centered.	638 (69.4)	167 (18.2)	114 (12.4)
8.	It provides more chances to participate.	583 (63.4)	147 (16.0)	189 (20.6)
9.	It gives unending access to class videos and materials.	726 (79.0)	128 (13.9)	65 (7.1)
10.	It promotes self-discipline.	669 (72.8)	123 (13.4)	127 (13.8)
11.	It encourages independency in learning.	716 (77.9)	104 (11.3)	99 (10.8)
12.	It provides flexibility in learning.	734 (79.9)	91 (9.9)	94 (10.2)
13.	It enhances basic technology skills.	755 (82.2)	107 (11.6)	57 (6.2)
14.	It improves communication with the professor and classmates.	541 (58.9)	141 (15.3)	237 (25.8)
15.	It boosts concentration.	492 (53.5)	152 (16.5)	275 (30.0)
	Average number of responses	668.8 (72.8)	127.1 (13.8)	123.1 (13.4)

Note: Figures in the parentheses indicate percentage to total respondents (919).

Source: Primary data.

821 respondents (89.3 percent) who all agreed with the statement, with only 39 respondents (4.2 percent) who disagreed to it. As the students are studying online from their comfort zone, zero risk of harm is expected. The second interesting point is in statement #13 "Online learning enhances basic technology skills." Altogether, 755 respondents (82.2 percent) agreed with the statement, while only 57 respondents (6.2 percent) disagreed. However, statement #15 "Online learning boosts concentration" attracted only 492 respondents (53.5 percent) in the agreed-side, which is the lowest percentage of positive response compared to the rest. Further, on this statement, 275 respondents (29.9 percent) were in the disagreed-side, which is the highest among all. This simply means that just above half of the respondents agreed that online learning support them in increasing their attention. Similarly, more than 25 percent of the respondents disagreed with the statement #14 "Online learning improves communication skills with the professor and classmates." In summary, impressively, the study collected an average number of 668.8 responses (72.8 percent) who either strongly agreed, agreed or somewhat agreed with all the 15 statements. Only an average number of 123.13 responses (13.4 percent) either somewhat disagreed, disagreed or strongly disagreed with all the statements. The average number of responses who were neutral is only 127.06 (12.8 percent).

Choices of Learning Modes

In anticipation of the future approach to education after the pandemic, the study also sought to find out how likely it is after the pandemic the learners would prefer to come back to the conventional class modes, or expand the online distance learning mode, or would prefer a hybrid one. The respondents were asked to rate their likelihood on a scale of 'extremely likely, likely, more or less likely, neutral, more or less unlikely, unlikely, extremely unlikely' against the statement raised. The likelihood for 'physical learning mode' received 671 responses (73 percent) compared to the likelihood for the other two learning modes such as online and hybrid that received 503 responses (54.7 percent) and 536 responses (58.3 percent) respectively (Table 11.4). Nevertheless, the number of responses to the physical learning mode as shown in Table 11.4, if compared to the number of responses to the physical learning mode in Table 11.1, remarkably decreased from above 700 down to only 671. In contrast, the number of responses to the online learning mode as shown in Table 11.4, if compared to that in Table 11.1 responded to the statement "You will still prefer online learning mode when the COVID-19 is over," fascinatingly increased from 453 (49.3 percent) up to 503 (54.7 percent). Similar trend is being maintained for the hybrid learning mode, 536 responses (58.3 percent) as shown in Table 11.4 and 579 responses (63 percent) shown in Table 11.2. Thus, a comparison shows that the online learning mode is trending upwards.

Table 11.4: Likelihood for Choices of Future Learning Mode

Question Relating to Choices of Learning Mode in Future	*Number of Responses*		
Once the COVID-19 is over and if options are given, how likely or unlikely will you choose each learning mode?	*More or Less Likely, Likely, Extremely Likely*	*Neutral*	*More or Less Unlikely, Unlikely, Extremely Unlikely*
Physical learning mode	671 (73.0)	142 (15.5)	106 (11.5)
Online learning mode	503 (54.7)	172 (18.7)	244 (26.6)
Hybrid learning mode	536 (58.3)	178 (19.4)	205 (22.3)

Note: Figures in the parentheses indicate percentage to total respondents (919).

Source: Primary data.

Likes and Dislikes about the Online Learning Mode

The study also gave an opportunity to the respondents to express their personal opinions on what they like and dislike the most about the online learning mode. The responses gathered from the respondents are summarized below:

The most frequent appreciation for online learning mode was its time and cost saving nature (365 responses; 39.7 percent) followed by its characteristic of safeness in learning (117 responses; 12.7 percent). However, a lower percentage of respondents (less than 5 percent) valued its benefits in terms of encouraging communication with the instructor, building confidence, ensuring privacy in learning, creating more freedom in learning and ensuring self-discipline, and so on (Table 11.5).

Table 11.5: Preference for Online Learning Mode

Questions Relating to Preference for Online Learning Mode	*Responses*
It saves time and money on travelling.	365 (39.7)
It is safe.	117 (12.7)
Recorded class videos and materials are accessible.	77 (8.4)
It is convenient, flexible and accessible from anywhere.	71 (7.7)
It is good for concentration/focus attention.	64 (7.0)
It encourages class participation/engagement.	45 (4.9)
It is comfortable and relaxing.	45 (4.9)
It creates more freedom/independency and self-discipline.	22 (2.4)
It is quiet and private.	22 (2.4)
It builds confidence.	9 (1.0)
It encourages the students to communicate with the professor.	9 (1.0)

Note: Figures in the parentheses indicate percentage to total respondents (919).

Source: Primary data.

Online learning, however, has been known for its negative side that results from the unstable Internet/Wi-Fi connection. As shown in Table 11.6, the study found that the most important reason to dislike the online learning by the respondents was their difficulties to concentrate or focus attention (342 responses; 37.2 percent) followed by poor Internet/Wi-Fi connection (236 responses; 25.7 percent). A lower percentage of respondents, however, expressed some other reasons for their dis-likeness toward online learning such as difficulties in interaction/communication, no motivation to learn, feeling loneliness and so on.

Table 11.6: Dislikes for Online Learning Mode

Questions Relating to Dislikes for Online Learning Mode	*Responses*
It is dependent on Internet/Wi-Fi connection.	236 (25.7)
It is difficult to concentrate/focus attention.	342 (37.2)
Sometimes communication is lost.	34 (3.7)
It is difficult to interact and participate in the discussion.	31 (3.4)
Sometimes motivation is lost.	24 (2.6)
Sometimes the feeling of loneliness appears.	6 (0.7)
It is very noisy.	2 (0.2)

Note: Figures in the parentheses indicate percentage to total respondents (919).

Source: Primary data.

CONCLUSION

From the findings of the study, the conclusion is that although there are some negative sides of the online learning, the positive ones almost outweigh them. There has been a significant change in the students' preferences of learning mode for the past several months since the beginning of the online distance learning impacted by the COVID-19 pandemic. Taking this change into account, ensuring enough infrastructure and support should be in place in order to benefit the students' learning in any university or higher learning institution. The trend is proving to be true, that the change in how education is continuing during the pandemic and will continue on after the pandemic is likely to be permanent to some extent. Therefore, ensuring that online learning mode and physical or face-to-face learning mode are ready in place will satisfy learners with different preferences of learning mode. This hybrid mode will most likely be the best option that future learners may seek. That caring manner of any higher education institution will partly contribute to the learning quality of the students and will somewhat create a good flexibility for its own institution to further think about how to extend its reach to students outside the area, country and region.

Also, the implication is that the possibility of online learning will continue to be expanded even after the COVID-19 pandemic is very likely. Therefore, it is of crucial importance for any educational institution to invest in technology infrastructure. Such investment should not wait till the COVID-19 pandemic is over but should start as early as possible. Only by doing so, the loss-of-learning risk during this critical period as far as it is concerned can be somewhat mitigated. Also, such investment in technology will contribute to the effort that any institution may make in order to create a more inclusive and more equitable learning program. Moreover, online learning can be better assured and largely promoted if close attention is paid by the key stakeholders such as the educational policy makers, regulators and relevant decision makers at the higher or top levels, in terms of intervening to facilitate a better connectivity experience and a more inclusive and equitable curriculum or learning program.

Our study is not free from certain limitations. In addition to the response of 38 percent of the target population, the study was limited to only one private university and restricted to only those students in accounting and finance related majors. Consequently, to generalize on the basis of these results could lead to biases. First, the students in the university where the study was conducted were largely known to be those children from affordable families in the area whose access to good quality computers, smartphones, and good Internet connectivity is not the concern. Secondly, the university where the study was conducted is very technology-oriented. The school infrastructure including the facilities that are necessary for the online distance teaching delivery purposes and other technical support is very well ensured and ready ahead of time prior to the pandemic. With these limitations in mind, however, the study did not expand its scope to cover students from other universities. Therefore, further study with a larger scope may be taken into account in order to generalize the results in a broader context.

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CHAPTER 12

The Impact of E-Learning during COVID-19 on Study Performance

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INTRODUCTION

The COVID-19 pandemic has forced millions of students out of schools worldwide. The case of Cambodia is not an exception to this situation. As the start of the Coronavirus in 2019 has caused public health awareness (Subedi *et al.*, 2020), the spread of the virus raised concerns for schools and universities to shut down. Countries in almost all regions around the world closed down their schools as a part of the preventive measures to control the virus. The virus has not only affected education but also socialization. As Cambodia has experienced the presence of the virus, the global pandemic has turned everything upside down; hence, its effect on Cambodia's education sector is not surprising.

Cambodia's first confirmed case of COVID-19 occurred in late January 2020. With a second case in early March 2020 in Siem Reap province, home of the renowned temples of Angkor Wat, the Ministry of Education, Youth and Sport (MoEYS), in an abundance of caution, closed the schools until further notice. All of Cambodia's 13,300 schools have been closed since March 16, 2020, leading many students to seek distance learning opportunities to continue their education. To respond to this crisis, United Nations Children's Fund (UNICEF) has been working closely with the MoEYS in Cambodia to establish continuous learning activities from early childhood through to primary, lower, and upper secondary education. Distance learning assets, including videos and e-lessons, are being broadcast on various social media platforms, television and radio, aiming to reach every household in Cambodia. E-Learning is a type of learning or teaching platform that depends on electronic devices and technology instead of papers and classroom teaching. Thus, with the outbreak of the COVID-19 pandemic, students had to meet teachers online for learning.

In Southeast Asia, like in many other developing regions, a large segment of the population doesn't have access to the internet and electronic devices. And even people with access to the internet, experience some infrastructural division. The infrastructural gap can be seen through several circumstances, including the discrepancy of the internet's speed in different regions. People in the city centres often enjoy significantly

faster internet as compared to those living in less developed areas. Thus, as widely felt, not all students have access to high-speed internet and even those with high bandwidth internet have experienced interrupted service or a slow down due to high collective consumption. This may be due to the fact that more people have started using the internet to work, socialize, and entertain themselves during the lockdown. Another issue is relating to the cost involved in using the internet facilities. Although data packages on mobile networks are relatively faster, they are far more expensive for students to afford on a regular basis. However, according to Digital Datareportal Cambodia (2020), there were 9.7 million internet users in Cambodia in January 2020, and the number of users has increased by 1.3 million (15 percent) between 2019 and 2020 along with internet penetration in Cambodia, which stood at 58 percent in January 2020. Despite the familiarity of most students and learners with the technologies, it has been realized that not all can adapt to the new, modern ones. Therefore, there might be challenges and difficulties for the students who have not had much experience with the use of modern technology. Against this backdrop, our chapter intends to understand the significance and usefulness of the new technology along with the impact of e-learning on the study performance of the target group during the COVID-19 pandemic. In specific, we intend to achieve the following objectives:

1. To analyze the importance of e-learning during the COVID-19 pandemic.
2. To explore an e-learning environment based on practice during the COVID-19 pandemic.
3. To identify the relevant factors that affect the study performance of the target group.
4. To explore the ways through which improvement in the learning of the target group of students could be possible during the COVID-19 pandemic.

LITERATURE REVIEW

Impact of E-Learning on Students' Grades and Thinking Skills

E-learning has an impact on both teachers and students. Without good preparation, the use of technology may become a challenge or a serious problem. As Motah (2007, p. 483) mentioned, "due to the introduction of new and more sophisticated approaches to dealing with information, communication, and education, technology not only has an impact on schools, but on the society as a whole; everyone is using or having access to the internet, email, or websites for the information that they need, or for communication and knowledge." In higher education, technology has an impact on the students' academic achievement, course completion, or degree achievement (Nora & Snyder, 2009). Students need access to technology to seek new information and new knowledge from the outside world. Even if they are sitting in one place,

with internet access, students can explore more than the information that they need. Nonetheless, to be able to access the internet and make use of this modern technology, everyone at least needs some background in computer skills. This has led to the computer skill requirement for students in order to enter colleges that adopt technology and computer systems. Today with the further enhancement of technology, learners and instructors are required to be proficient in computer skills to make use of technology and enhance their learning and teaching respectively.

Universities and higher education institutions have prepared better tools and materials to help students achieve their academic goals. The changes in classrooms and teaching methods are done for the purpose of student engagement in lessons and class activities. At the same time, students' performance plays an important role in their studies in order for them to achieve their academic degrees. This should be from the combination of the learning environment (Bonk & Wisher, 2000), students' class involvement, and the motivation that the students need for the distance learning despite the direct interaction. In addition, e-learning as well has an impact on students' grades and their level of thinking skills (Nora & Snyder, 2009). If students make use of the internet and technology, they will be able to support their studies: students can use the internet for their research, or they can exchange ideas with their peers through social media. Another discovery from the Nora and Snyder (2009) study is that students' attitude and level of concentration are from their internal selves as well as from the support from their schools and the surrounding environment. Students who have received enough support and had the skill of technology would find online or distance learning very enjoyable. And the inner motivation that they have would of course lead them in wanting to join the class. Despite the distance learning, they would enjoy just as much as they did in the classroom. Furthermore, a supportive environment and necessary tools/material support also have a good effect on students' grades and enhance their cognitive skills. In order to help students be familiar with new technologies, schools should provide training and other important information regarding the use of the new technologies. Moreover, not all students have the skill and the knowledge of new technologies unless there is an orientation or training by schools.

Also, during an assessment, when students who have studied through e-learning were compared to those who were actively taught in the classroom, it was found that those who did their quiz physically did better than those who did it online. The results of both assessments show that students who have their assessments online tend to have difficulty with technology and cannot finish their quiz or their assignment on time. However, in the classroom, students could do their quiz or assignment successfully. In addition, students who have their quiz done by computer and not in the classroom tend to have problems when there is unexpected technology involved; some students might not know how to handle it immediately and that causes the

students to lose the time and the focus on their quiz. As for the students who have their quiz done in the classroom either by paper or computer, they still have the chance to ask for support from their teachers or for other assistance from the Information Technology staff. There is a significant difference when doing the assessment in a different environment or when using different tools. In the classroom, students are able to depend on their teachers and those who are there to support them when there are any unexpected problems. Unlike so, an online assessment can cause students difficulties in case of a technological problem. Since technology problems are very unexpected and there is no one to support the students while they try to see how to handle or to deal with them, this might affect the students' assessment, performance, and their feelings toward the test and the subject that they are studying.

Challenges of E-Learning on Students' Study Performance

E-learning has been recognized as a powerful learning method which improves students' performance, knowledge, and skills. The technical issue is the critical factor that influences the implementation of e-learning as students face the problems of accessibility and usability. In other words, it might not be a problem for the students who can afford to buy modern devices, but for the students who are not able to afford the latest technology, it may be difficult to study in the same environment. Even when students can afford modern devices, it does not mean that there would not be any challenges when using them. It might happen that the devices face unexpected technical error or that the internet connection becomes unstable. The study from Favale *et al.* (2020) has revealed that technical problems have decelerated the online teaching and learning process. Although technology integration is essential in enhancing the quality of the education system, a good level of technological skill is always required. Their study has found that 26.86 percent of students have encountered difficulties in technical issues, including those having less experience in technology. Based on the study of Shraim and Khlaif (2010), students had difficulties due to having insufficient skills in using electronic devices. E-learning fully relies on strong internet connection; however, lagging internet connection due to a shortage of electricity has caused difficulties in the implementation of e-learning, especially for students in rural areas. More than 63 percent of the respondents got distracted with e-learning due to the cutting off of electricity and the loss of internet connection (Subedi *et al.*, 2020). Similarly, the study from Kapasia *et al.* (2020) has stated that more than 32 percent of the students in India had faced difficulties in e-learning due to the lack of internet connectivity.

Electronic devices have provided students the opportunity to learn more effectively through e-learning during the global pandemic when schools are closed. However, having insufficient tools to access online classes or other materials has been a challenge in this implementation. Students are struggling with limited resources or

gadgets, which is the problem in adaptation of e-learning. As mentioned by Dhawan (2020), the difficulty in e-learning is due to not having enough devices, equipment, or proper tools to access online classes, as it may affect learning opportunities. This struggle which distracted the online learning process from achieving its full potential is a challenge for individuals. The research conducted by Kebritchi *et al.* (2017) has considered learners' expectation and participation as the issues of e-learning. Students have different paces of learning which makes online learning an uncomfortable and non-preferable learning method for some of them and it would lead to confusion and a decrease in level of confidence (Dhawan, 2020). Based on the findings, more than 77 percent of students prefer a classroom learning style which makes them feel demotivated in an e-learning environment. In addition, Kapasia (2020) has stated that 12.6 percent of students in India have encountered the unfavorable learning environment at home which has caused the denial of e-learning, mainly from students in rural areas. During this pandemic, there is concern for the quality of education provided by institutes through online teaching. Shifting from physical classes to online mode was a challenge for education providers to design an effective teaching methodology which covered the syllabus and attracted students' attention in learning (Kebritchi *et al.*, 2017). According to Subedi *et al.* (2020), the full learning content was not understandable during their online class for more than 67 percent of the respondents in Nepal. Furthermore, there is a concern regarding the course content in which students, lacking physical communication, found difficulties in understanding instructions.

Solutions for E-Learning to Improve Students' Study Performance

Responding to the challenges of e-learning which students have faced during COVID-19 due to technical difficulties, pre-recorded video lectures and content testing are suitable solutions to ensure that the teaching-learning process is not hampered; these will make online courses more dynamic, interesting, and interactive. Along with efforts to humanize the learning process to the best extent possible, personal attention should be provided to students so that they can easily adapt to the e-learning environment. For example, teachers should provide assessments that involve group work, and other apps could be utilized to help attract and capture the student's attention. Moreover, social media and various group forums can be used to communicate with students; since communication is the key in reaching out to students via texts, various messaging apps, video calls, and so on—content should be such that enables students to practice and also hone their skills. Other than social media, there are also other apps that can help engage students in the classroom, which can actually increase the students' activity online and not let them feel bored during classes.

Another point is the quality of the courses. Course quality should be improved continuously and teachers must try to give their best to keep the lessons interesting

enough to not bore the students with the lectures. Hence, online programs should be designed in such a way that they are creative, interactive, relevant, student-centered, and group-based (Partlow & Gibbs, 2003). Furthermore, educators must spend adequate time making effective strategies for giving online instructions; as effective online instructions bring positive feedback from learners, they encourage learners to ask questions and broaden the learning horizon of the course content (Keeton, 2004). Institutions must focus on pedagogical issues and emphasize collaborative learning, case learning, and project-based learning through online instructions (Kim & Bonk, 2006). According to Gunawardana (2005), these strategies can keep students in line with what they had learnt and can alert the students as although they are studying online, their involvement and performance are as important as when they were in physical classrooms.

Computer-literacy is an imperative precondition for learners to benefit from technology-based learning. E-learning can only be built on a set of basic computer literacy skills, and learners should go through an introductory session for each programme that focuses on professional development in the use of technology in the classroom. In fact, Information and Communication Technology (ICT) can be a part of the solution according to Manir (2007). If education and capacity-building are critical steps for entering into the new global economic and educational development, e-learning should be considered a critical facet of basic development, an alternative medium of capacity-building, and a means to people's empowerment. Furthermore, since motivation can be defined as the extent to which persistent effort is directed toward a goal (Johns, 1996), learning motivation can be understood as the extent to which a student makes persistent effort toward learning. At the same time, motivation can be determined intrinsically by individuals and externally by sources taking into account situational variables and environmental factors (Amabile *et al.*, 1994). To overcome the lack of self-motivation for e-learning, students can better involve themselves and show up for all the activities and lessons during sessions and stick to their study schedule time in order to ensure effective learning. Plus, although it might seem difficult, it is also better for students to stay positive toward online learning. Since there is no other way but to adapt with the new learning style, besides thinking that it is a challenge, it might be good to think that it is a new opportunity to learn new things and be able to adapt with the new changes. The flexibility of e-learning is a solution to people's commitments to their family or work which may increase the number of people who enrol in this type of education. In fact, this goes beyond the learners; it also gives flexibility to the instructors. In addition, educational institutions are implementing e-learning technologies to improve the communication among learners and instructors for better knowledge exchange as well as to strengthen the learning community to accomplish personal goals.

Key Concepts, Theories and Studies

The adjustment of classrooms and teaching methods are to encourage students to be involved in lessons and class activities, meaning class activities and students' participation are both important for students' performance. Similarly, students' class involvement and motivation are what students need for distance learning (Bonk & Wisher, 2000). It appears that other factors, such as class activities and student participation also have an impact on student study performance. Additionally, Nora and Snyder (2009) have stated that e-learning has an impact on students' grades and thinking skills. For example, students can use the internet for their research and social media for their online discussions.

The increase in the number of students participating in distance education supports online learning as a substitute for traditional classroom teaching. Martin and Bolliger (2018) found that icebreaker/introduction and working with online communication tools were the most important engagement ways among learners, while sending reminders and providing rubrics for assignments were the most important and beneficial in learner-instructor interactions. Similarly, many students were satisfied with online education which further revealed that e-learning can support higher education in countries where higher education institutions are limited.

Key Debates and Controversies

Students who did their assessments online did not have an effective result since they tended to have problems with the technology and could not promptly finish the quizzes or assignments. It shows that e-learning does not only impact a student's grade and thinking skill, but technology difficulties also affect the student's performance.

On the contrary, students' perceived barriers to online learning have been documented. Administrative issues, academic skills, social interactions, technical skills, learner motivation, time and support for studies, cost, and access to the internet and technical problems were some of the challenges associated with online learning.

Students without reliable internet access and/or technology have struggled to participate in digital learning; this gap is seen across countries and between income brackets within countries. For example, whilst 95 percent of students in Switzerland, Norway, and Austria have a computer to use for their schoolwork, only 34 percent in Indonesia do (OECD, 2020). In the US, there is a significant gap between those from privileged and disadvantaged backgrounds: whilst virtually all 15-year-olds from a privileged background said they had a computer to work on, nearly 25 percent of those from disadvantaged backgrounds had not, and to be noted that some schools and governments have also been providing digital equipment to students in need such as in New South Wales, Australia (Basak *et al.*, 2016).

STUDY DESIGN AND METHODS

This is a descriptive study which aims to find out the impact of e-learning on students' study performance, explore the challenges that influence their performance in the e-learning environment during COVID-19, and seek an effective solution to improve their study performance during the current pandemic.

This study was conducted using a mixed research method by combining both quantitative and qualitative methods. Primary data for the study were collected from the target respondents (students of the CamEd Business School in their first academic year 2020) through an online survey by using Google Forms. Several questions were designed and administered with an intention to investigate the impact of e-learning on the target students' study performance. Through the qualitative method, we have tried to get a deeper understanding of the students' difficulties and their preferred solutions during the current pandemic.

Sample Design

In order to determine the sample size for this study, we have used the Yemen (1967) formula by taking into account the population of the first-year students of the July - December 2020 term. The formula used to determine the sample size is as follows:

$$N = \frac{n}{1 + Ne^2}$$

Where,

n = Sample size of the study
N = Total population
e = Margin of error

Considering the total population (N) size as 490, with a seven percent (0.07) margin of error (e), the sample size of the study was determined as 144. Further, on the basis of the gender representation in the total population, for this study, 95 (66 percent) female students and 49 (34 percent) male students were picked up randomly through lottery to conduct the online survey.

Research Instrument and Data Collection

To collect the required primary data as per the study objectives, a semi-structured questionnaire was developed, and the survey was conducted via online Google Forms with the sample students pursuing their first-year program. However, the questionnaire was pre-tested and finalized based on the feedback received from a few sample students. The qualitative data for the study was also collected through an online Focus Group Discussion.

RESULTS AND DISCUSSIONS

Primary data collected from the study participants have been processed to meet the requirement for further analysis. As mentioned earlier, the study has comprised 66 percent female and 34 percent male sample respondents.

Respondents' Experience of E-Learning Prior to COVID-19 Pandemic

We were quite interested to know whether the study participants have possessed any e-learning experience prior to the COVID-19 pandemic, and if so, to what extent. The purpose of knowing this is to get an idea about their background in e-learning. It is revealed from the survey that while more than one-third (35.9 percent) of the study participants had not possessed any previous experience of e-learning at all, above half (53.3 percent) of them had acquired some sort of e-learning experience before the pandemic. However, only 10.9 percent of the respondents have felt that they had a good understanding and experience of e-learning prior to the COVID-19 pandemic.

Respondents' Understanding on Factors Affecting Study Performance

We felt that it was important to know the kind of understanding the study participants have with regard to the factors affecting their study performance. Given the choices of factors, while more than one-third (38 percent) of the participants have felt 'attendance and participation', the lowest percentage (17.4 percent) have considered it as 'communication and discussion'. Among the remaining participants, 26.1 percent have felt that the study performance is greatly influenced by assessments and grades, and finally, for 18.5 percent of the respondents, it was the behaviour and attitude in the classroom that influenced the study performance of students. Similarly, in the Focus Group Discussion, the participants have felt that their study performance was greatly influenced by their class attendance, participation in the class discussions, class quizzes, exams including their attitude and behavior toward learning.

Regarding the effect of e-learning on the respondents' study performance, while more than three-fourths (77.2 percent) have expressed their agreement, the remaining 22.8 percent of respondents have considered e-learning to have no effect on their study performance. To know the factors other than e-learning that influence study performance, a majority (37 percent) have considered 'schoolwork overload', followed by more than one-fifth (20.7 percent) of the participants who have felt 'self-influence'. The other factors such as finance (15.2 percent) and access to study material (14.1 percent) were considered by the participants that too influence their study performance.

Thus, in response to the question that "what do you consider to be the most important way to assess your performance" as can be seen, e-learning does not only have an impact on a student's grade and assessment, but attendance and participation

has also played an important role. In addition, the implementation of online studies has revealed a negative effect as students' performance have dropped due to a loss of concentration to the lessons taught although a few of them shared positive comments. Besides, factors such as poor internet connections, system error, lack of motivation, and lack of active interaction with the instructors are some of the factors that impacted study performance.

Respondents' Consideration of E-Learning Importance during COVID-19 Pandemic

Almost all the study participants (95 percent) have realized and are quite aware of the importance of e-learning during the current pandemic. In response to why the respondents think e-learning is important during COVID-19, an equal percentage of the respondents (40.2 percent) have cited the reason of 'healthcare and individual protection' and 'learning without any worries.' For other participants, the reasons were saving time and money, and convenience to learn. One additional benefit of e-learning as felt by the study participants was that teaching and learning can continue in a situation where both teachers and students were not in a position to travel to the institution.

In the Focus Group Discussion, the participants have also felt that the strong benefits of e-learning are its ability to save time involved in travelling and it being safe in terms of spreading the COVID-19 virus. Learning is also faster and flexible as they can learn from anywhere with an access to the internet. Other benefits as felt by them were being encouraged to learn and to know the advantages of e-learning as well.

Respondents' Satisfaction as E-Learning Users during the COVID-19 Pandemic

Even though more than 95 percent of the study participants have felt the importance of e-learning during the COVID-19 pandemic, as far as their level of satisfaction is concerned, it has varied widely (Table 12.1). The results from the 7-point Likert Scale show that while 42.4 percent of the sample students were moderately satisfied,

Table 12.1: Levels of Satisfaction of Respondents as E-Learning Users

Levels of Satisfaction						
Extremely Satisfied	*Moderately Satisfied*	*Slightly Satisfied*	*Neutral*	*Slightly Dissatisfied*	*Moderately Dissatisfied*	*Extremely Dissatisfied*
11 (7.6)	61 (42.4)	31 (21.5)	33 (22.9)	3 (2.1)	2 (1.4)	3 (2.1)

Note: Figures in parentheses represent percentage to total sample respondents.

Source: Primary data.

21.5 percent of them were slightly satisfied. Again, around 23 percent of the respondents have preferred to remain neutral (neither satisfied nor dissatisfied). It is important to know that only around 6 percent of the sample students were found to be dissatisfied as the users of e-learning.

However, contrary to the findings that a majority of the sample students have been satisfied with e-learning, more than half (56.5 percent) of them have expressed that e-learning should not be used after the COVID-19 pandemic. They have strongly felt that physical classes encourage them to have more active involvement in interactions, discussions, and communication while they are at school. As commented by some respondents "studying at school is an excellent way to prepare ourselves to live in the society". However, a number of respondents have also preferred the institution to offer them an opportunity to learn through both e-learning and physical learning.

Challenges Faced by Respondents as E-Learning Users

In spite of the satisfaction gained by the sample students as the users of e-learning, it has been revealed that the participants have experienced multiple forms of challenges in using technology as a mode of their learning. Overall, 70 percent of them have faced difficulties in some way or other. Toward understanding the challenges faced by the participants, it is found that while more than two-thirds (67.4 percent) of them have faced 'poor quality of Internet connection', above half (57.6 percent) of the participants have had challenges in 'accessing Internet', followed by 53.3 percent with other technical challenges (Figure 12.1). Likewise, in the Focus Group Discussion,

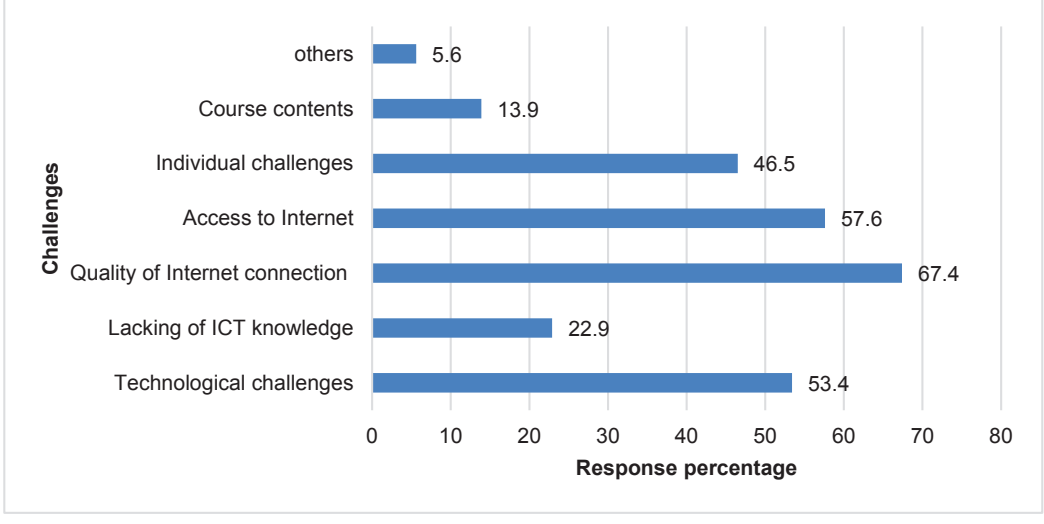

Figure 12.1: Challenges Faced by Respondents as E-Learning Users

Source: Primary data.

participants have felt that they lost their concentration in class due to poor and unstable internet connection, and this also affects their group discussions for doing some assignments. Further, they have realized that their interactions were limited during the online learning.

Thus, the challenges of e-learning encountered by the respondents are categorized as technical and individual challenges.

Poor Quality of Internet Connection

One of the most significant challenges faced by the study respondents was the poor quality of internet connection which distracted their attention from continuous learning and active participation in class activities. As revealed, more than two-thirds of the participants have felt this problem as a barrier to their learning process.

Limited Availability of Stable Internet Connection

During online learning, stable internet connection is required for accessing learning materials and sessions. As shown in the results, more than half of the surveyed respondents have expressed their problems in accessing stable internet connections. The problem becomes more serious during quizzes and exams when the stable internet connection is lost. This is a kind of distraction of e-learning which has resulted in poor study performance by some of the respondents.

Lack of ICT Knowledge

Nearly 23 percent of the surveyed respondents have expressed their inability to cope up with technical problems due to their limited ICT knowledge. They have viewed that their challenges with technical issues that occurred during the e-learning sessions, quizzes, or exams were due to their insufficient experiences in handling technology.

Individual Preferences of Students

As the pace of learning is different from one to the other, around one-fourth of the respondents have felt their preferences in classroom learning as being more motivational and encouraging. Limited interaction in e-learning is one of the significant factors for them to support in favour of physical learning.

Limited Learning of Full Course Contents

Though small in percentage, but close to 14 percent of the respondents have felt that e-learning has failed to engage them in a more effective way in certain course contents. A similar finding was found by Subedi *et al.* (2020) which had revealed that more than

67 percent of the respondents had considered the full learning content as not understandable during the online instructions.

Possible Ways to Overcome the Challenges

With regard to the challenges mentioned earlier, a few possible suggested actions were gathered from the respondents such as:

- Ensuring the stability of internet connection by the students through finding out their own suitable places from where they can learn without any interruptions.
- Making a provision by the institute to provide an extra course to students lacking ICT knowledge to improve their ability to use online applications and enhance their learning effectiveness.
- Ensuring to improve the quality of contents to engage the students actively in class participation and group discussions to make learning easy and encouraging.

CONCLUSION AND IMPLICATIONS

In its modest attempt, the study has revealed that e-learning has impacted students' study performance through their assessments and grades, participation, including their attitudes and behaviour. Based on the results of the study, the importance of e-learning during the presence of the COVID-19 pandemic has been well recognized. However, the difficulties and challenges involved in e-learning were felt by the learners.

The disruptions in internet connectivity, limited knowledge of ICT, students' learning preferences, and the lack of an active and engaged learning environment have slowed down the learning process, discouraged students, and brought certain amount of dissatisfaction to them to continue their online learning. To overcome these challenges, participants have suggested certain actions to make the learning process more active and enjoyable. Ensuring a stable internet connection to access the online classrooms, including participating in quizzes or tests, enhancing technical skills, and particularly ICT related knowledge and skills are required in an effective e-learning environment. It is also important to point out that the learners should stay actively involved in adapting to the new learning environment to maximize their learning benefits.

Keeping the importance of the study in mind, we recommend extending the study in terms of its geographic areas and number of institutions to generalize its findings and implications thereof. As the study had been conducted during COVID-19, to follow the protocol, we had opted for an online survey. However, future studies may be considered through a face-to-face direct personal interview with the respondents along with conducting physical Focus Group Discussions. However, in the absence of these, this study may be considered as an attempt to encourage other studies in the future in this direction.

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CHAPTER 13

The Impact of COVID-19 on Education: From Students' Perspectives

Hak Kimlong

INTRODUCTION

The spread of the novel Coronavirus or COVID-19 has severely disrupted international peace and security and posed a serious concern to the global politics and socio-economic aspects. Escalated in Wuhan, China at the end of 2019, the New Coronavirus has been officially declared as a Pandemic by the World Health Organization (WHO) in March 2020, during which 118,000 cases were confirmed (Ducharme, 2020). The Outbreak of COVID-19 has been widespread globally, now affecting more than 200 countries, and roughly 52 million confirmed cases with approximately 1.2 million death tolls (Worldometer, 2020). The impacts of the global pandemic have become a turning point of global health security, which will put a larger strain to the recession of many sectors, one of which is the educational sector. Coherent and cooperative responses from all relevant stakeholders from sub-nationals to the international level are essential to jointly combat the virus and seek preventive measures to resist a global crisis. Education has become one of the sectors which has been affected by the global pandemic as most of the infected nations including Cambodia are forced to impose lockdowns and restrictions on all institutions, entertainment venues and workplaces. Schools and educational institutions are too being suspended.

There was no exemption for the educational sector when it came to the outbreak of COVID-19. The closure of all educational institutions amid the global pandemic had unprecedentedly shifted the learning behaviors of students in all levels from primary to higher education. In March 2020, the Ministry of Education, Youth and Sport (MoEYS) of Cambodia announced the nationwide closure of all private and public schools and universities (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2020). Particularly in developing countries like Cambodia, the suspension of physical classes largely contributed a number of impacts on education during the pandemic period as there is a wide social gap and inequality in terms of social welfare for higher education, affecting millions of youth who were pursuing academic degrees (Flynn & Himel, 2020). Consequently, the impact of

COVID-19 on education has indicated both positive and negative characteristics, especially in the context of higher education.

RESEARCH QUESTIONS

This study aims to identify the impact of COVID-19 on education in Cambodia. Keeping this in mind, the study intends to provide answers to the following research questions:

- What are the positive impacts of COVID-19 on education in Cambodia?
- What are the negative impacts of COVID-19 on education in Cambodia?

RESEARCH OBJECTIVES

In attempts to answer the research questions, the study has taken one higher education institution in Phnom Penh, Cambodia as a case study in view of the following objectives:

- To ascertain the positive and negative impacts of COVID-19 on education in Cambodia in the context of CamEd Business School students.
- To understand the shifting of studying behaviors of students.
- To determine the academic performance of students during online education.

SIGNIFICANCE OF THE STUDY

The findings of this study clearly show the positive and negative consequences of COVID-19 on education considering the case of the study institution. The greater and higher awareness of impacts of COVID-19 on education justifies the needs for more effective and efficient learning and teaching approaches during and/or the post pandemic period. Also, the prior notices of the drawbacks provide the advantages for relevant stakeholders to seek for preventive measures and corrective actions to either avoid or minimize the possible impacts. Moreover, the research aims at understanding the students' behavior of learning in the new normal where all platforms are conducted remotely which promote the awareness of whether academic students have achieved better or worse performances amid acquiring online education.

SCOPE AND LIMITATIONS OF THE STUDY

Due to the presence of several physical constraints during COVID-19 as faced by the researcher, the study has been confined to certain limitations, particularly gathering the resources and evidence as well as the larger perspectives of the impact on education in Cambodia. The study focused on analyzing the key issues considering respondents

from the CamEd Business school, which is one of the leading higher educational institutions in Cambodia. Moreover, within CamEd Business School, it was unlikely to obtain results from each and every individual student, and thus, the study is not free from sampling error. However, for the purpose of this study, we determined the sample size following the statistics formula with a certain acceptable margin of error. As we collected the primary data from the sample students of the CamEd Business School, therefore, the scope of this research is limited to only CamEd students who are currently pursuing the Bachelor's program. Due to the presence of these limitations, the findings of this research may not be generalized to represent the entire educational sector in Cambodia.

LITERATURE REVIEW

The Impact of COVID-19 on the Global Educational Sector

The COVID-19 pandemic has escalated enormous disruption to global educational sector in various forms. Since the outbreak of the virus worldwide, back in March 2020, almost each and every educational institution in the world has announced the suspension and closure of classroom teaching. Hence, the new norm of education has shifted toward the distance and online learning approach through technological means. The emergence of digital education has largely contributed a number of consequences including affirmatives and negatives as there are challenges and opportunities embedded under e-learning platforms. Genuinely, educational accessibility has been a critical challenge long before the outbreak of the novel coronavirus, as of 2018, approximately 258 million children and youth were incapable of receiving proper education (UNESCO, 2019). In addition to this, the impact of the pandemic became another burden to the existing issue in the education sector. According to the United Nations (2020), 94 percent of students in the world were heavily affected by the transmission of the virus in April 2020 in which all classrooms were conducted via online platforms. Therefore, it creates numerous challenges for students in terms of technical infrastructures and accessibility for learning, particularly in poor and developing nations. Simply, students in least-developed-countries proportionally do not have the access to the internet and possess less technological equipment for learning, making online learning an unrealistic opportunity for them. For example, in Africa, only 29 percent of the schools and institutions were able to switch from physical to online education and 24 percent of teaching has been cancelled, forsaking millions of African students to stay outside the education cycles. Moreover, based on the same report, due to the occurrence of the pandemic, about 40 million children in the world have missed out their education during their early years (Marinoni *et al.*, 2020). The current global crisis highlights the urgent needs for the effective

implementation of policies and measures to recover and reignite the growth as well as to prevent prolonged stagnation.

Cambodia's Strategic Responses to the Pandemic

COVID-19 has posed numerous consequences to all sectoral aspects, and the degree of impact varies in accordance with the respective geographical and regional level which indicates the introduction of various policies and measures to tackle the issues and mitigate the impact. Cambodia, one of the developing countries in Southeast Asia, has accomplished a remarkable record in preventing the spread of the virus within the regional and international level. As of November 02, 2020, only 292 confirmed cases of COVID-19 were reported in Cambodia while 283 of who recovered with zero death rate and none of which cases were community infection (WHO, 2020). Notwithstanding that the infection was relatively low compared to other countries in the region, the negative consequences of socio-economic aspects are inevitable. In fact, the UN estimates the economic growth will shrink from 7.1 percent in 2019 to –4.1 percent in 2020 and roughly 17.6 percent of the population falls into impoverishment while the unemployment rate will increase to 4.8 percent (United Nations Office for the Coordination of Humanitarian Affairs [OCHA Service], 2020). In contemplation of mitigating of the impacts, all relevant stakeholders from sub-national to national levels devote to work collaboratively for a speedy recovery of economic slump. As a matter of fact, the Royal government of Cambodia (RGC) funded a US$300 million social protection program, under which the cash would ultimately finance the poor and vulnerable groups of people as a result of pandemic impacts. On the top of that, the government has also implemented the long-term strategic plans for economic recovery to address the deeper issues including the necessity of diversification and sustainability investment in preventing any long-term consequences. Significantly, according to OCHA Service (2020), the Royal Government has executed a five-pillar framework to combat the issue, reflecting the social dimensions for the recovery plan such as enhancing the national COVID-19 health plan, embracing social protection, resuming the economic activities, maintaining macroeconomic balance and stability and strengthening social unity and community resilience. Furthermore, Cambodia has aligned a close tie with the international organizations to enforce national policy framework including the United Nations agencies like the World Health Organization which provide technical support and medical supplies as well as the preventive guidelines and measures to halt the spread of the virus. Lastly, in terms of education, the Ministry of Education, Youth and Sport have provided various forms of pedagogies including an e-learning approach in the form of tele-broadcasting aiming at assist the students from low-income family who are incapable of affording technological accessories to get access to education amidst these hard times. On top of that, the Ministry of Education announced the

resumption and reopening of schools and educational institutions in Cambodia in three different phases with the strict adherence to the safety guidelines of Ministry of Health and preventive measures in the Standard Operating Procedures (SOP) including the limitation of numbers of students and maintaining high hygiene standard (Khorn, 2020).

STUDY METHODOLOGY

Following the background information, research questions and research objectives, forming study methodology is essential to carry out the research precisely in order to obtain answers to the questions. This part of the chapter focuses on the research design, data collection and data analysis.

Research Design

Following quantitative research methodology as the method of the study, mainly referring to data collection and analysis strategies, in this research, numerical data were collected in an attempt to determine whether or not there is a relationship between two or more variables. Primary data were collected through a survey using a structured questionnaire from the sample respondents. The cross-sectional design was used to demonstrate the changes in the studying behaviors and the performance as well as the academic results of CamEd students during the online learning period. Moreover, in order to enhance a better understanding and maximize the validity of our research, we used the data that we have collected from freshman to senior CamEd students to match with the research objectives as well as to accurately apply the responses to the main research questions.

Data Collection

Data accumulated for the purpose of the study were retrieved from both primary and secondary sources. Precisely, secondary data were retrieved from existing research articles and publications available on the websites. In this chapter we covered archival and official data reports from relevant international organizations, non-inter-governmental organizations to ensure the effectiveness and validity of the research. In addition, online surveys were conducted as a part of the primary source. The survey was mainly conducted via online Google Forms with the sample students who were enrolled in the courses. Moreover, the questionnaire consists of ordinal, multiple choices, scale and interval questions which aims to acquire the information and perspectives from respondents toward their online learning experiences during the pandemic. In order to determine sample size, this study has selected Slovin's formula (1960) as the means of measurement (Glen, 2012). Despite the following formula not being the most ideal type among researchers, it does not contain lots of

complexity in calculation. In accordance with the data from official CamEd Website (2020), during the 2019-2020 academic year, there was a total of 1942 students from year 1 to year 4 which represents the total population (N) of the research. Due to certain limitation, the confidence level of this research is only 90 percent which means that the alpha or margin of error (e) is 10 percent. As such, 96 students were the sample size for the research. Furthermore, a form of random sampling so-called Cluster sampling has been adopted as it involves selecting one definable subsection of the population as the sample that is taken to be representative. To be more precise, 24 students were selected randomly from each year to conduct the research. The following sample size formula (Slovin's formula) is used in the study:

$$n = \frac{N}{1 + N(e)^2}$$

Where,

n = Number of samples
N = Total population
e = Margin of error

Data Analysis

For the purpose of analyzing the data, descriptive statistics has been used in this study. It is a simple tool for measurement that provides a basic indication of value of the existing variables. Instantly, quantitative data are mainly used to analyze the learning experience of sample students, and all of the data collected were converted and analyzed through Microsoft Excel by establishing tables and graphs to indicate the specific outcomes.

FINDINGS AND DISCUSSIONS

COVID-19 pandemic has innovated new norms of education. Due to the lockdown and restrictions as well as the closure of all institutions, digital platforms have become the centered approach in the new normal. The changes have contributed a number of benefits to new learning styles for students. However, it is also quite essential not to overlook the drawbacks of online education as it would heavily affect to the future of global education. This chapter mainly aims to answer the research questions on the positive and negative impacts of COVID-19 on education.

Table 13.1 indicates the number of sample respondents along with their characteristics. As revealed, compared to male counterparts, the participation of female respondents was higher in the study. Again, compared to 21–25 years of age group students, the number of study participants in the 18–20 years age group was higher.

Table 13.1: Characteristics of Sample Respondents

Item	*Characteristics*	*Frequency*	*Percentage*
Gender	Male	42	43.75
	Female	53	55.21
	Other	1	1.04
Age	18–20	57	59.38
	21–25	39	40.63
Group of Study	A	15	15.63
	B	4	4.17
	C	1	1.04
	D	16	16.67
	E	14	14.58
	F	16	16.67
	G	3	3.13
	H	10	10.42
	I	12	12.50
	J	5	5.21

Source: Primary data.

Positive Impact of COVID-19 on Education

Student's Adaptability Toward New Learning Behaviors

Online education plays a key role in reinforcing the adaptable capability of students, particularly in the context of CamEd students. As a result of the survey, CamEd students tend to be adaptive to online learning as over 45 percent agree that adaptability to online learning is not the challenge. In fact, the first factor contributes to students' adaptability is due to the indication of the crucial role of Information Communication Technology (ICT) in higher education, especially during the pandemic. ICT becomes the new principle of pedagogy due to its utilization of distance education solutions including online platforms such as Zoom, Google Meet, Microsoft Teams and other social media. In addition to this, ICT highly promotes the accessibility to education as well as facilitate and mediate the learning process for both teachers and students (Sarik, 2020). Moreover, a complementary factor was due to readiness of the institution. Instantly, 81.25 percent of the sample collectively agreed and strongly agreed that CamEd Business School was well-prepared for online education. Therefore, the participation proportion of a respected educational

institution is necessary for students to quickly adapt with the shift of exiting paradigm. Furthermore, online learning fosters students' independent studying habits and enhance their flexibility in learning. Unlike physical classes where students could consult with their lecturers with face-to-face communication, online classes had disrupted the connection. Therefore, students become more independent and self-reliant for their own academic performance as well as increasing their flexibility for studying because the more independent students get, the more responsibilities they have to encounter. Based on the result of the survey as perceived by the respondents, their adaptability level is shown in Table 13.2.

Table 13.2: Sample Respondents' Adaptability to Online Learning

Respondents' Adaptability	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
I find it easy to adapt to online learning	19 (19.80)	44 (45.83)	27 (28.12)	6 (6.25)	0 (0.00)
Using technology for learning is not my difficulty	23 (23.96)	51 (53.13)	17 (17.71)	5 (5.20)	0 (0.00)
CamEd is technically well-prepared for online learning	29 (30.21)	49 (51.04)	16 (16.67)	2 (2.08)	0 (0.00)
I can access well to the internet connection	8 (8.33)	41 (42.71)	38 (39.58)	8 (8.33)	1 (1.04)
I am able to access to more online source via technology	15 (15.62)	59 (61.46)	19 (19.79)	3 (3.13)	0 (0.00)
Online classes enhances my technological skills	16 (16.67)	58 (60.42)	19 (19.79)	3 (3.13)	0 (0.00)
It gives me more flexibility in online learning	19 (19.79)	52 (54.17)	23 (23.96)	2 (2.08)	0 (0.00)
It fosters independence learning habit	13 (13.54)	57 (59.38)	22 (22.92)	4 (4.17)	0 (0.00)
I feel more comfortable for online learning	15 (15.63)	46 (47.92)	23 (23.96)	11 (11.46)	1 (1.04)

Note: Figures in the parentheses represent percentage to total sample respondents.
Source: Primary data.

Academic Results during Online Education

Despite the fact that COVID-19 has severely affect to global education in various ways, one of the positive impacts of online education is the dramatic improvement of students' academic results. In the context of CamEd students, the academic results

during the period of online classes tended to be higher compared to the average score they obtained before the closure of the schools. The data in the survey illustrate that during the second semester of JJ2019, during which physical classes were taken, the three highest average scores of the respondents were 70–74 percent, 75–79 percent and 80–84 percent while the three highest average scores of students during the conduction of online classes in the first semester of JJ2020 were 80–84 percent, 85–89 percent and 90–94 percent. This clearly indicates that the trend of results in physical classes is higher than online classes only from 60–79 percent of the average score range. On the other hand, it is higher for online classes from 80–100 percent of the average score range. Figure 13.1 presents the results of online classes which is higher than physical classes. Additionally, taking into account the grades, the total number of 'A' grades of the respondents before COVID-19 era was 150. However, a 30 percent increase was found when students shifted to online learning as the accumulated 'A' grades were 195 in total (Figure 13.2). The figure exhibits a better academic result of students when online or distance learning is implemented. Based on the result of the survey, the average score of students is shown in Figure 13.1.

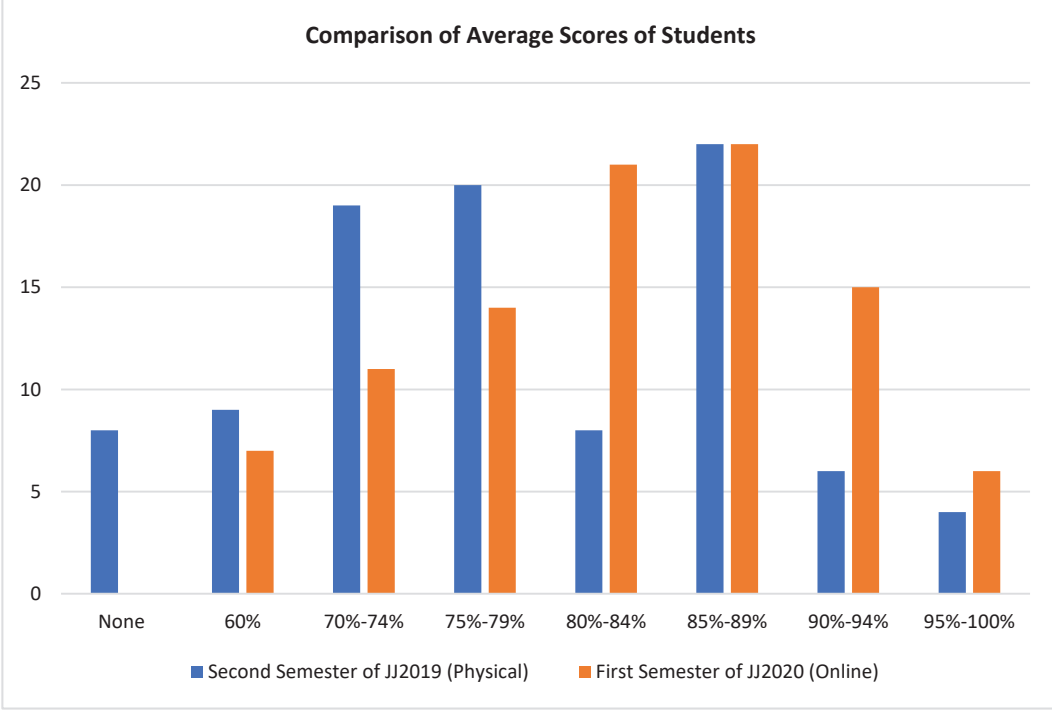

Figure 13.1: Comparison of Average Scores of Students Between Face-to-Face and Online Learning

Source: Data compiled by author.

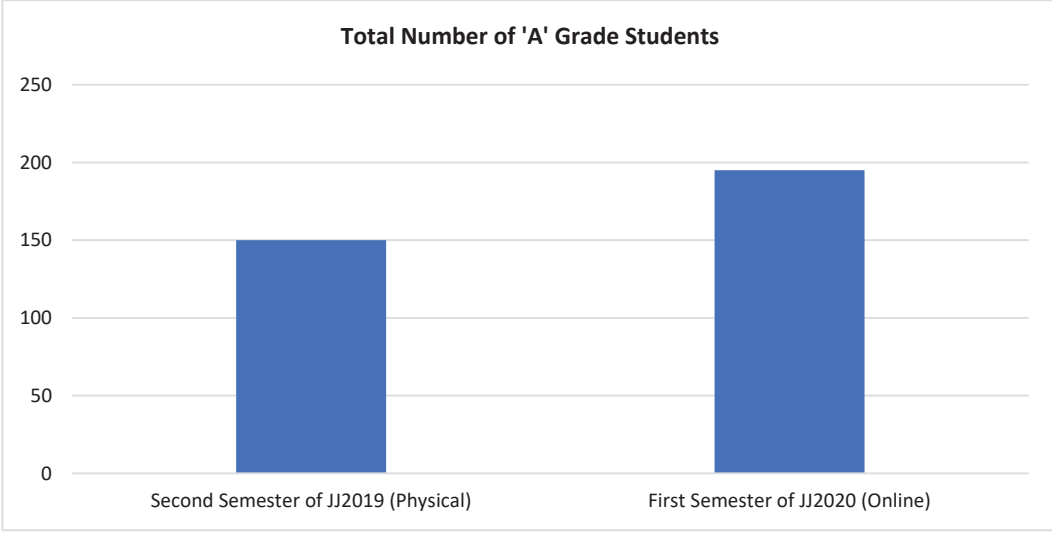

Figure 13.2: Total Number of 'A' Grade Students in Face-to-Face and Online Learning

Source: Data compiled by author.

Negative Impacts of COVID-19 on Education

Behavioral Deficiency

As all educational approaches are moving toward digital education amid the pandemic, students are likely to encounter with several negative consequences which possibly to some extent outweigh the benefits. Based on the survey of the sample students, it is revealed that one of the major bad impacts of online classes is the behavioral deficiency of students. The study measures students' learning behavior through the inquiries as to whether or not they used to skip online classes, reading more textbooks and fall asleep during classes. These factors audibly manifest the lack of self-discipline in learning. As a result, during online classes, 72 percent of students admit that they often fall asleep during the classes while 80.22 percent claim that they start to feel bored of online learning. Theoretically, there is a lack of motivation and willingness in online education, consequently, students tend to be less productive when they learn from home (Weele, 2020). Likewise, nearly 50 percent (46 out of 96) sample respondents disagree that they are productive in online classes. According to the result, there are several constraints behind the deficiency of learning behavior and the lack of self-discipline. Firstly, distance learning contains disruptions which lead to the loss of students' concentration. For instance, 43.75 percent of respondents confirm that they are incapable of focusing well on the lectures; therefore, it makes their performance deteriorated accordingly. Secondly, behavioral deficiency occurs due to the fact that students are incapable of setting up their own learning agendas. Based

on the responses, about 55 percent of students agree and strongly agree that they are dependent in organizing their studying schedule. Thus, loss of motivation in learning is likely to happen when students do not specify and adjust their own studying times well. Based on the result of the survey, the behavioral deficiency of sample students is shown in Table 13.3.

Table 13.3: Sample Respondents' Behavioral Deficiency

Respondents' Behavioral Deficiency	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
I can concentrate well	7 (7.29)	18 (18.75)	29 (30.21)	38 (39.58)	4 (4.17)
I read textbooks more	5 (5.21)	15 (15.62)	21 (21.88)	47 (48.96)	8 (8.33)
I increase my participation rate during online class	9 (9.38)	21 (21.88)	32 (33.33)	27 (28.12)	7 (7.29)
I spend more time on studying than before COVID-19 era	7 (7.29)	17 (17.71)	33 (34.38)	31 (32.29)	8 (8.33)
I occasionally fall asleep during class	17 (17.71)	53 (55.21)	19 (19.79)	6 (6.25)	1 (1.04)
Sometimes, I feel bored with the online class	22 (22.92)	55 (57.29)	15 (15.63)	3 (3.12)	1 (1.04)
During online learning, I used to skip classes	17 (17.71)	38 (39.58)	21 (21.88)	17 (17.71)	3 (3.12)
The more I learn in online class, the more fun I get	4 (4.17)	18 (18.75)	48 (50.00)	21 (21.88)	5 (5.21)
I am more productive in online class	5 (5.21)	19 (19.79)	27 (28.13)	42 (43.75)	3 (3.12)
I am dependent on setting my own learning agendas	11 (11.46)	42 (43.75)	37 (38.54)	6 (6.25)	0 (0.00)
I usually rewatch videos of classes	17 (17.71)	37 (38.54)	21 (21.88)	19 (19.79)	2 (2.08)

Note: Figures in the parentheses represent percentage to total sample respondents.
Source: Primary data.

Soft Skills Deficit

Adherence to the fact that COVID-19 has posed a great concern to the educational sector, one of the biggest concerns on education as a result of the impacts of COVID-19 on education is soft skills deficit. Genuinely, e-learning approach is implemented

with regard to social distancing measures which particularly isolate people from one another in attempts to prevent the spread of the virus. For that reason, the loss of social interaction and communication have become the new norm of living. Empirical evidence illustrates the deficit of soft skills in academic performances during periods when digital education was put into practice. According to Loveless (2020), soft skills mainly refer to non-academic skills which are complicated and hard to quantify, and typically soft skills are identified in the forms of communication, public speaking, and team-working. In terms of the educational field, online education lessens communication among the student-teacher relationship and student-student relationship. According to the survey, more than one-third respondents (35 out of 96 samples) disagree that they communicate more within their classmates. In addition to this, 37.5 percent admitted that the interaction with their lecturers were minimized during online classes. Therefore, the indication shows the sense of loss of interaction and communication skills among students. Secondly, public speaking skills is one of the components among soft skills which tend to have deteriorated. The survey shows that 39.58 percent of respondents confirm that they have encountered with less situations requiring presentation, while 35.42 percent maintained a neutral stance (Table 13.4). According to a research study, one of the main factors that lead to the lack of self-confidence in public speaking is the lack of practice (Nadiah *et al.*, 2019). With less physical public speaking and presentations, the deficit of those skills tends to be significant as these particular skills require practice and effort in order for students to get accustomed to presenting in front of classes or groups. Although students appear to obtain better academic results, they are encountering a trade-off with the vital soft skills required for their future.

Table 13.4: Sample Respondents' Soft Skills Deficit

Respondents' Soft Skills Deficit	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
During online classes, I communicate more with my classmates	9 (9.38)	11 (11.46)	33 (34.38)	35 (36.46)	8 (8.33)
I have done more presentations in online classes	6 (6.25)	18 (18.75)	34 (35.42)	32 (33.33)	6 (6.25)
I have interacted more with my lecturers in online classes	7 (7.29)	19 (19.79)	29 (30.21)	36 (37.50)	5 (5.21)
My lecturers assign more team discussions during online classes	5 (5.21)	28 (29.17)	30 (31.25)	28 (29.17)	5 (5.21)

Note: Figures in the parentheses represent percentage to total sample respondents.
Source: Primary data.

CONCLUSION AND IMPLICATIONS

In summary, it is undeniable that COVID-19 has hit hard all aspects of global sectors including education. The world has witnessed the unprecedented shift of pedagogy in education which have rotated the learning approaches to another level. The suspension and closure of physical institutions resulted in skyrocketed growth of digital education as all educational platforms moved toward online methodology. There is no doubt that the shifts toward e-learning have massively contributed a number of positive impacts for students. On the contrary, it is also important to consider the possible negative outcomes from such platforms. In the context of CamEd Business School students, as the online education is progressing continuously, it is worth to note that there are several significant positive and negative impacts of COVID-19 on education. Seemingly, with the temporarily lockdown of schools, students have developed the adaptive behavior in response to online learning in terms of ICT skills and independence learning habits. Moreover, during online classes, the majority of students have obtained more satisfactory and better academic results compared to the result in physical classes due to the fact that they have doubled their efforts for the examination. On the other hand, there are several drawbacks on their learning process as a result of COVID-19 and lockdown measures. With the research findings, learning from home can create a behavioral deficiency for students due to the lack of self-discipline and less concentration during their studying hour. In addition, students are likely to experience soft skills deficit as the level of their communication, collaboration, and public speaking skills becomes deteriorated over the period of online classes. Therefore, it is quite crucial for seeking measures in order to prevent larger constraints caused by these potential negative impacts, in which the measures shall be taken into account at individual and institutional level. Indeed, individuals shall use the strength to modify their weakness. For instance, online learning fosters independence. Thus, students should develop their independence to conduct a good learning agenda to keep themselves on the right track. At the institutional level, relevant stakeholders, especially lecturers need to identify the weaknesses and challenges that student might implicitly encounter. Notwithstanding teaching remotely, lecturers could assign the tasks and assignments in the same way as they would do in the physical classes. These are the practices which could mitigate the potential negative impacts. Otherwise, the constraints could expand and heavily affect the future of global education and human capital, especially in terms of soft skills development.

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The current COVID-19 pandemic poses an unprecedented impact on societies and economies around the world. The negative economic shocks intensified by the global pandemic, shutdowns and layoffs, create a devastating effect on the lives and livelihoods of millions. Indeed, over half-a-billion people perished due to the global health crisis. To combat the spread of the virus, governments curtailed the activities of non-essential industries which forced hundreds of millions of workers to get confined to their homes. While the pandemic sparked a global surge in the demand for e-commerce which has pushed many firms to create a digital presence to serve the growing market, the demand for specific sectors such as air transportation, tourism and non-essentials including hospitality and entertainment has vanished.

The Cambodian economy, which mostly depends on exports of garments, footwear and textiles; tourism; agriculture; and construction, contracted by 3.1 percent in 2020 (ADB, 2021) due to the global pandemic. As we started to learn about COVID-19 and its impact on public health and economy, CamEd Business School, a leading higher education institution in Cambodia, took the humble initiative to organize an *International Research Symposium* on November 15, 2020, to highlight—*How did a Health Crisis Translate to an Economic Crisis? The Impact of COVID-19 Pandemic*—which resulted in the outcome of this research-based book, COVID-19: The Economy and Society. While the Economy part relates to chapters such as economy, consumer behavior, informal workers, garment sector and logistics, the Society part focuses on education, online learning, creating shared value, civic participation and crowd funding for social issues. This book is a timely outcome and ideal for academic scholars, industry practitioners and government policymakers.

Contributors

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