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RESEARCH ARTICLE

Consumer adjustment spending habits due to the COVID-19 pandemic in Nakhon Ratchasima Province, Thailand

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ABSTRACT

Consumer spending fell drastically during the crisis of COVID-19 spreading. Fear of social distancing practices and outright closures for many industries led to a reduction of overtime, and unemployment and resulted in less income but higher prices. Consumer spending is the total money spent on foods and services by individuals for personal use and enjoyment. The research objective was to explore the variables of consumer adjustment in spending habits and saving patterns due to the COVID-19 crisis and to find out the associated consumer behavior patterns in the Nakhon Ratchasima Province of Thailand. The research design is quantitative method by using questionnaire as a tool. The four hundred participants provided valuable insights in consumer spending patterns. The research finding are the consumers in our research strongly agreed on the impact of the COVID-19 pandemic on the economy and consumer spending. Consumer goods were still purchased as usual but some time at a lower volume but certainly at lower quality. Hording reminded them of war time situations. The government relief program has positive effect on consumer spending by cost-of-living reduction. The only way out for low-income earners was an adjustment in spending. Due to crisis, consumers managed expenses by spending as needed.

Keywords: consumer behavior; consumer spending; COVID-19 impact; COVID-19 pandemic; purchasing goods; government relief program

1. Introduction

What started in December 2019 as a virus that originated in a market or from a world-renowned virus lab, COVID-19 was rapidly spreading across the world. We all have our own personal experience with COVID and the so-called anti-COVID measures. The world was naïve in hoping for a COVID vaccine which would be the silver bullet, while we still cannot irradicate the common cold and must come up with new vaccines for the various variants every year. So social distancing was the standard answer not much different from a few centuries ago when mankind dealt with pestilence. We also learned that the collateral damage of the crisis was much greater than the health risks and more people died from it than COVID. Currently, the world economic is returning to pre-crisis level, consumer spending is still getting low as consumer spends for only necessary items such as food. The spreading of COVID-19 influences marketing channel disruption, product prices changing, labor shortage and consumer demand. The customer satisfaction on product purchasing is reduced due to product supply chain disruption.

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The COVID-19 spreading in Thailand has been confirmed then the food supply chain was the first sector effected by COVID-19 spreading. Most of food manufacturing faced the difficulty of food transportation as the government lockdown policies. After food sector received the difficulty of COVID-19 pandemic, many business sectors faced the same problems. The consumers were changed behaviors particularly on spending as income shortage, inconvenience, and social distancing policy.

The COVID-19 pandemic has forced consumers in Nakhon Ratchasima Province, Thailand to adjust their spending habits in response to the crisis. Social distancing measures and income shortages have led to changes in consumer behavior, particularly with regards to spending on non-essential items.

We tried to find out how COVID impacted consumer spending in Nakhon Ratchasima a northern province of Thailand. The study questions are looked at the adjustment in the spending habits of consumers due to the COVID-19 influence in the following dimensions: the COVID-19 crisis impact, the importance of consumer goods, government relief program and adjustment in spending and the high influencing variable for consumer spending adjustment.

2. Literature review

The COVID-19 pandemic has had a profound impact on consumer behavior in Nakhon Ratchasima Province, Thailand, with changes in spending habits and the importance of consumer goods. The literature review provides valuable insights into the impact of the pandemic, but further research is needed to fully understand the implications of these changes.

The literature review is focused on the relationship between COVID-19 effects variables and consumer spending. The COVID-19 spreading and its collateral damage especially the impact of the health issues on the economy both the world economy and local economy. But what really matters is the impact on a personal level and the resulting consumer spending habits. The literature review used the systematic review method which shows in below.

2.1. Impact of the COVID-19 pandemic

Andreasen[1] provides a good introduction to consumer research. Walsh and Spiggle[2] said that brand has the association with consumer spending and four information have the influence on consumer behaviors. Thompson et al.[3] studied the relationship between consumer phenomena and consumer survey method, consumer behavior needs to have a specific evaluation method. Aziz et al.[4] presented that consumer characteristics roles have direct influence on consumer ethnocentrism and consumer purchasing behavior, this also was a component which we placed in our study. Farah and Nour[5] showed the positive relationship between consumer animosity and consumer ethnocentrism. The consumer ethnic has a positive correlation with animosity felling. Olafson and Pagel[6] showed the pay day is homogeneous and robust for all income and spending. Baker and Yannelis[7] said that the income and consume spending had already changed before the pandemic happened. It means consumers always aware of their spending.

Adda[8] showed that the virus spreading is related with the transportation activities. The transportation network expansions make the virous spreading rate increasing. Smaldone et al.[9] studied about the consumer behavior changing during the COVID-19 pandemic and found that consumer behaviors dramatically changed due to economic, social and safety policies implementation. Migliore et al.[10] said that the lockdown period has an influence on consumer behaviors which returned to ethnocentrism. The consumer behavior will be changed when the COVID-19 pandemic is over, they will have to consume more on local agri-food products.

Hypothesis1 (H1): The impact of the COVID-19 pandemic has positive effect on the importance of consumer goods.

Hypothesis 2 (H2): The importance of purchasing consumer goods has a positive effect on consumer spending adjustment.

Hypothesis 3 (H3): The impact of the COVID-19 pandemic has positive effect on government relief programs.

Hypothesis 4 (H4): The government relief programs have a positive effect on consumer spending adjustment.

Hypothesis 5 (H5): The impact of the COVID-19 pandemic has positive effect on the adjustment in spending.

Hypothesis 6 (H6): The government relief programs have a positive effect on the importance of consumer goods.

2.2. The importance of purchasing consumer goods

Belot et al.[11] studied the unequal effects of COVID-19 from 6 countries and found that the group of young people have the consequence of economics and psychology. The lower income group has more experience with economic suffering. The higher income group suffered more on their social welfare and spending habits. Di Renzo et al.[12] studied on the relationship between COVID-19 pandemic and consumer lifestyle, based on the finding that almost all consumers had the experience of anxious feeling and unhappy emotion. The female has more anxious moods than the male as their food habits have inclined. Goddard[13] found that COVID-19 has a significant impact on Canadian consumption habits. Almost 30% of dollars from Canadian consumers has shifted from food service sectors to retails service sectors as consumers prefer to use online purchasing. Hamadani et al.[14] reported that during the lockdown period caused by COVID-19 spreading in Bangladeshi, the number of consumers experiencing food security dramatically increased and the female was more anxious than the man due to taking care of their baby. Končar et al.[15] indicated that the retails sectors need to keep their food placement sustainability during the crisis by providing skilled workers, consistent food supply, and changes to consumer needs. As the COVID-19 has more influence on consumer behaviors then retails sectors must change.

2.3. Government relief programs

The government should impose the measure for food supply and production during COVID-19 spreading as consumers are guaranteed for sufficient food supply. Insch and McBrad[16] showed that consumer product perception depends mainly on country of origin (COO). Country of origin has a different effect on product design, product assembly and product origin. As the COVID-19 spread, many countries launched the product import restrictions which affected consumer perception of country of origin. Power et al.[17] researched how COVID-19 found that COVID-19 has more effect on the food security of the UK population and insecurity of food supply. The working hours decreased, and lockdown policy increased insecurity of food supply due to the food supply chain being fragmented. Savarese et al.[18] reported in Italy, the lifestyle of people has changed since the COVID-19 pandemic came, which influences their food choices and health conditions. People have less perception of immunity from food consumption, the younger people have lower levels of perception and have a lower healthy lifestyle. Stamu-O'Brien et al.[19] found that patients affected from COVID-19 infections showed more consequences of psychology and this infection will affect relationships and food habit consumption. Aladangady et al.[20] used the census survey method for consumer spending analysis and found that receiving the consumer spending data timely is very important for policy maker and marketer due to monthly spending being beneficial for real time evaluation, particularly during the government shutdown policy enforcement. Andersen et al.[21] found that consumer spending during COVID-19 spreading has

different dimensions. The spending has been dropped driven by virus risk and government restriction policies which created income risk and unemployment. Baker et al.[22] studied the impact of coronavirus to consumer spending and found that consumer spending had increased when the number of infections increased particularly on the major categories. The spending on retails, credit cards and food items significantly increased, however the overall consumer spending gradually declined when the coronavirus heavily spread. Bounie et al.[23] found the difference between online and offline consumer spending behaviors during the COVID-19 pandemic. The online consumer spending has increased when the social distancing and other restriction guidelines were implemented. The offline spending has decreased as consumers are still shocked with virus spreading. Carvalho et al.[24] studied electronic payment during the COVID-19 pandemic and found that consumers have adjusted spending strategies, they went to supermarkets less and purchased more on the necessary items such as food and medicine and often visited local groceries.

2.4. Adjustment in spending due to COVID-19 spreading

Armantier et al.[25] surveyed the consumer behaviors and expectation on the COVID-19 spreading. The results showed that consumer financials and expectations have deteriorated due to lower incomes, high inflation, and government restriction policies. The consumer labor market and financial expectation hung on the uncertain situation which caused careful spending. Almagro and Orane-Hutchinson[26] found that the need for government intervention for disparity mitigation is different in different consumer groups. The occupation played a significant role than race and income and made the consumer expectation declined. The recommendation is that crowded space has a more significant role than population density during the COVID-19 pandemic. Omar et al.[27] reported that the perception of scarcity and uncertainty during COVID-19 pandemic have an influence on anxiety but do not have the influence on consumer panic for purchasing. The anxiety is a mediated variable of perception of scarcity and uncertainty which causes panic purchasing behavior. Cappelli and Enrico[28] found that the COVID-19 pandemic made the local food supply shortage and food production interruption. Bartik et al.[29] found that small business enterprises laid off employees due to business temporarily closed during the COVID-19 spreading to minimize the operational costs. The financial situation is also fragile as revenue is less than expense. Some small business enterprises strongly believe that business will be disrupted when the COVID-19 spreads longer. Campello et al.[30] found that small business enterprises cut back the high skills workers more than low skills workers and temporary hail to recruit new staff. The COVID-19 spreading has an influence on the job market either new position hiring and low skill lay off. This situation surely has an effect on consumer purchasing behavior since consumers have less money for spending. Dingel and Neiman[31] evaluated the impact of COVID-19 on job occupancy and found that more than 37% of USA jobs can be entirely done at home. The job can be done at home paid at a higher rate than a job that cannot be done at home. The lower income of a job totally affects consumer spending as the cash on hand is less. Joyce and Xu[32] reported that the government lockdown policies have the effect on young workers and most of them from the shutdown business sectors. The low-income workers mainly from shutdown business sectors and the mitigation of low-income workers is really important for economic improvement. Chetty et al.[33] found that the high-income people sharply decreased spending during the high COVID-19 spreading and the business sectors requiring physical distancing also received lower revenue than pre-COVID-19 pandemic. The small business operators reduced staff who have fewer working skills and led to less consumer spending in the economy. Elgin et al.[34] reported that the government policies for COVID-19 endeavors are different which depended on the country's situations. However, the COVID-19 spreading caused the unemployment rate to increase and consumer spending to fall. The consumer spending is associated with the government economic policies implementation such as economic stimulus programs. Crawford et al.[35] reported that the COVID-19 pandemic caused the consumer spending shock as consumer perception lowered. The government fiscal

packages help consumer perception particularly for the lower income workers. The consumers prefer the adequately of fiscal stimulus packages since they improve income and easy access to credits. De Vito and Gómez[36] found that the liquidity of listed companies is low during the COVID-19 pandemic. The flexibility operation companies will be exhausted about cash holding more than two years which causes liability increased for cash crunch prevention. Most of the companies launched the expense control by reducing staff that affect consumer spending. Fernandes[37] found the relationship between COVID-19 crisis and economic development in 30 countries. The COVID-19 spreading created economic problems by affecting the job market, supply chain interruption and tourism deterioration. The countries dependent on the tourism industry and exported business would face severe effects on economic slowdown and consumer behavior.

The literature review also provided us with the theoretical underpinnings to create a model for analyzing the consumer spending behavior during the COVID-19 pandemic which shown in **Figure 1** and assisted us in the development of the research hypothesis to be tested.

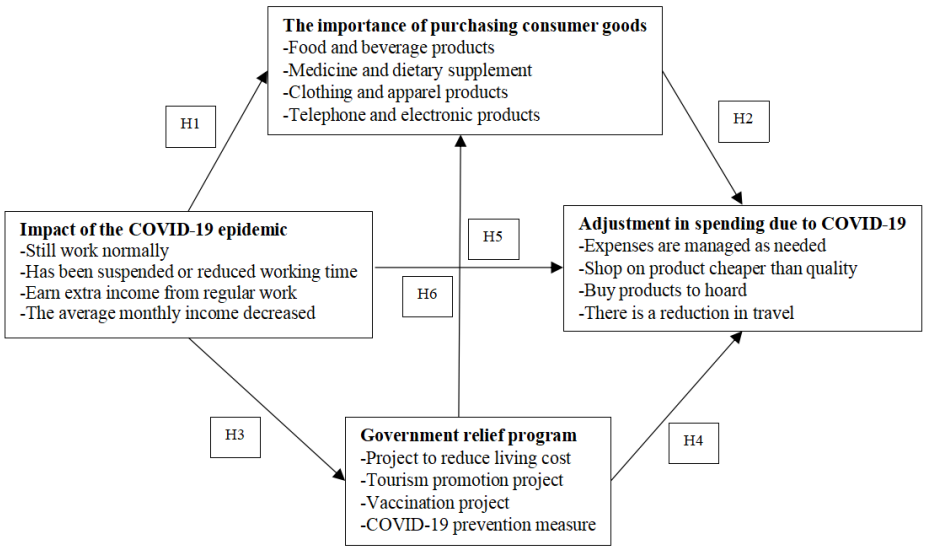

Figure 1. Conceptual research framework.

3. Methodology/materials

This research used qualitative research techniques as a tool for variables to find out the consumer spending related behavior. After appropriate variables identified then the quantitative research techniques were introduced by using the questionnaires. The sample for this research is 400 respondents who were randomly asked with the questionnaires by researchers that recommend by Decrop[38]. The study results were captured with the paper-based instrument in the form of a questionnaire and analyzed by using mean, standard deviation (SD) and correlation coefficients statistic as a descriptive research technique.

3.1. Population

The research population was the consumers in Thailand and more specifically the population of Nakhon Ratchasima Province of Thailand. Nakhon Ratchasima, also commonly known among Thai people as Korat, is a northeastern province in Thailand. This province is the major gateway to Isan which is a rural region neighboring Lao. The population actually increased during COVID times as many people who lost their jobs in Bangkok moved back home to the countryside. As Thai consumers are very similar to other Thai provinces it is fully hoped that this study variable will apply through other provinces.

3.2. Sample

Table 1 shows the demographics of respondents in Nakhon Ratchasima and the survey was conducted in various areas of the province including only Thai citizens excluding other nationalities that live in the province such as expats and migrant workers from neighboring countries like Laos, Cambodia and Myanmar. The majority respondents were female (64.5%) and between 21–30 years old (54%) followed by 26.4% being between 31–40 years old. The sample size is 400 respondents, the sample design was a technique of random convenience sample and the respondent demographics constitute of the Thailand demographics population.

Table 1 shows the majority (70%) of the participants in the study were working and income between 600 and 1200 USD per month. Less than ten percent of the respondents earned less than six hundred dollars a month and the same percentage (9%) earned between 1201 and 1800 USD. The 12% of the participants earned over 1800 USD which is relatively high for Thai standards. The main respondents came from Korat City and the provinces near Nakhon Ratchasima Province. The respondents (70.5%) had the education at high school level or even less as they might have dropped out of school at an earlier age or only attended middle school or vocational school. And 14% roughly one-eighth of the participants had a bachelor's degree in various majors. Interesting is the high percentage (8.8%) of the respondents with a master's degree. An amazing 6.7% had a postgraduate degree which included Ph.D. and M.D. which is also usual and represents part of the Thai population.

Table 1. Demographics of respondents.

Respondents	Number count	Percentage (%)
Gender		
Male	142	35.5
Female	258	64.5
Total	400	100%
Age		
<20 years	45	11.3
21–30 years	216	54.0
31–40 years	106	26.5
>41 years	33	8.2
Total	400	100%
Income (monthly)		
<600 USD	36	9.0
601–1200 USD	280	70.0
1201–1800 USD	36	9.0
>1801 USD	48	12.0
Total	400	100%
Education level		
Lower than bachelor degree	282	70.5
Bachelor degree	56	14.0
Master degree	35	8.8
Higher than master degree	27	6.7
Total	400	100

4. Results and findings

The results of this research can be presented in different categories such as impact of the COVID-19 pandemic, the importance of consumer goods, government relief programs and adjustment in spending as per the conceptual framework. The data was presented in the tables and their findings were explained under the conceptual framework. The statistics are correlation coefficients, mean and standard deviation.

4.1. COVID-19 pandemic impact

Table 2 shows the COVID-19 pandemic impact on the respondents was measured with a series of four questions. The participants mean of 4.05 and SD 0.67 who strongly agreed with the COVID-19 impact that they are still working normally same as before the pandemic. However, respondents also strongly agreed that the hours they work have been reduced and that work has been suspended completely with a mean of 4.04 and an SD of 1.13. Interestingly the lowest rank response was that the average monthly income from their regular work has been reduced with mean =3.22 and SD =1.09 which was agreed with COVID-19 impact. Slightly higher was the response to the question if they earn extra income from their regular work with mean 3.28 and SD 1.39. Overall, the respondents agreed on the impact of the COVID-19 pandemic with mean = 3.64 and SD = 1.05.

Table 2. Impact of the COVID-19 pandemic.

Variable	Mean	SD	Results
COVID-19 pandemic impact			
1) You are still working normally.	4.05	0.70	Strongly agreed
2) You have been suspended or reduced working time.	4.04	1.13	Strongly agreed
3) You earn extra income from your regular work.	3.28	1.39	Agreed
4) Your average monthly income has been decreased.	3.22	1.00	Agreed
Average	**3.64**	**1.05**	**Agreed**

4.2. The importance of purchasing consumer goods

Table 3 shows the importance of purchasing consumer goods was also measured with four questions. The questions followed the consumer goods product categories. Food and beverage products were found to be impacted in terms of price and availability and mean 3.68 and SD 0.70 were usually agreed upon by the respondents. Medicine and dietary supplements have also been agreed with mean 3.62 and SD 0.75. Apparel and cloth items ranked lower with a mean of 3.12 and an SD of 0.66. The uncontroversial agreed were telephone and electronic products such as computers with mean 3.12 and SD 0.79. Overall, the customers agreed with the importance of purchasing consumer goods with mean 3.49 and SD 0.73 which was agreed upon by the respondents.

The government relief program was strongly uncontroversial agreed with mean 4.08 when it came to reducing the cost of living and SD 0.63. The tourism promotion project was also strongly stipulatory with mean 4.01 and SD 0.67. The vacation project which was also a 50/50 match with a capped maximum was only agreed uncontroversial with mean 3.96 and SD 0.75 The least popular was the government-sponsored COVID-19 prevention measures with mean 3.82 and SD 0.78 which was uncontroversial agreed. Overall, the participants agreed with the government relief programs with a mean of 3.96 and SD of 0.75.

Table 3. The importance of purchasing consumer goods.

Variable	Mean	SD	Results
Impact of the COVID-19 pandemic			
1) You are still work normally.	4.05	0.70	Strongly agreed
2) You have been suspended or reduced working time.	4.04	1.13	Strongly agreed
3) You earn extra income from your regular work.	3.28	1.39	Agreed
4) Your average monthly income has been decreased.	3.22	1.00	Agreed
Average	**3.64**	**1.05**	**Agreed**
The importance of purchasing consumer goods			
1) Focus on food and beverage products.	3.68	0.70	Agreed
2) Focus on medicine and dietary supplements.	3.62	0.75	Agreed
3) Focus on clothing and apparel products.	3.54	0.66	Agreed
4) Focus on telephone and electronic products.	3.12	0.79	Agreed
Average	**3.49**	**0.73**	**Strongly agreed**
Government relief programs			
1) The project to reduce living cost.	4.08	0.63	Strongly agreed
2) The tourism promotion project.	4.01	0.66	Strongly agreed
3) The vaccination project.	3.96	0.76	Agreed
4) The COVID-19 prevention measure.	3.83	0.78	Agreed
Average	**3.96**	**0.75**	**Agreed**
Adjustment in spending due to COVID-19			
1) Expenses are managed as needed.	4.12	0.58	Strongly agreed
2) Shop on cheaper product rather than quality.	4.08	0.69	Strongly agreed
3) Purchasing product to hoard.	4.01	0.71	Strongly agreed
4) There is a reduction in travel.	3.97	0.72	Agreed
Average	**4.04**	**0.67**	**Strongly agreed**

4.3. Correlation estimation matrix

Table 4 shows the correlation estimation matrices, the component analysis and factor analysis in the first stage are required to test the variables supported the pre-research. The average variance extracted (AVE) which shows in **Table 5** is higher than correlation estimation in **Table 4** then the latent variables have supported the preliminary research. The correlation estimation between the COVID-19 pandemic impact and the importance of purchasing consumer goods is 0.582**, and with the government relief program, 0.612**, while the adjustment in spending is 0.489**. The correlation estimates between the importance of purchasing consumer goods and government relief programs is 0.591**. While the correlation estimate between government relief programs and adjustments in spending was found to be 0.583**.

Table 4. Correlation estimation matrix.

	Impact of the COVID-19 pandemic	The importance of purchasing consumer goods	Government relief program	Adjustment in spending
	Correlation estimation			
1) Impact of COVID-19 pandemic	1			
2) The importance of purchasing consumer goods	0.582**	1		

Table 4. (*Continued*).

	Impact of the COVID-19 pandemic	The importance of purchasing consumer goods	Government relief program	Adjustment in spending
	Correlation estimation			
3) Government relief program	0.612**	0.591**	1	
4) Adjustment in spending	0.489**	0.528**	0.583**	1

** Significant at the 0.01 level.

4.4. Measurement model

The measurement model is the first step for the model for variable measurements and ensure that the variables are number of construct representative. The confirmatory factor analysis (CFA) has been used for reject or confirm the observed variables which related to the latent variables. **Table 5** shows that the measurement models-impact of the COVID-19 pandemic, the importance of consumer goods, government relief program and adjustment in spending are within the acceptable ratio. The results demonstrate four latent variables which have factor loading (ranging from 0.614 to 0.814 and confirmatory factor analysis (CFA) results are higher than 0.6. For convergent and discriminant validity, confirmatory factor analysis (CFA) has been used to confirm the convergent and discriminant validity. The composite reliability (CR) and average variance extracted (AVE) values are higher than 0.7 and 0.5 respectively. Then, the results of composite reliability and average variance extracted represent for measurements of descriptive statistics and correlation.

Table 5. Measurement model.

Construct	Variables	Factor loading	CR	AVE
Impact of the COVID-19 pandemic (ICP)	ICP 1	0.653	0.993	0.83
	ICP 2	0.781		
	ICP 3	0.812		
	ICP 4	0.742		
The importance of consumer goods (ICG)	ICG 1	0.623	0.991	0.92
	ICG 2	0.721		
	ICG 3	0.753		
	IMT 4	0.689		
Government relief program (GRP)	GRP 1	0.741	0.992	0.87
	GRP 2	0.723		
	GRP 3	0.645		
	GRP 4	0.802		
Adjustment in spending (AIS)	AIS 1	0.684	0.994	0.91
	AIS 2	0.738		
	AIS 3	0.802		
	AIS 4	0.614		

4.5. Hypothesis testing

Table 6 demonstrates that the standardized estimations of the path coefficients are less than 1. Hypothesis testing and impact of the COVID-19 pandemic has a positive and significant relationship with the importance of consumer goods (H1) ($\beta = 0.21$*, and *P*-value = 0.002. The importance of consumer goods has a positive relationship and significant with adjustment in spending (H2) ($\beta = 0.49$***, and *P*-value = 0.003). The impact of the COVID-19 pandemic has a positive relationship and significant with the government relief program (H3)

(β = 0.43***, and *P*-value = 0.001). The government relief program has a positive relationship and significant with adjustment in spending (H4) (β = 0.31*** and *P*-value = 0.001). The impact of the COVID-19 pandemic has a positive and significant relationship with adjustment in spending (H5) (β = 0.82*** and *P*-value = 0.001). The government relief program has a positive relationship and significant with the importance of consumer goods (H6) (β = 0.63*** and *P*-value = 0.002).

Table 6. Hypothesis testing.

Hypothesis	Paths	Path coefficient	*P*-value	Relationship
H1	ICP → ICG	0.21*	0.002	Supported
H2	ICG → GRP	0.49***	0.003	Supported
H3	ICP → GRP	0.43**	0.001	Supported
H4	GRP → AIS	0.31***	0.001	Supported
H5	ICP→ AIS	0.82***	0.001	Supported
H6	GRP → ICG	0.63*	0.002	Supported

Note: * significant at 0.05 level, ** significant at 0.01 level, *** significant at 0.001 level.

5. Conclusion

The objectives of our research were to find out the parameters of consumer adjustment in spending due to the COVID-19 pandemic. As the second objective, we studied the consumer behavior parameters influenced by the COVID-19 virus and its collateral damages which are much greater than the health issues.

Based on the mean and standard deviation we found that COVID-19 impacted the Thai participants of the study in various ways. Most of the respondents still worked as usual. However, at the same time people also strongly agreed that they may be working less. This means little has changed in their work but the workload may have been reduced while the stress due to the uncertainty of the situation has increased. The same controversy exists when respondents agree that they are still getting paid for their work, but that the amount of overtime has been eliminated or reduced. When we look at the purchasing behavior of consumer products, we saw that food and beverages were still being purchased out of necessity. Some of the respondents increases the spending on medicine and dietary supplement out of fear of the health consequences of COVID-19 which were never clearly understood by the general population and they listened to the sensationalized of the crisis by the media. People bought less apparel products as many of the clothing stores were closed during the lockdown, at the same time fashion was less important during times of home office and homeschooling which resulted in savings in terms of clothing purchases. On the other hand, the spending for electronic good like smartphones and computers increased along with the spending on services required to study and work online. Thailand also ran several government reliefs programs. Most notable and probably successful was the 50/50 match when it came to food purchases in restaurants and from stores. Pre-approved individuals received a match up to a certain amount per month which essentially did cut their item cost in half, but not their spending as people often simply purchased more.

This program was strongly agreed upon by the respondents. There was a second program that also matched travel and hotel expenses which was often counterproductive in the big picture as it created mega spreader events and transported COVID-19 out of Bangkok to other provinces such as Nakhon Ratchasima. The vaccination project a worldwide project shows how crazy we as a herd can become. Believing that there will be a onetime wonder drug vaccine which would eradicate COVID-19 while we still could not even eliminate the common flue after centuries of research. So, this was a big government scam which benefitted the healthcare system but not the individuals, which may even have paid more than a hundred US dollars per

dose. And patients received up to four doses of various brands of vaccine until the virus became milder than the common flue. The COVID-19 prevention measures were similarly counterproductive. Same as in the Middle Ages the number one answer was social distancing, and lock downs along with wearing useless masks which were only window dressing showing that some action was taken. These measures were agreed upon by the respondents but their collateral damage on the economy was greater than their benefit except for some who got richer.

Adjustment in spending due to COVID-19 were necessarily for the majority of the low to middle income respondents who needed to manage their expenses. It was strongly agreed upon that individuals would focus more on quantity and less on quality when it came to making a purchasing decision. Hording products was another thing that occurred frequently during the COVID-19 crisis while in Europe the number one item to be horded was toilet paper, Thais were more practical and horded cooking oil and rice. A reduction in travel may have been more a consequence than a decision to be made by the consumers, as the borders were closed and Thailand opened relatively late in 2022 to allow tourists back in and Thai people to travel overseas. But also, domestic travel was heavily regulated by the Thai government which made it even hard to travel from one province to another during the pandemic which also triggered protest reactions by the general population. Travel banns were the main cause for the reduction in travel not the ack of desire to travel or frugal customer behavior.

When we look at the correlation matrix, we find that the highest correlation was between the impact of COVID-19 and government programs. The government was waving the flag for COVID-19 as they benefitted the most while appearing like the savior. Consumer goods purchases were the second highest impacted from focus on price rather than quality to hording essential food stocks. Adjustment of spending had the lowest correlation a typical Thai thing similar to other countries where people live hand to mouth. The measurement model was interesting and confirmed the findings we discussed above the loading factors (0.645–0.812) were pretty much the same and the CR value (0.87–0.993) also along with the AVE (0.83–0.92) for impact of the COVID-19 pandemic, importance of consumer goods purchases and government relief programs to adjustment in spending. When it came to testing the six hypotheses, we found that all of them were supported. (H1) Impact of the COVID-19 pandemic—importance of consumer goods, (H2) importance of consumer goods—adjustment in spending, (H3) impact of the COVID-19 pandemic—government relief program, (H4) government relief program—adjustment in spending, (H5) impact of the COVID-19 pandemic—adjustment in spending, (H6) government relief program—importance of consumer goods. The mediation analysis confirmed the hypothesis testing results. In our study hypothesis H1 explored the influence of impact of the COVID-19 pandemic on Importance of consumer goods with a direct effect of 0.21* and the hypothesis was supported by the mediation analysis. In hypothesis H2 we looked at Importance of consumer goods and how it influences adjustment in spending which showed a 0.273 indirect effect with partial mediation and the hypothesis was again supported. In hypothesis H3 impact of the COVID-19 pandemic influenced government relief programs which had an 0.502 indirect effect that showed full mediation and the hypothesis was strongly supported. None of our results are surprising as we all lived through the COVID-19 pandemic and had similar experiences in different countries worldwide. The rich got richer and the poor get poorer and the end of the crisis came as the media had a new topic that they could sensationalize the Ukraine-Russia military conflict which turned into a new Afghanistan. But in Thailand the consumers in our research strongly agreed on the impact of the COVID-19 pandemic on the economy and consumer spending. Consumer goods were still purchased some time at a lower volume but certainly at lower quality. Hording reminded them of war time situations. The government relief program helped the government more than it helped the poor people and the only way out for low-income earners was an adjustment in spending.

Recommendations: It is highly recommended to follow up this study over time with a larger sample of respondents from the Nakhon Ratchasima Province distinguishing urban and rural population. It also would be interesting to apply the same instrument outside of Nakhon Ratchasima in other Thai provinces and towns including Bangkok and surrounding areas as well as the cities of Chiangmai, Pattaya and Phuket. We may also expand the scope of the study and focus on different aspects of the COVID-19 pandemic and the collateral damage caused by it and its mismanagement by the authorities worldwide.

Practical implication for Asian business: As we all are aware consumer spending fell drastically worldwide during the COVID-19 pandemic for many reasons which resulted in less income and higher expenses for consumers. Many lost their job and ended up unemployed, especially those in the hospitality industry and tourism-related businesses. Other employees ended up working without overtime and reduced hours which made it hard to make ends meet as especially factory workers and blue-colored labor heavily rely on their overtime to make enough to support their families. Those faced with unemployment often left Bangkok and moved back to their upcountry roots such as Nakhon Ratchasima Province. Consumer adjustment in their spending habits due to the COVID-19 pandemic is a very practical real topic that impacted all of us and has very practical implications for both consumers and businesses alike. The study attempted to answer how consumers adjusted their spending habits, namely what they purchase and what their underlying purchasing decision-making process was. And, the reasons sometimes more importantly why consumers did not make certain purchases and opted to save their money instead. We found that most of the consumers reduced spending by focusing on essential items mainly food and medicine followed by clothing and telecommunication products. In general, consumers are more price conscious and focus more on quantity than on quality. On the practical side, that meant discounters were the big winners. Having said that it also meant that the volume consumers purchased decreased as they had less purchasing power. But during the COVID-19 crisis hoarding also took place which caused supply chain interruptions, in Thailand these items were mainly rice and cooking oil. The most useful way the government in Thailand stimulated the economy was through the 50/50 match. The 50-50 government co-payment scheme has generated accumulative spending in the billions of Thai baht with more than seven million people registered just in the first week and with over a million shops and street food vendors participating. Other government programs including the vaccination program proved to have a lesser positive impact on the economy, but certainly benefited those in power. Stimulating tourism was not effective while keeping the country closed and domestic travelers lacked the spending power to really revitalize travel in Thailand. The practical applications of this study also showed the winners in the COVID-19 crisis such as online businesses, home shopping, and food delivery. Entrepreneurs with little resources could cook at home in their apartments and compete with sit-down restaurants which were closed due to social distancing and had high overhead. Food delivery apps like food panda, lineman, grab, and Robinhood were other winners who benefitted from the consumer adjustments made due to COVID-19. The collateral damage of the COVID-19 crisis certainly out weighted the health issues, and a hard-hit economy is only slowly recovering. But for those keenly aware of the findings of this study, there is a silver lining in the future despite a new crisis the Ukraine war which further alters consumer spending especially related to energy issues.

Conflict of interest

The author declares no conflict of interest.

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