COVID-19: COPING STRATEGIES AMONG B40 HOUSEHOLDS IN MALAYSIA TO ACHIEVE FOOD SECURITY DURING MOVEMENT CONTROL ORDER (MCO)

Ahmad Zubir Ibrahim
School of Government
Universiti Utara Malaysia
azubir@uum.edu.my
Zaheruddin Othman
School of Government
Universiti Utara Malaysia
zaher@uum.edu.my

ABSTRACT

This study assessed implications of the Coronavirus Disease 19 (COVID-19) pandemic on household food security among B40 households in Malaysia during Movement Control Order (MCO) using online survey data from 803 respondents. Results show that more 37.73 per cent the respondents experienced income shocks due to the COVID-19 crisis. For the coping strategies for that time, the study found that 83.31 per cent of these B40 households buy goods in stores that offer low prices, 3.74 per cent borrow money from relatives or neighbours to continue survival, picking vegetables around the house area with 32.28 per cent and 26.9 per cent to do business online. The results suggest that ongoing and future government responses should focus on structural changes in social protection by developing responsive for the long term and more focused to build up human capital among B40 households through skill and training to ensure the resilience of food security and sustainability among groups

Keywords: **Coping strategies, B40 households, Food security, Covid-19, Movement Control Order**

INTRODUCTION

In December 2019, a cluster of pneumonia cases, caused by a newly identified β-coronavirus, occurred in Wuhan, China. On January 12, 2020, the World Health Organisation (WHO) officially referred to the disease as coronavirus disease 2019 (COVID19). It proposed to name the new coronavirus as SARS-CoV-2, both released on February 11, 2020, by the International Committee's Coronavirus Research Group (CSG) (Guo et al., 2020). Thus, Covid-19, declared a pandemic by WHO on March 11, 2020, began as a health crisis but had in short order triggered a parallel and unfolding economic crisis with particular consequences for the poor and the vulnerable. Malaysia has been no exception. (Rahman & Matin, 2020).

The first Malaysian was confirmed with COVID-19 on February 4 2020. The 41-year-old man had recently returned from Singapore when a fever and cough began to develop. On March 16, 2020, the number of positive cases increased beyond 553 patients, and the Prime Minister of Malaysia declared a Movement Control Order (MCO). Social distancing had to be in place for 14 days to minimize the accelerated dissemination of COVID-19 (March 18 to March 31 2020). As of 10 April 2020, a total of 4,346 cases of COVID-19 were reported by MOH Malaysia, including 70 deaths and 1,830 recovered cases (Elengoe, 2020).

This situation directly affects livelihoods among B40 groups in Malaysia. The B40 group are measured as households that earn a household income of RM3,855 and below in 2014. (DOS, 2017). However, In 2019, the household groups. B40 is also classified as B1, B2, B3 and B4; This classification allows more focused planning, tracking and services to reduce the income disparity between households. (DOS, 2019). Furthermore, the B40 have low wealth and non-financial asset ownership, vulnerable to economic shocks and highly dependent on government assistance (UNDP 2020) to affect the situation.

The Department of Statistics Malaysia (2020) found that owing to the Covid-19 epidemic, almost 50 per cent of self-employed Malaysians are out of jobs since the Movement Control Order (MCO) was implemented. In the meantime, 23.8 per cent of them lost their companies, 28.3 per cent of employers experienced a drop in revenue, nearly 95 per cent experienced a decline in income, and of this, 35.5 per cent had their income dropped by more than 90 per cent. Thus, this study aimed to examine the coping strategies during Movement Control Order (MCO) due to the Covid-19 Pandemic on B40 households in Malaysia

LITERATURE REVIEW

Vulnerability is an essential aspect of reducing the likelihood of disasters. It is characterized as the degree to which a population or structure is likely to suffer harm due to hazard exposure (Prasetyo et al. 2020). In the meantime, vulnerability is described by the International Federation of Red Cross and Red Crescent Societies IFRCS (2006) as a level of threat to households or populations over risks to their lives and livelihoods. The insecurity of a family is determined by a household's ability to deal with hazards and disruptions such as famine, floods, government policy, war, and the crisis of HIV/AIDS. The shock's magnitude, length and timing are significant considerations. Although inherent vulnerability leads to increased risk in most problems, insecurity is not the same as poverty; the consequences of disasters are made worse when they are overlaid on a situation of widespread poverty. Households and populations employ defence techniques to escape the most extreme impacts of shocks and ensure adequate food supply.

Fekete (2009) points out that the commonality between these various terms is that vulnerability is seen as a structure that exposes elements to an external danger or sensitivity to harm. In contrast, resilience is seen as a plan's capacity to contend with, withstand, respond and recover from disasters. vulnerability and resilience are common to the shocks experienced by the socio-ecological environment, the reaction of the system and adaptive capability. However, their reasons for the vulnerability described above differ, as it depends on the nature of the hazard, the precise area, the local climate and socioeconomic activities.

According to this rationale, a vulnerability has particular geographical, socio-economic-demographic, cultural and structural contexts that can be expected under such circumstances of exposure, susceptibility and re-exposure. (Hamidi, Zeng, & Khan, & Khan (2020). UNISDR (2009) defines vulnerability as the characteristics of natural, physical and socioeconomic components that increase the susceptibility of a structure to hazards.

Meanwhile, Devereux, (2001) also explained vulnerability is determined in part by risk factors that are similar to a geographically related group of people or by mutual risk characteristics ('exposure'), and in part

by risk factors that are unique to individuals or individual households ('susceptibility'). While the whole population can face vulnerability to a challenge to livelihoods such as drought or food price inflation, exposure or resistance is distinguished between families, based on relative income and relative wealth.

Based on the discussion of definition vulnerability, pandemic COVID-19 as one part of exposure to affect the livelihoods among vulnerable groups especially. Many studies showed during Movement Control Order (MCO) or lockdown to effected the socioeconomic among low-income people. A study by Subki et al. (2020) found that 25per cent of women in Selangor Malaysia experienced a partial loss of income due to having their employment contracts terminated, being forced to shut down their business or being placed on unpaid leave. Moreover, 43per cent of women reported having lost household income due to MCO.

Loss of income was not associated with age, nor with being a single mother. Also, to a lesser extent, women with a monthly household income in the M40 category are affected, as 7per cent of them is either on unpaid leave or have closed their business, and 12per cent report having lost household income due to the MCO. Additionally, 42 per cent of single mothers had lost (part of) their household income due to having their contract terminated, closing their businesses or being placed on unpaid leave. The situation affected exacerbates pre-existing vulnerability, as one-quarter of these women had a monthly household income below the poverty line index (< RM 989). About half of the single mothers (45 per cent) reported having nobody else to care for their dependents while they were at work. When asked to evaluate their financial situation, the majority of single mothers (75per cent) felt that their savings would only last for a maximum of 4 weeks. Subki et al. (2020)

Also study by Steenbergen, (2020) among Coastal communities in Vanuatu found that this community loss of cash income, difficulties in accessing food and shifting pressures on particular resources and habitats during the lockdown. Also study by Kasar et al. (2020) in India find out 66 per cent of the workforce lost employment during the lockdown, with the impact being more severe in urban areas. Furthermore, those self-employed in agriculture were the least affected, while the urban self-employed was the worst affected with nearly 90 per cent of reporting a loss of employment. This situation caused the vast majority of households reduced their food intake during the lockdown. Around 86 per cent of households reporting a reduction in their food intake in the urban areas. On another indicator of vulnerability, this study also finds that approximately 64 per cent of urban households and 35 per cent of rural households did not have enough money to buy essentials for even a week. Although 25 per cent of farming households did not have enough money to purchase basic needs and 66 per cent less food intake, over 40 per cent and 80 per cent, respectively, primarily self-employed, temporary workers and even daily wage workers (Kasar et al. 2020)

In Bangladesh, Rahman & Matin (2020) also clarified that about 75 per cent of people in urban slam showed 63 per cent of people in rural areas less income. This condition has led to a decline in food expenditure per household of about 28% in urban slums and 23% in rural areas. The generalized essence of the income shock was underlined by little geographical variance. As can be seen later, families, through different coping strategies, attempt to control their food to offset the decrease in income for as long as they can. There is a decrease in food spending of 24 per cent of households with three meals a day in urban slums and 15 per cent in rural areas to impact food safety status among these individuals. These households have also decreased food intake by about 47% in urban slums and 32% in rural slums. In contrast to the decline in caloric intake per se, the drop in diet diversity seems to be a more pronounced first-order reaction to the crisis.

Rahman & Matin (2020) also clarified that about 75 per cent of people in urban slam showed 63 per cent of people in rural areas less income. This condition has led to a decline in food expenditure per household of about 28% in urban slums and 23% in rural areas. The generalized essence of the income shock was underlined by little geographical variance. As can be seen later, families, through different coping strategies, attempt to control their food to offset the decrease in income for as long as they can. There is a decrease in food spending of 24 per cent of households with three meals a day in urban slums and 15 per cent in rural areas to impact food safety status among these individuals. These households have also decreased food intake by about 47 per cent in urban slums and 32 per cent in rural slums. In contrast to the decline in caloric intake per se, the drop in diet diversity seems to be a more pronounced first-order reaction to the crisis.

During MCO, several diverse coping mechanisms must be introduced so that these individuals can thrive at this crucial moment. Coping methods are behaviours that individuals select as means of living in challenging times triggered by some shock to their usual livelihood and way of life. Strategies for early coping are not inherently uncommon, are reversible and do not inflict permanent harm. This situation may involve harvesting wild foods, selling non-essential land, or taking a member of the family to work elsewhere. More radical policies will permanently disrupt potential food security, such as land sales, the relocation of whole households to poverty or deforestation (IFRCS, 2006).

Davies (1996) further describes coping strategies as 'short-term responses to abnormal food tension' and adjustment as 'coping strategies that have been effectively adapted into the everyday event loop.' So to put it bluntly, coping strategies are reactions to adverse events or surprises, whereas adaptation strategies are adjustments to unhealthy habits or processes. Coping interventions are necessary because poor people are very vulnerable to income shocks, already surviving on inadequate incomes because they also lack an ass. Furthermore, Rashid, Langworthy, & Aradhyula (2006) defined the coping strategy as a general sequence of different types of techniques that are applied by households sequentially as the burden becomes more constant. Also, methods are coped within three categories: "current adjustment" "unsecured borrowing" and "secured borrowing/divestment."

Present adaptation methods include household strategies, moving to fewer favoured foods with lower cash prices, and reallocating household labour to raise current profits. Unsecured borrowing applies to borrowing that is not backed as collateral by supplying household assets; households borrow against potential planned incomes. Relatives, moneylenders, traders, and NGOs are the primary providers of unsecured borrowing— usually, NGOs target loans to disadvantaged families. Finally, by divesting assets or borrowing against assets owned by the household, households can deal with shocks.

METHOD

Data was collected using an online questionnaire launched in Bahasa Malaysia through Google forms. The questionnaire was sent to random respondents in Malaysia among B40 individuals using social media (WhatsApp). The social distancing and lockdowns caused by COVID-19 did not allow face-to-face interviews. The survey consisted of 30 questions and was conducted in less than 10 minutes. Within 10

days, a total of 803 respondents in the B40 group completed the analysis. The analysis was carried out in phase II after a further extension of the MCO to 3 weeks was announced by the MCO, until 14 April 2020.

Demographic and Socioeconomic Characteristics

From the data collection, there are 803 respondents (i.e. 391 male and 412 women, 709 Malays, Chinese 36 orang, 34 Indians and four other (Siam, Iban, Serani) participated in this study and were analyzed. More of the respondents (44.3 per cent) were middle-aged (26-35 years old), followed by those in the age group of below 25 years (23.7 per cent). 22.5per cent age group 36- 46 years and 9.34per cent above 46 years.

Of all the respondents, 59.5per cent was married, while 5.7 per cent were divorcees or widows, 34.7per cent was single living with their sisters, brothers or parents. Approximately 57.4per cent had 4 to 6 family members, 31.4per cent had 1 to 3 family members, 9.7 per cent had 7 to 9 family members, and 1.24per cent had more ten family members.

Table 1 showed the distribution respondent by the state in Malaysia based on range income. the range family income per month. 34.9 per cent B40 household income was RM2001 to RM 3000, followed by range income RM1000 to RM2000 (26.8per cent), 24.1 per cent range income RM3000 to RM4000 and 14.1per cent income below RM1000. The household income was based on the payment of the respondents and their spouses, other family members staying together in the household, part-time wages and monthly financial assistance. Majority of the B40 households (38.2 per cent) works in the private sector, 32.3 per cent as public servants,173 per cent own works and 12.2 per cent as a housewife.

.

Table.1: B40 households respondents by the state in Malaysia

State	B40 Income Category (person)				Total
	< RM 1000	RM 1000-RM 2000	RM2001-RM3000	RM3001-RM4000	
Perlis	2	3	13	8	26
Kedah	33	36	36	24	129
Pulau Pinang	11	39	32	22	104
Perak	9	13	26	15	63
Selangor	10	9	22	17	58
Negeri Sembilan	2	10	19	10	41
Johor	7	19	13	12	51
Pahang	2	13	23	11	49
Terengganu	7	9	18	6	40

Kelantan	12	12	18	10	52
Melaka	3	6	13	12	34
Sabah	5	5	5	10	25
Sarawak	7	20	24	20	71
W.P Kuala Lumpur	1	14	11	10	36
W.P Putrajaya	0	4	5	4	13
W.P Labuan	2	3	3	3	11
Total	113	215	281	194	803

Source: from the survey (2020)

B40 Households situation during Movement Control Order

Throughout the Movement Control Order (MCO), the average group of B40s faced the situation of rising prices of necessities as 69.49 per cent of the B40 group explained that they are facing an increase in the price of essential goods. The long duration of MCO also puts pressure on the B40 group. A total of 43.84 per cent stated that they were depressed during the MCO period. Panic purchases by the public during the MCO period also resulted in the insufficient food supply in the market, as much as 40.10 per cent explained that food supply was inadequate in the market.

During the MCO period, 26.44 per cent of B40 households survive hunger due to the affected source of income of 37.73 per cent. At the same time, 7.22 per cent of the B40 group lost their food supply and lost their jobs by 12.58 per cent. In ensuring survival, 42.56 per cent of this group ran out of savings and eventually had to starve due to food shortages (Table 2).

Table 2 B40 Households situation during Movement Control Order

Situation during MCO	B40 Income Category (per cent)				Total
	< RM 1000	RM 1000-RM 2000	RM2001-RM3000	RM3001-RM4000	(per cent)
Food shortages	1.37	2.37	2.37	1.12	7.22
Losing a job	3.49	5.48	3.36	0.25	12.58
Income affected	6.48	14.69	11.58	4.98	37.73
Hungry	1.49	8.97	10.21	3.99	24.66

Insufficient food supply in the market	3.99	12.58	16.06	7.47	40.10
Depression	6.35	15.19	15.19	7.10	43.84
Prices of basic necessities are rising	7.72	18.43	26.28	17.06	69.49
Out of savings	6.10	16.56	13.70	6.23	42.59

B40 households Coping Strategies During MCO

Based on Table 3 and Figure 1, coping strategies among B40 households groups are classified into three main themes, namely strategies on food, non-food and generating new resources. During the MCO period, almost the entire group was easily threatened with spending money frugally and giving priority to daily necessities only. 83.31 per cent of these B40 households buy goods in stores that offer low prices. There are also borrow money from relatives or neighbours to continue survival, but the number is relatively small at only 3.74 per cent

.In terms of ensuring adequate food supply in the household, the average B40 group prioritizes food to children. At the same time, they also reduce the amount of food intake and use their savings to buy food. Undoubtedly during the MCO, this group is too faced with a source of income affected and food shortage, so it is not surprising that this group will use savings to get food. Indirectly this scenario involves the position of protection in the household.

As a coping strategy during the MCO, B40 household collecting vegetables around the house area to be used as food, especially with 32.28 per cent. Storing household food is also used as one of the coping strategies during the MCO with 36.61 per cent. Also, B40 households buy food items on credit, but the number is small at 4.11 per cent.

To withstand while MCO, there are a small number of these B40 groups involved or starting a business online. A total of 26.9 per cent of these groups do place online while facing COVID-19. The efforts or actions taken by the B40 group by running an online business is the right action and should be commended to ensure that the source of income is not affected. At the same time, there are also affected people also try new jobs as such as Grab / E-hailing driver, Food Panda during the MCO period with 9.96 per cent. Ironically, in dealing with COVID-19, triggered a new paradigm and thinking among the B40 group in particular to find new sources of income.

Table 2 B40 Households Coping Strategies During MCO

| Coping Strategies	Income Categories				Total (per cent)
	< RM 1000 (per cent)	RM 1000-RM 2000 (per cent)	RM2001 - RM3000 (per cent)	RM3001-RM4000 (per cent)	
Non Food					
Thrifty	12.83	25.53	33.13	21.92	93.4
get help from the government	9.71	22.42	20.55	9.46	62.14
Prioritize daily necessities only	12.95	24.91	33.13	22.29	93.28
Borrow money	0.62	1.99	0.87	0.25	3.74
buy cheap stuff	9.46	21.42	30.51	21.92	83.31
Food					
Picking vegetables around the house	3.86	11.46	11.96	5.11	32.38
Buy food on credit	0.25	1.49	1.87	0.50	4.11
Using savings to buy food	9.09	20.17	16.81	7.72	53.80
Prioritize food to children	11.21	22.29	28.02	20.17	81.69
Reduce food intake	6.72	17.06	24.16	15.82	63.76
Painting food	3.99	13.57	13.45	5.60	36.61
Generate new income					
Starting an online business	5.11	8.72	9.34	3.74	26.90
Trying out a new job as Grab / E-hailing driver, Food Panda	1.62	2.99	4.36	1.00	9.96
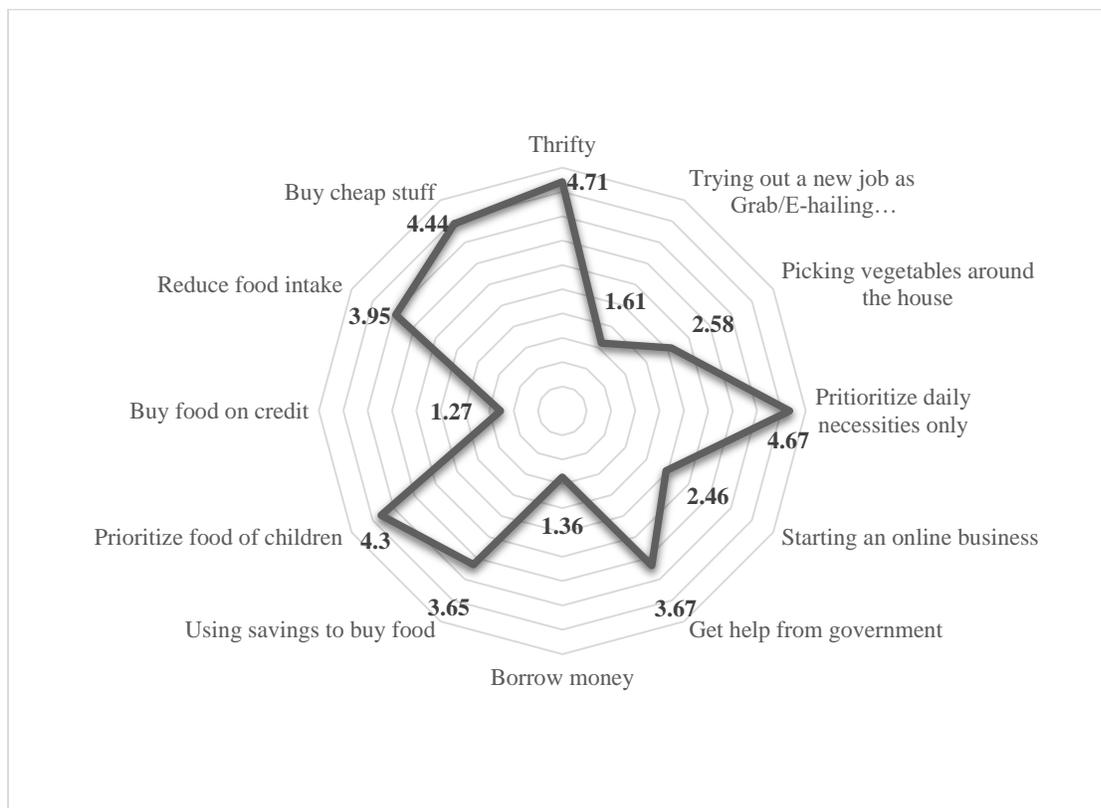
Figure 1: Mean Score Coping Strategy B40 households during Covid-19 Pandemic

DISCUSSION

COVID-19 has had a strong effect on both developing and vulnerable economies, leaving the most substantial detrimental impact on the status of household food security. In Malaysia, there is fear about the long-term economic implications of leaving millions of people without employment. This study attempted to describe the B40 household group's coping mechanisms in Malaysia to maintain food security during MCO. This study found that the mean number of B40 households affected livelihoods during MCO, especially from the perspective of food security. As predicted, the greater the number of jobs lost by B40, the lower the profits. In homes, this situation affects food welfare. For, e.g., losing a job during MCO often indicates more successful food safety status in families and also triggered emotional and depression during the pandemic era. B40 families are often faced with food shortages under usual circumstances due to household members (i.e. large household size, multiple school-going children, family members with disabilities and diseases) and poverty (Norhasmah, 2010). Therefore, due to various resource constraints and extensive sharing among household members, food intake was reduced, and this could lead to problems related to food insecurity and the additional pandemic, as well as to the food insecurity situation in this community.

The phase-out of the measures taken by the government of Malaysia is expected to help establish lockdown recovery strategies caused by COVID-19, which should hopefully be a priority for the most vulnerable. By concentrating first on the low populations, the planet should aim to overcome the detrimental consequences of COVID-19. The Malaysian government is introducing a stimulus package to protect this community, such as (i). Ten billion ringgit allocation for a one-off payment from supporting both B40 and M40, during MCO; (ii). Allocation of five hundred and thirty million ringgit to have 15-50 per cent discounts on energy

bills (iii). A special fund of 64.4 million ringgit to ensure food protection for farmers and fishing organizations who can grow food. Loan moratorium to be applied to include loans from TEKUN, MARA and cooperatives as well as government institutions offering loans to small and medium-sized enterprises; (v). 3.2 billion ringgit for the *Bantuan Sara Hidup* (vi). The six-month rental exemption, with 3 million ringgit in expenses to be paid by the government for those living at People's Housing Projects (Lim, 2020). For the long term, the government should provide full capacity among B40 households, primarily through skills, training and human capital among this population.

CONCLUSION

The COVID-19 pandemic is prompting B40 households to be vulnerable and underprivileged. As many emerging countries have a lot to do before the COVID-19 pandemic for people close or below the poverty line, unique protocols for possible lockdowns and national crises can be established to ensure that they meet the basic needs of the underprivileged.

Food security is a significant problem for B40 households and should be monitored in efforts to improve the status of food security in Malaysia, especially during the COVID-19 pandemic. Based on the study, the impact of B40 on households has been found to endanger food security in households. Because of this pandemic, many persons in this community lost less money and a career. The Malaysian government is introducing numerous social security initiatives to help disadvantaged communities through an economic stimulus package such as Bantuan Prihatin Nasional 1.0 and 2.0. In the long run, however, prevention programmes should be tailored to resolve diverse factors leading to household food security. Around the same time, policymakers should ensure that B40 families are not overly worried about their next meal or whether they will survive the lockout rather than suffer the pandemic.

IMPLICATIONS AND FUTURE RESEARCH

This research is also essential because it has contributed significantly to the formulation of the social safety net and legislation, especially for B40 households in the sense of vulnerability. Most notably, as the critical factor contributing to B40 household stability in the face of an epidemic, the theoretical ramifications of this analysis offer useful insights into demographic and socioeconomic characteristics. From the perspective of B40 families, the considerations explored to determine the critical effect of understanding the COVID-19 pandemic.

It is strongly recommended that robust post-pandemic studies within the B40 households be carried out. The required screening to classify at-risk families of vulnerability within B40 households should be done through government involvement through various relevant ministries conjunction with the private sector, non-governmental organization and zakat institution. This knowledge can be used to create and enforce intervention programs to ensure that adequate or sufficient quality of sustainable livelihoods can be obtained by the Malaysian people, especially vulnerable groups. Also, the evaluation of intervention projects should be carried out to ascertain their efficacy (Norhasmah et al., 2012).

ACKNOWLEDGE

REFRENCES

Davies, S. (1996) Adaptable Livelihoods. Basingstoke: Macmillan.

Devereux, S. (2001). Livelihood insecurity and social protection: a re-emerging issue in rural development. *Development policy review*, *19*(4), 507-519.

Elengoe, A. (2020). COVID-19 Outbreak in Malaysia. *Osong Public Health and Research Perspectives*, *11*(3), 93.

Fekete, Validation of a social vulnerability index in context to river-floods in Germany, Nat. Hazards Earth Syst. Sci. 9 (2009) 393–403, https://doi.org/ 10.5194/chess-9-393-2009.

Guo, Y. R., Cao, Q. D., Hong, Z. S., Tan, Y. Y., Chen, S. D., Jin, H. J., ... & Yan, Y. (2020). The origin, transmission and clinical therapies on coronavirus disease 2019 (COVID-19) outbreak–an update on the status. *Military Medical Research*, *7*(1), 1-10.

Hamidi, A. R., Zeng, Z., & Khan, M. A. (2020). Household vulnerability to floods and cyclones in Khyber Pakhtunkhwa, Pakistan. *International journal of disaster risk reduction*, *46*, 101496.

Lim. L.L (2020) *The socioeconomic impacts of COVID-19 in Malaysia: Policy review and guidance for protecting the most vulnerable and supporting enterprises*: International Labour Organization (ILO)

Norhasmah, S., Zalilah, M. S., Kandiah, M., Mohd Nasir, M. T., & Asnarulkhadi, A. S. (2012). Household food insecurity among urban welfare recipient households in Hulu Langat, Selangor. *Pertanika Journal of Social Science and Humanities*, *20*(2), 405-420.

UNDP (2020) Support In Developing National B40 Action Plan Using Innovative Bottom-Up Approaches. Retrieved from https://www.my.undp.org/content/malaysia/en /home/operations /projects/poverty_reduction/support-in-developing-national-b40-action-plan-using-innovative-.html

Rahman, H. Z., & Matin, I. (2020). Livelihoods, coping, and support during COVID-19 crisis. *Dhaka, BRAC Institute of Governance and Development*.

Subki, S. K. A., Tajari, R., Hussin, N. H., Dzulkifli, M. H., Kroneman, L., & Lin, L. S. (2020). Socio-Economic Impacts of Covid-19 Movement Control Order (MCO) on Women's Livelihoods in Selangor. *Policy*, *1*.

Steenbergen, D. J., Neihapi, P. T., Koran, D., Sami, A., Malverus, V., Ephraim, R., & Andrew, N. (2020). COVID-19 restrictions amidst cyclones and volcanoes: A rapid assessment of early impacts on livelihoods and food security in coastal communities in Vanuatu. *Marine policy*, 104199.

Kesar, S., Abraham, R., Lahoti, R., Nath, P., & Basole, A. (2020). Pandemic, informality, and Vulnerability: Impact of COVID-19 on livelihoods in India. *CSE Working Paper*, *2020*.

Prasetyo, Y. T., Senoro, D. B., German, J. D., Robielos, R. A. C., & Ney, F. P. (2020). Confirmatory factor analysis of vulnerability to natural hazards: A household Vulnerability Assessment in Marinduque Island, Philippines. *International Journal of Disaster Risk Reduction*, *50*, 101831.

UNISDR (2009), Terminology on Disaster Risk Reduction, United Nations International Strategy for Disaster Reduction (UNISDR), Geneva, Switzerland, Available online at https://www.unisdr.org/files/7817_UNISDRTerminologyEnglish.pdf.

Rashid, D. A., Langworthy, M., & Aradhyula, S. V. (2006). *Livelihood shocks and coping strategies: An empirical study of Bangladesh households* (No. 379-2016-21620).