The Perceived Effects of Covid-19 on the Preferences and Expectations of Customers of Grocery Stores in Metro Manila

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Abstract

The novel coronavirus disease 2019 (COVID-19, caused by SARS-CoV-2) has spread globally and its impact cause many brick-and-mortar retailers including grocery stores to develop different strategies to operate amidst pandemic which includes revamping the area of facility management and layout, systems design and retail marketing. The objective of the study is (1) determine the relationship between the perceived COVID-19 effects and the buying expectations and preference of grocery customers, (2) determine the significance of the New Normal grocery operations strategy elements and practices and its moderating effect on the grocery customer buying expectations and preferences in view of the Covid-19 repercussions and (3) recommend a grocery operations strategy implementation platform to address the new buying preferences and expectations of grocery customers toward the new normal. With a sample size of 303 respondents of various individual that have experience buying grocery during pandemic answered the online questionnaire. Using Structural Equation Modeling (SEM), the result of the study showed that the COVID-19 effect have direct significant to the buying expectations and preference of grocery customers. Additionally the New Normal grocery operations strategy elements and practices also have significant direct effect to the buying expectations and preference of grocery customers.

Keywords

Grocery Store Operation Strategy, Consumer Buying Preferences, COVID-19 effect, Structural Equation Modeling (SEM), New Normal

1. Introduction

The novel coronavirus disease 2019 (COVID-19, caused by SARS-CoV-2) has spread globally and its impact on daily life continues to increase as individuals, government and businesses need to respond and consider measures to mitigate the risk of infection, assess the potential impact, and develop plans. Affected countries, like the Philippines, immediately conducted contact tracing, imposed a travel ban, and declared community quarantine for cities with a high incidence of Covid-19 cases (Amit et al., 2020).

This quarantine consisted of social distancing; travel ban; temporary closure of non-essential business establishments; encouragement of work-from-home arrangements; and prohibition of mass gatherings and non-essential public events. As the number of positive cases increased, the government implemented stricter home quarantine measures in all households, suspension in all forms of public transportation, regulation of the provision for food and essential health services; imposition of curfew hours; and selective allowance of commercial and retail establishments. Empirical evidence from few selected economies suggested that these measures have been effective in flattening the pandemic "curve" and significantly reducing the number of fatalities (Amit et al., 2020; Kraemer et al., 2020).

Containment measures to halt the spread of COVID-19 and limiting the number of fatalities has a very large adverse impact on transit mobility, trade, and retail that resulted in large short-term economic losses (Deb et al., 2020). The retail sector continues to be in a challenging environment brought about by COVID-19 and its immediate impact on the sector is the overall reduced spending, except for the essentials. This resulted in the decline in sales for retailers, but except for retailers of essential goods, groceries, and supermarkets which experienced an increase in demand

opportunity. For some major retailers that have already suffered growing competition from online stores, the crisis will be the last straw and they will either go out of business or permanently close a high proportion of physical stores, meaning that consumers will be unable to revert to former shopping habits (Hänninen et al., 2018).

The world attempts to return to normality but some things may have changed irrevocably particularly in the field of retail. Physical retail stores across the world were forcibly closed or upended during the lockdown period and opening up again is like operating in a different world. The pandemic caused many brick-and-mortar retailers, including supermarkets and groceries, to struggle to maintain revenue streams. With this, retailers develop different strategic approaches to survive. Many trends have become mainstream such as contactless shopping, appointment shopping, courier-engaged delivery, catalog sales, and order and pick-up arrangements (Storefront, 2020).

For retailers, they pay attention to the safety of both their employee and customer. Retailers need to consider longer cleaning and sanitation hours particularly in the morning or shorter operating hours due to external factors such as government ordinance. They limit the occupancy level of their store, which could be the most critical and problematic that retailers face moving forward. Some even consider changing the layout of their store such as creating transition space at the entrance, better pick-up point, creating one-way aisles, and revamping their fitting rooms while some even consider eliminating handles and knobs, show carts being sanitized, creating clean employee areas, eliminating kiosks and impulse displays and using different materials to discourage live viruses and bacteria (Horovitz, 2020).

At the start of the lockdown last March 2020, the total spending increased by 40% in different varieties of stores, then a sudden decrease at the end of march by 25%-30% in expenses like air travel and groceries (Baker et al., 2020). According to an article in grocery shopping preferences, the latest pattern in the number of new COVID-19 cases could affect customer behavior, as there is a chance of contamination in case of physical contact with other individuals (Grashuis et al., 2020). Consumer expenditure in every grocery store is still on the rise since it is the source of our necessities (Leatherby & Gelles, 2020), although the challenges that grocery stores face are the imbalance of supply and demand (Bhattarai, 2020).

Many areas in the retail industry are affected by the COVID-19 pandemic. Although some sectors gain while some have their losses, they still develop countermeasures or change their strategic approach to cope up with the effect of pandemic and slowly come back to normality. Many literatures describe the effect of COVID-19 on the grocery stores although many countermeasures and strategies are introduced, there is still a lack of evidence on how effective these new normal operation strategies and practices are to the adaptability of stores to operate successfully through the pandemic.

With this, retail stores face many critical factors that have to be considered to skillfully craft their operations strategy to continue their businesses during and after the pandemic. The study relates to consumers shopping in grocery stores for their necessities while facing some factors during this pandemic in Metro Manila. It is in this light that the following questions be addressed by this research undertaking: How can the retailer create an environment that the front-line employees and customers will feel safer? What changes do retailers need in their system and procedures to approach their customers to interact business with them?

The goal of this study is to determine the effects of COVID-19 as deemed by grocery store operators in terms of the perceived changes in customer buying preferences and expectations given the pandemic restrictions that will consequently lead to changes in buying habits toward the so-called New Normal. Thus, the research study aims to accomplish the following objectives (1) determine the relationship between the perceived COVID-19 effects and the buying expectations and preferences of grocery customers, (2) determine the significance of the New Normal grocery operations strategy elements and practices and its moderating effect on the grocery customer buying expectations and preferences in view of the Covid-19 repercussions, and (3) recommend a grocery operations strategy approach to address the new buying preferences and expectations of grocery customers toward the new normal.

The impact of the COVID-19 pandemic is deep and brought significant misery on people around the world, the global economy, and changed the retail landscape. The information this paper will provide is the insight on how deep COVID-19 affected the grocery stores as well as how effective new normal operation strategies and practices are to keep their store operation back on track. The result of the study can help grocery store owners identify which

particular area they should focus to develop or what strategic move should they implement or change to further cope up with the devastating effect of COVID-19 on the retail industry.

This study will focus on possible factors and determine the significant factors that online and traditional stores will face in the new normal and how it may affect their business's success. The researcher will use research articles and data gathering in business owners on what they are dealing with in the new normal then create a data framework to cover all the topics needed for this study.

2. Methodology

2.1. Conceptual Framework

The second chapter contains the research methodology that the researchers used for this study. It involved the methods of data gathering, design of survey instruments, and construction of SEM Framework. The study was then guided by the constructed conceptual framework. The study's primary aim is to determine the perceived effects of COVID-19 as well as to evaluate the significance of grocery's operations strategy and practices to the grocery's customer buying preference and expectation during the pandemic. Below is the conceptual framework for the study. See Figure 1.

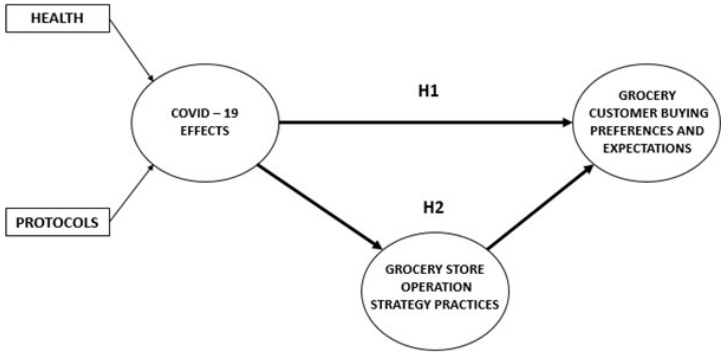

Figure 1. Conceptual Framework

To achieve the goal of identifying the perceived effects of Covid-19 on the preferences and expectations of customers of grocery stores in Metro Manila, the following hypothesis are below:

H10: There is no significant relationship between COVID - 19 factors and grocery customer expectations and preferences

H1a: There is a significant relationship between COVID - 19 factors and grocery customer expectations and preferences

H20: Grocery operations strategy and practices have no moderating effect on the relationship between Covid-19 effects and grocery customer expectations andpreferences

H2a: Grocery operations strategy and practices have a moderating effect on the relationship between Covid-19 effects and grocery customer expectations andpreferences

2.2. Proposed Framework for SEM Analysis

The study used SEM Framework as a tool for assessment in finding the perceived effects of Covid-19 on the preferences and expectations of customers of grocery stores in Metro Manila. See figure below:

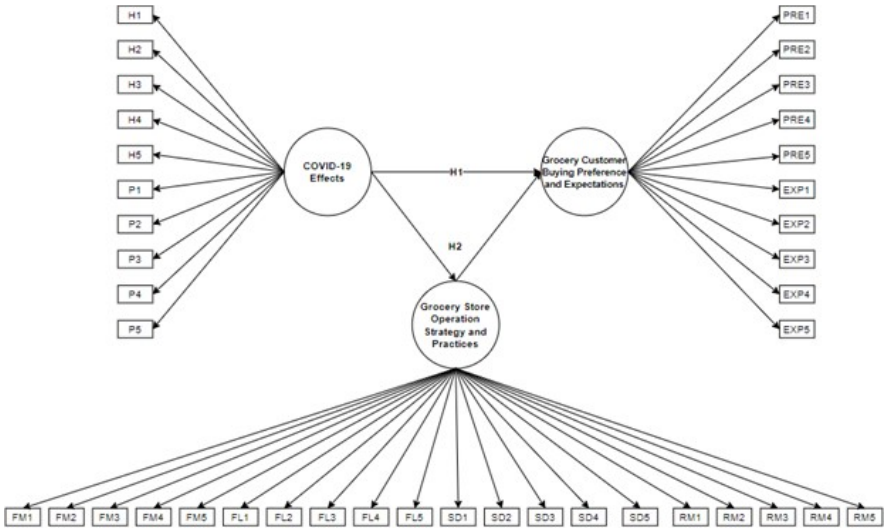

Figure 2. Proposed SEM Framework for Analysis

From the SEM framework (showed in Figure 2), there are 2 factors under the COVID-19 effect which is its effect in terms of health risk to buyers and government protocols and regulations. This includes the practices of buyers and retailers inside the grocery store such as social distancing, wearing of proper PPE, and if the grocery store follows the standard government protocols to contain and avoid the spread of COVID-19 in store premises. This study will prove the first hypothesis which is the direct effect of COVID-19 on the grocery customer expectations and preferences.

For the second hypothesis under the SEM framework, there are intervening effects of grocery store operation strategy practices between COVID-19 effects to the grocery customer expectations and preferences. There are strategies adopted by the grocery store to operate and survive the effect of the pandemic. This included the strategy in grocery store facility management and layout, systems design, and retail marketing. Facility management and layout include the flow of customer traffic inside the grocery store and physical layout to ensure space between buyers. Systems design encompasses grocery store strategy to cope up with the effect of COVID-19 such as limiting operating hours, controlling the number of customers inside the store, and other systems like integrating shopping into online platforms. Last is retail marketing, the grocery store strategy to attract customers either online or physically.

For the dependent variable in the framework, there are two factors which are the customer's expectation and preferences in the grocery store. The preferences of customers are divided into two parts which are online and physical shopping while the other part is the customer expectations.

2.3. Data Gathering

The researcher used a survey questionnaire (see Appendix) as an instrument for gathering information. The sample size is 303 respondents from grocery store customers around Metro Manila consisting of different work positions and titles regarding their perceptions on the difference brought by pandemic to the changes to the related protocols. An online questionnaire was distributed since it was not possible to do a community-based sampling during ECQ in Metro Manila. Questions focus on topics related to COVID-19 such as employee and customer health risk, safety procedures, and government protocols and regulations implemented per store to operate. Included also the grocery store operation strategy and practices during new normal in the area of facilities management and layout, supply distribution, and retail marketing that may affect the customer buying preferences and expectations. The sales information in terms of physical and online sales, as well as the number of store customer traffic visits, are also included in the questionnaire.

2.4. Data Analysis

The researcher then used Structural Equation Modeling (SEM) to test theoretical propositions using

nonexperimental data to show the causal relationship between variables. This technique is the combination of factor analysis and multiple regression analysis and will be used to analyze the structural relationship between measure variables (via the results of the questionnaire) and the latent constructs found in the conceptual framework. The SEM is widely recognized and used by many for theory testing in marketing and customer behavioral outcomes, identifying reliability of service quality, and other studies that need to evaluate non-observed latent variables calculated by various measures.

The data collected thru an online survey were extracted to MS Excel and then converted to SPSS Statistics. The SEM framework presented in Figure 2 is then drawn in SPSS AMOS. Using the data stored in SPSS Statistics, the researcher run SPSS AMOS and the initial SEM Model can be seen in Figure 3. To further analyze the model, the researcher gathers the data for the initial model fit test result which is tabulated in Table 1. After the assessment, the SEM model is improved by removing factor loading with less than 0.40 but the researcher also considered the low factor loading that they believed correlates with the latent and covaried error variables in the same latent factor through modification indices. Then the final SEM Model has projected in Figure 4 together with the final model fit test result in Table 2 which showed great improvement compare to the initial model fit test result. After generating the final SEM model and evaluating it as a good model fit thru analyzing the final model fit test result, the direct effect, indirect effect, total effect, and p-value are tabulated in Table 3 which are used for the interpretation of the result. The SEM is a way to determine significant factors or strength of relationship affecting the dependent variables of the construct, grocery customer buying preferences, and expectations. With the hypothesis mentioned above, the SEM can measure now the model fit the data set from the responses and can test the interrelationship between the ranges of variables.

2.5. Interpretation

The result of the SEM is used to determine the significant relationship among the range of variables and if a model fit is seen, firms before these are used to come up with a tactical and operational initiative for the store and new strategies and policies in the corporate business level to guide the operations of the grocery store as a front liner in providing product and services to its target market as affected by the pandemic and constrained by the new normal conditions and protocols.

The SEM is used to analyze and assess the latent factors and their measured variables. Determining the validity of measurement of the model can be done with the evaluation of model fit indices. The following metrics indices are observed to evaluate the model fit: minimum discrepancy per degree of freedom (CMIN/DF), root mean square error approximation (RMSEA), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), normed fit index (NFI), tucker lewis index (TLI), incremental fit index (IFI), comparative fit index (CFI) and root mean square residual (RMSR).

In AMOS, CMIN/DF is the minimum discrepancy per degree of freedom and the use of this ratio is suggested by several writers as a measure of fit. It is the standard metric for evaluating the overall fit of the model and CMIN/DF < 3 indicates an acceptable model fit between hypothetical model and sample data (Khline, 1998).

The incremental fit index (IFI) includes a factor that represents deviations from a null model, so these are sometimes called comparative indices. Comparative fit index (CFI) compares the proposed model with the performance of a null or baseline model in which there was no correlation between observed variables. The value of > 0.90 for both IFI and CFI suggests a good model fit (Hair, 2009).

Normed fit index (NFI) is the difference between the null model's chi-square and the target model's chi-square, divided by the null model's chi-square. This index's major downside is that it is sensitive to the sample size (Mulaik et al 1989; Bentler, 1990), hence, generally not recommended to be solely relied on (Khline, 2005). This problem was rectified by the Non-Normed fit index (NNFI), also known as the Tucker Lewis index (TLI), an index that developed against the disadvantage of NFI regarding being affected by sample size and prefers the simpler model with a suggested cut-off of 0.80 (Hooper et al., 2007).

The goodness of fit index (GFI) is a measure of fit between the hypothesized model and the observed covariance matrix while. Given the sensitivity of this index, it becomes less popular in recent years. The adjusted goodness of fit index (AGFI) corrects the GFI, which is affected by the number of indicators of each latent variable. With the given disadvantageous effect of the sample size of both GFI and AGFI, they are not relied upon as a standalone

index but still have their historical importance since they are often presented in covariance structure analysis. The root mean square residual (RMSR) is the square root of the difference between residuals of the sample covariance matrix and the hypothesized covariance model. The acceptable RMSR is 0.05, this value should be closer to 0 and both GFI and AGFI of > 0.80 suggested a good model fit (Gefen et al., 2000).

The root mean square error of approximation (RMSEA) let us know how well the model, with unknown but optimally chosen parameter estimates, would fit the population's covariance matrix (Bryne, 1998). It is widely used in Structural Equation Modelling (SEM) to provide a mechanism for adjusting for sample size where chi-square statistics are used. The stringent upper limit of 0.07 shows a good fit and seems to be the consensus amongst the authorities in this area (Steiger, 2007).

3. Results and Discussion

3.1. Initial SEM Framework Output

After gathering data through an online survey, the results are then processed and then converted to an excel file, and then transfer to SPSS Statistics in preparation of data for the AMOS. Using the AMOS and the input data gathered through the survey the initial result can be seen in Figure 3.

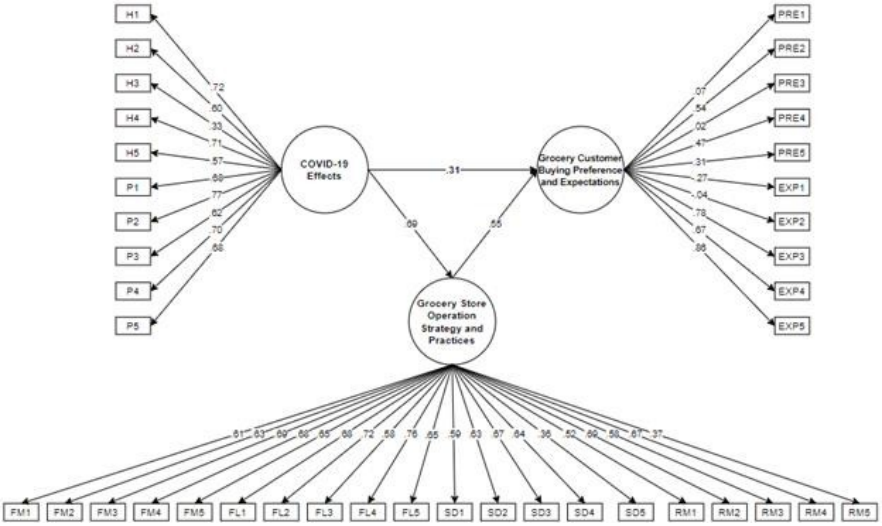

Figure 3. Initial SEM Framework

3.2. Initial Model Fit Test Result

Table 1. Initial Model Fit

Goodness of fit measures of the SEM	Parameters Estimates	Minimum Cut-off	Suggested by
CMIN/ DF (x^2/df)	4.105	< 3	Kline (1998)
Incremental Fit Index (IFI)	0.649	>0.90	Hair (2010)
Tucker Lewis Index (TLI)	0.626	>0.80	Hooper et al. (2008)
Normed Fit Index (NFI)	0.583	>0.90	Hooper et al. (2008)

Comparative Fit Index (CFI)	0.647	>0.90	Hair (2010)
Goodness of Fit Index (GFI)	0.601	>0.80	Gefen et al. (2000)
Adjusted Goodness of Fit Index (AGFI)	0.556	>0.80	Gefen et al. (2000)
Root Mean Square Residual (RMR)	0.087	<0.05	Gefen et al. (2000)
Root Mean Square Error of Approximation (RMSEA)	0.101	<0.07	Steiger (2007)

The initial SEM model was presented in Figure 3 which is used for assessing the structural relationship between measure variables and the latent factors. The results of the initial run using AMOS are reported in Table 1, which shows the initial model fit test result. Analyzing the result and comparing its parameter estimates to the suggested minimum cut-off based on different studies, the initial model was not a good model fit. With this, further modifications are made and some variables with a factor loading of less than 0.40 are removed to improve the model. The final SEM model was then shown in Figure 4.

3.3. Final SEM Framework Output

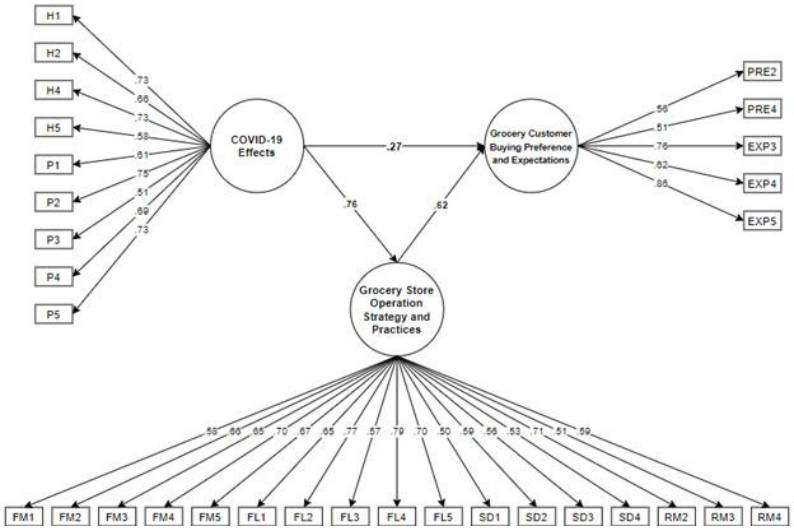

Figure 4. Final SEM Framework

3.4. Final Model Fit Test Result

Table 2. Final Model Fit

Goodness of fit measures of the SEM	**Parameters Estimates**	**Minimum Cut-off**	**Suggested by**
CMIN/ DF (x^2/df)	2.205	< 3	Kline (1998)
Incremental Fit Index (IFI)	0.913	>0.90	Hair (2010)
Tucker Lewis Index (TLI)	0.894	>0.80	Hooper et al. (2008)
Normed Fit Index (NFI)	0.852	>0.90	Hooper et al (2008)

Comparative Fit Index (CFI)	0.912	>0.90	Hair (2010)
Goodness of Fit Index (GFI)	0.848	>0.80	Gefen et al. (2000)
Adjusted Goodness of Fit Index (AGFI)	0.805	>0.80	Gefen et al. (2000)
Root Mean Square Residual (RMR)	0.049	<0.05	Gefen et al. (2000)
Root Mean Square Error of Approximation (RMSEA)	0.063	<0.07	Steiger (2007)

The final model fit test result presented in Table 2 showed a great improvement compared to the initial model fit result in Table 1. It shows the parameter estimates of each index and suggests minimum cut-off per criteria, which is used for the evaluation of model fit.

Chi-square in the final model measures 2.205, which is < 3 indicates an acceptable fit between the hypothetical model and sample data (Kline, 1998). Tucker Lewis Index (TLI) measures 0.894 which is acceptable and can pass as a good model fit according to (Hooper et al, 2008). Normed Fit Index which 0.583 in initial model fit improves up to 0.852. The Incremental Fit Index (IFI) improved from 0.649 to 0.913 and the Comparative Fit Index (CFI) measured 0.912 in the final model fit, hence easily passed the suggested minimum cut-off of 0.90 indicating an acceptable model fit (Hair, 2010).

The Goodness of Fit Index (GFI) projected 0.848 together with the Adjusted Goodness of Fit Index (AGFI) that measured 0.805 shown in the final model fit table (Table 2) which both passed the suggested minimum cut-off of 0.80 indicates a good model (Gefen et al., 2000). Additionally, the Root Mean Square Residual (RMSR) improved from the initial result of 0.087 to 0.049 as shown in the final model fit means that it also passes the minimum suggested cut-off. Root Mean Square Error of Approximation (RMSEA) which is one of the most informative indices measured 0.063 in the final model fit result shown in Table 2 passed the general threshold value of less than 0.07 indicates a good fit (Steiger, 2007).

To summarize, standard measures of fit for minimum discrepancy per degree of freedom (CMIN/DF), root mean square error approximation (RMSEA), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), tucker lewis index (TLI), incremental fit index (IFI), comparative fit index (CFI) and root mean square residual (RMSR) passed their designated minimum suggested cut-off shown in Table 2 which are indicative of a good fit and acceptable model. Lastly, the final model can be used to analyze the direct, indirect, and total effects of latent to each other.

3.5. Direct effect, indirect effect, and total effect

Table 3. Direct effect, indirect effect, and total effect

Variables	**Direct Effect**	**P-value**	**Indirect Effect**	**P-value**	**Total Effect**	**P-value**
CE → GCBPAE	0.273	0.001	0.470	0.001	0.743	0.001
CE → GSOSAP	0.758	0.001	-	-	0.758	0.001
GSOSAP → GCBPAE	0.620	0.001	-	-	0.620	0.001

The direct, indirect, and total effects of different latent factors are presented in Table 3. The Covid-19 Effect (CE) is shown to have a direct and indirect effect on Grocery Customer Buying Preference and Expectations (GCBPAE) (H1: β: 0.273, p= 0.001). Grashuis et al. (2020) said that the latest pattern in the number of new COVID-19 cases could affect customer buying behavior and preferences, as there is a chance of contamination in case of physical contact with other individuals.

Additionally, it is indicated that the COVID-19 Effect (CE) has a direct effect on Grocery Store Operations Strategy and Practices (β: 0.758, p= 0.001). Finally, the Grocery Store Operations Strategy and Practices (GSOSAP) is reported to have a direct effect on Grocery Customer Buying Preference and Expectations (GCBPAE) (H2: β: 0.620, p= 0.001). Horovitz (2020) discussed store strategies to cope with the post-pandemic world which include changing store layout, creating transition space, eliminating handle knobs and kiosks to discourage live viruses and bacteria.

In summary, for the first objective of the study which is determining the relationship between the perceived COVID-19 effects and the buying expectations and preferences of grocery customers, it is stated in Table 3 that it has a direct effect of 0.273 and an indirect effect of 0.470 with a total effect of 0.743 which suggested that the COVID-19 effect have direct significance to the buying expectations and preferences of grocery customers. Hence, the result of the first hypothesis is that there is a significant relationship between COVID - 19 factors and grocery customer expectations and preferences ($H1_a$). The findings of this research also correlate with findings by Eger et al, (2021) which show that consumer behavior during shopping in the COVID-19 pandemic is generally affected by fear for health and Accenture, (2020) claim that consumers have become centered on the most basic needs during a pandemic crisis. Additionally, the result is also supported by Celik & Dane, (2020), which claim that the COVID-19 pandemic outbreak has a powerful impact on food consumption preferences from various countries.

For the second objective of the study, which is determining the significance of the New Normal grocery operations strategy elements and practices and its moderating effect on the grocery customer buying expectations and preferences in view of the Covid-19 repercussions, it is presented in Table 3 that it has a direct effect of 0.620 which suggested a significant effect between grocery operations strategy and practices and buying expectations and preferences of grocery customer. The difference between the direct effect of Covid-19 to buying expectations and preferences of grocery customers (0.273) and the direct effect of using grocery operations strategy and practices to buying expectations and preferences of grocery customers (0.620) indicates the effectivity of strategy that grocery store implements during Covid-19 pandemic. With this, the result of the second hypothesis is that the grocery operations strategy and practices have a moderating effect on the relationship between Covid-19 effects and grocery customer expectations and preferences ($H2_a$**).** The result of the study correlates with the findings of Chen et al (2020), which claim that a large percentage of grocery customers utilizes the New Normal operation strategy in the form of online grocery shopping services and delivery-to-doorstep services, and further exemplifying an expanding market for online grocery shopping. Additionally, Chenarides et al (2021) support the claim saying that there is a spike in grocery store pick-up and delivery program participation of grocery consumers due to fearing of Covid-19 and feeling unsafe which further show the moderating effect of grocery operation strategy on customer buying expectation and preference in view of Covid-19 repercussions.

3.6. Recommendation

The researchers identified a strategy to interpret the SEM results. First, identify the significant factors in the standardized regression weights, since all of the results are up to the standard it is all significant. Next, choose high factor loadings in each latent presented to identify what the researchers will address in the study. The latent is COVID-19 effects, Grocery Store Operation Strategy, and Practices, and Grocery Customer Buying Preferences and Expectations. Researchers chose factor loadings that are higher than 0.4 since it is the standard for it to be significant. The following chosen factor loading are: P1 (0.612), P2 (0.747), P5 (0.732), FL2 (0.768), FL4 (0.795), SD2 (0.585), PRE2 (0.563), EXP3 (0.757), and EXP5 (0.862).

The SEM results discussed show that the recommended operations strategy addresses the new buying preference and expectations of grocery customers toward the new normal. Customer expectations are for grocery stores to prioritize customer safety and an employee wearing proper protective equipment. This is where protocols come in. Grocery stores are recommended to observe and check quarantine pass (issued by the government) to identify if the customer is scheduled to buy grocery on a specific day during GCQ, for the services of grocery stores apply the implementation of government regulation of social distancing and curfew, grocery stores checking temperature before entering the facility. According to results in customer preference, customers prefer going to grocery stores to buy their needs and necessities. This is where the facility layout comes in. The recommended facility layout, grocery store/s should display products such as alcohol, sanitizer, disinfectant, surgical mask, and other necessary products that is a necessity during a pandemic near the entrance or places where customer can easily see and locate and grocery store/s should have a one-way aisle and separate entrance & exit area. For the system's design, online shopping services should be provided by the grocery store. Similar to the claim of Campo & Breugelmans, (2015), the majority of consumers are less inclined to buy products online because of higher perceived online purchase risk.

Another recommendation that can be applied to grocery stores in Metro Manila, Philippines is called a curbside pick-up. According to an article "Is curbside pickup just getting started?" by RetailWire, it has been happening in the United States by major chains like Walmart, Best Buy, Dick's, etc. According to an article in Cowen & Co. Avoiding in-store navigation, skipping the checkout line, and not needing to dig for goods in the store are all advantages of curbside pickup. This operation has been applied to some food and clothing retail stores in the Philippines but not at grocery stores. The following are the procedure for the curbside pick-up.

Step 1: Consumers will choose the groceries online on their app or website.
Step 2: The consumer will park in the designated area of the chosen store
Step 3: Scan a QR code to check-in and text through the app that will notify the grocery store that the customer has arrived
Step 4: Wait for personnel to bring the bought products to their car.

The curbside pick-up method and the home delivery method have more marginal utilities and are more convenient to customers, who then need less time and effort to collect groceries while maintaining physical distance from other people, according to Grashuis et al (2020). It is also supported by Gawor & Hoberg (2019), who find great utility associated with the home delivery method as compared to the in-store pick-up method in a choice experimented with online consumers of electronics in the United States. One major issue while grocery shopping is that customers tend to touch most of the products which can lead to the spread of the disease. This system will help avoid customers from entering the facility where grocery stores can easily control the people who will have contact with the products and can easily sanitize the products being sold.

For future researchers, further studies can be addressed on how grocery stores in the Philippines can adjust to the four main phases of community quarantine which are modified general community quarantine (MGCQ), modified enhanced community quarantine (MECQ), general community quarantine (GCQ) and enhanced community quarantine (ECQ) and if the strategies made during quarantine are still applicable after the pandemic.

4. Conclusion

Novel coronavirus disease 2019 (COVID-19, caused by SARS-CoV-2) is a pandemic that affected the daily life of individuals, government, and business operations. Containment measures to halt the spread of the virus resulted in social distancing, self-isolation, travel restriction, curfew, reduced workforce across all economic sectors, and caused many jobs to be lost which sparked fear of impending economic crisis and recession globally. Brick-and-mortar retailers like supermarkets and groceries struggle to maintain revenue streams due to the COVID-19 pandemic. With this, retailers develop different strategic approaches to survive.

The general result of Structural Equation Modeling (SEM) indicates that the effect of COVID-19 had significant direct effects on the grocery customer buying preference and expectation.Grocery stores have been put under strain as a result of people's panic buying and stockpiling of food. The researchers identified a strategy to interpret the SEM results. First, identify the significant factors in the standardized regression weights, since all of the results shown are up to the standard it is all significant. Next, choose high factor loadings in each latent presented to identify what the researchers will address in the study. The latent is COVID-19 effects, Grocery Store Operation Strategy and Practices, and Grocery Customer Buying Preferences and Expectations. Researchers chose factor loadings that are higher than 0.4 since it is the standard for it to be significant. The following chosen factor loading are: P1 (0.612), P2 (0.747), P5 (0.732), FL2 (0.768), FL4 (0.795), SD2 (0.585), PRE2 (0.563), EXP3 (0.757), and EXP5 (0.862). These results show that the recommended operations strategy to the new buying preference and expectations of grocery customers toward the new normal are addressed.

Interestingly, the operations strategy and practices that grocery stores develop to cope up with pandemic have a significant direct effect on the grocery customer's buying preference and expectation. This includes changing and developing strategies in the area of facility management and layout, systems design, and retail marketing.

Results of the SEM indicate that strategy under protocols should be given importance since customers want their safety prioritized. Facility management and layout of the grocery store are also addressed since customers prefer going to grocery stores to buy their needs and necessities, this way facility layout should be given attention. It

includes limiting customer inside the grocery store, creating enough transition space, separate entrance and exit, creating one-way aisle, manning fresh goods to minimize contact, proper display of in-demand products like alcohol and sanitizer, organized waiting for the area, and equipping of Plexiglas shield have a significant effect to customer preference and expectation. Additionally, strategy under systems design, online shopping services, pick up and store-to-home services, and restricting the amount of each product that an individual can purchase also have a significant effect.

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