Library Progress International *Print version ISSN 0970 1052*
Vol.44 No. 3, July-December 2024: P.23632-23644 *Online version ISSN 2320 317X*

Original Article *Available online at www.bpasjournals.com*

Marketing strategies of farmers and middlemen on selected locally produced vegetables during the Covid-19 pandemic

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How to cite this article: Rosalyn P. Alburo, Hemres M. Alburo, Roberto Cutillar, Tylo Junior L. van Steenhuyse, Lorelie Q. Escabal (2024). Marketing strategies of farmers and middlemen on selected locally produced vegetables during the Covid-19 pandemic. *Library Progress International,* 44(3), 23632-23644

ABSTRACT
This study investigates the marketing strategies employed by farmers, middlemen, and resellers in the production and trade of locally produced vegetables—cabbage, pechay, and spring onions—during the Covid-19 pandemic. Focusing on respondents from four cities and 12 municipalities in Cebu, Philippines, the research explores the challenges faced by smallholder farmers, middlemen, and resellers, accentuated by mobility restrictions, supply chain disruptions, and shifts in consumer behavior. A total of 745 farmers, 48 middlemen, and 412 resellers were surveyed, revealing the multifaceted impacts of the pandemic on the agricultural sector.
The findings underscore the vulnerability of High-Value Crop (HVC) farmers. Market inactivity, transportation constraints, and price fluctuations emerged as critical challenges faced by stakeholders. The study provides insights into adaptive strategies employed by farmers, middlemen, and resellers, emphasizing the need for targeted interventions to enhance supply chain resilience and market access.
Implications drawn from the study emphasize the importance of policy interventions and capacity-building initiatives to support the long-term sustainability of local vegetable production and trade. This study serves as a foundation for further research endeavors aimed at enhancing the resilience and sustainability of local vegetable markets in the post-pandemic era.

KEYWORDS
Agricultural marketing, Covid-19 pandemic, high-value crops, marketing strategies

1. Introduction
In agricultural production and marketing, logistics is a key factor as it entails transportation and storage activities. Marketing of perishable commodities poses additional problems, especially for local smallholder farmers. Rola-Rubzen et al. (2013) note that these farmers face numerous constraints: poor quality products & low returns for their produce, lack of technical know-how, inefficient or non-optimal input use, and poor postharvest practices. The lack of postharvest facilities in the Philippines causes farmers to incur significant losses. Farmers were noted as having a lack of market power, as the immediate need to sell their harvest lessens their capacity to bargain, forcing most to sell at lower prices due to the perishable nature of these commodities (Quintana et al., 2022). The Covid-19 pandemic has amplified the abovementioned problems already faced by farmers, with mobility restrictions and other protocols severely inhibiting agricultural production and marketing.

The Covid-19 pandemic created widespread shocks to the supply chain, affecting all relevant sectors, particularly, agriculture. The restrictions on the movement of people and goods due to the pandemic created constraints in the food system, including food spoilage issues due to congestion at delivery points and general lack of capacity to store crops, closure of markets and workplaces, absences of cold-chain storage, and the inability to access input supply (Espino et al., 2021).

An evaluation by the National Economic Development Authority (NEDA) revealed that High-Value Crop (HVC) farmers were the most affected during the pandemic, with HVC farming having the highest income loss amounting to P36.8 million, with P388 thousand in direct losses from unsold HVC produce in Central Visayas (Inter-Agency Task Force for the Management of Emerging Infectious Diseases – Technical Working Group for Anticipatory and Forward Planning [IATF – TWG for AFP], 2020). Espino et al. (2020) outlined in their study six of the most impacted areas on the local agri-food system during the pandemic: farming and agricultural production; distribution and transport; food sources and sales points; food environment: food availability and affordability; diets and food consumption; and food security.

This paper sought to identify and assess strategies adopted in marketing cabbage, pechay, and leaf onion during the pandemic. The respondents in the study are farmers and middlemen, who produce and trade said vegetables in Mantalongon, Dalaguete; Nug-as, Alcoy; and Sudlon, Cebu City. Meanwhile, the resellers interviewed are small retailers marketing said vegetables in public markets and sari-sari stores throughout the Cebu province.

2. Objectives

Generally, the study aims to assess the marketing strategies of farmers and middlemen on selected locally produced vegetables during the Covid-19 pandemic

Specifically, the study aims to:

1. Understand how the COVID-19 pandemic affected the marketing of local vegetables by farmers and middlemen in Cebu, Philippines;
2. Identify strategies used by farmers, middlemen, and resellers to address challenges in selling during the pandemic;
3. Explore how changes in market demand and access impacted local vegetable producers;
4. Provide insights for potential policy interventions that can help make local vegetable marketing more stable and resilient in future crises.

3. Scope and Methodology

3.1. The Study Sites

The project was conducted in three selected areas namely Nug-as, Alcoy; Mantalongon, Dalaguete; and Sudlon, Cebu City, Cebu, Philippines. Most of the cabbages, pechay, and spring onions are produced in these areas. Likewise, interviews of middlemen/resellers were also conducted in 15 randomly selected cities/municipalities of the province.

3.1.1 Nug-as, Alcoy

Nug-as is a barangay in the municipality of Alcoy, located approximately 105 km southeast of Cebu City. The said barangay has a vegetable landing area with market days every Tuesday, Wednesday, Friday, and Saturday. While Nug-as hosts the largest patch of natural forest in Cebu it also has farm areas planted with cabbage, pechay, and spring onions among other vegetables. Similar crops are also grown in its surrounding barangays. Prior to the pandemic, middlemen from Dumaguete City and other places in Negros regularly come to Nug-as to buy in bulk vegetables since it becomes a little cheaper than if they buy their supplies in Cebu City plus it is also more convenient for them to transport at shorter distance via the ports of Bato (Samboan, Cebu) to Tampi (Negros Oriental) and Tangil (Dumanjug, Cebu) to Guihulngan City (Negros Oriental).

3.1.2 Mantalongon, Dalaguete

Mantalongon (Dalaguete) is probably one of the most known places in the mountain barangays of Cebu. It is known both as the summer capital and the vegetable basket of Cebu because of its cooler environment. The area is about 700 meters from the sea level and is about 95 km southeast of Cebu City. Dalaguete and Alcoy are adjacent municipalities and Mantalongon and Nug-as are less than 10 km away from each other. For so many years, truckloads of vegetables are hauled from Mantalongon each day and brought to Cebu City's Carbon Market where vegetables are redistributed to supermarkets, various municipalities, and even in the provinces of Leyte,

Negros Oriental, Bohol, and other small islands. Lately, traders from Negros also directly come to the area to buy bulk volumes of vegetables similar to what is happening in Nug-as. Cabbage, pechay, and spring onions are also among the commonly produced vegetables in Mantalongon and neighboring barangays.

3.1.3 Sudlon, Cebu City

Sudlon is one of the many barangays in the mountains of Cebu City. It is also known for growing vegetables. Among the crops they grow are cabbage, pechay, and spring onions although not as much as those produced in Nug-as and Mantalongon.

3.2. Selection of Respondents

Respondents of this study included farmers (coop members and non-coop members) and vegetable traders (middlemen and resellers).

3.2.1 Farmer Respondents

The study surveyed 745 total farmer-respondents. Farmers only qualified as respondents if they had grown at least one of the three vegetable crops in this study. The project was conducted in three selected areas namely Nug-as, Alcoy; Mantalongon, Dalaguete; and Sudlon, Cebu City. Most of the cabbages, pechay, and spring onions are produced in these areas. To provide a comparison, respondents were interviewed on different periods of the pandemic. Necessary data was obtained from the local government units. For both Mantalongon and Sudlon, segregated data were not available, thus 75% of the total population of the farmers were assumed to be farming any of the three commodities. For Nug-as, on the other hand, data on the total number of farmers growing any of the three commodities were available. Sloven's formula was used to determine the sample size in areas where the number of farmers is greater than 100 and allowing a 5% margin of error.

3.2.2 Middlemen and Reseller respondents

The study interviewed 48 and 412 middlemen and resellers, respectively. In the context of this study, middlemen are those who buy in bulk the vegetables produced by the farmers in Nug-as, Mantalongon, and Sudlon. On the other hand, resellers are those who receive or buy the commodities from the middlemen who usually sell the

Figure 1. The Study Sites

commodities to consumers; they are vegetable vendors in public markets. Middlemen in Nug-as, Mantalongon, and Sudlon landing areas were interviewed. Similarly, resellers in the 16 city/municipal public markets were also interviewed. These public markets are the designated public markets of the 16 LGUs that were selected as follows: 4 cities (Talisay City, Cebu City, Mandaue City, and Lapulapu City), 4 first-class municipalities, 4 second-class municipalities, and 4-third class municipalities.

3.2.3 Collection of Data

Data were collected using surveys (guided interviews) and observation. Guided interviews were used to collect data from farmers, middlemen, and resellers. Respondents who may not be willing to participate in the study were not forced. An interview guide was prepared specifically for each type of respondent. The interview questionnaire/schedule also took into consideration the role of women in the production and marketing of vegetables in the study. A vernacular version of the instrument was used for farmers, middlemen, and resellers. Pre-testing of the questionnaire was conducted to randomly selected farmers from representative farming municipalities. These farmers were still part of the farmers to be interviewed after the questionnaire had been pre-tested. During the conduct of the interview, minimum health protocols set by IATF were strictly observed.

3.2.4. Data Gathered

Socio-demographic profiles of the farmers, middlemen, and resellers were gathered, specifically considering Sex-Disaggregated Data (SDD) to make it gender-responsive. For farmers, data on farm productivity, marketing strategies, capitalization, and effects of COVID-19 were also collected. Similarly, marketing strategies, capitalization, and effects of COVID-19 were also asked from middlemen and resellers.

3.2.5. Analysis of Data

Data were analyzed using frequencies, means, and percentages. Simple regression was used to analyze whether distance is affecting the severity of felt marketing problems and also if marketing strategies vary with city/municipal classification.

4. Literature Review

Agricultural marketing strategies and practices

Logistics is more of an issue in the Philippines than for other countries due to the country being an archipelago and lacking connectivity. As a result, the Philippines has the lowest regional ranking regarding the logistical aspect (World Bank, 2020). In agricultural production and marketing, logistics is a key factor as it entails the transportation and storage activities. Espino et al. (2020) state that even before the pandemic, issues such as underdeveloped farm-to-market roads, high transportation costs, and impassable roads during rainy days have troubled local food system actors.

Marketing of perishable commodities poses additional problems, especially for local smallholder farmers. Rola-Rubzen et al. (2013) note that these farmers face numerous constraints: low productivity, poor quality product & low returns for their produce, lack of technical know-how, inefficient or non-optimal input use, use of low-yielding varieties, poor postharvest practices, and poor farm management practices. In addition, the study states that in high-value markets, farmers face institutional and infrastructural constraints due to their lack of information about prices & markets, which translates into an inability to access these markets and high transaction costs. The lack of postharvest facilities in the Philippines causes farmers to incur significant losses. Farmers were noted as having a lack of market power, as the immediate need to sell their harvest lessens their capacity to bargain, forcing most to sell at lower prices due perishable nature of these commodities (Quintana et al., 2022). The COVID-19 pandemic has amplified the abovementioned problems already faced by problems, with mobility restrictions and other protocols severely inhibiting agricultural production and marketing.

Impact of COVID-19 on agricultural marketing

The pandemic has disrupted global economies with movement restrictions resulting in large GDP changes across the world, with the prices of agricultural commodities and derived products decreasing sharply (Beckman & Countryman, 2021). Similar to other sectors during the pandemic, agricultural markets worldwide were severely affected by the large drop in consumer spending that resulted from the COVID-19 pandemic (Elleby et al., 2020). The average share of agricultural labor to the total Filipino population remained significant throughout the years despite the decreased agricultural output; however, results from the study conducted by Gregorio & Ancog (2020) revealed that as a result of the decrease in the agricultural labor force due to the pandemic, the Philippines had a 2.97% decrease in volume of agricultural production (overall reduction of 3

million tons), 1.40% decrease in GPD, and a 2.97% increase in poverty ratio.
Furthermore, an evaluation by the National Economic Development Authority (NEDA) revealed that High-Value Crop (HVC) farmers were the most affected during the pandemic, with HVC farming having the highest income loss amounting to P36.8 million, with P388 thousand in direct losses from unsold HVC produce in Central Visayas (IATF – TWG for AFP, 2020). Hossain (2020) noted that although agricultural activities slowed down during the pandemic, farmers continued growing, processing, and distributing agri-fishery products; however, changes were necessary, with farmers having difficulties adapting to the new normal, particularly in the marketing and distribution of produce due to restricted mobility and lockdowns. Espino et al. (2020) outlined in their study six of the most impacted areas on the local agri-food system during the pandemic: farming and agricultural production; distribution and transport; food sources and sales points; food environment: food availability and affordability; diets and food consumption; and food security.

Government support services for farmers

COVID-19 is a national issue and demands a coordinated response from all levels of the government. It is critical that to support essential businesses in the local and national supply chains, policies and initiatives should target the agriculture and agri-food sectors (Gregorio & Ancog, 2020). To address the challenges brought about by COVID-19, the "Plant, Plant, Plant Program" or "*Ahon Lahat, Pagkaing Sapat (ALPAS) Laban sa COVID-19*" program was implemented nationwide by the Department of Agriculture in 2020. The P31-billion program aimed to increase the national agri-fishery output through intensified usage of quality seeds, appropriate inputs, modern technologies to increase levels of productivity across all commodities, and thus ensure food productivity, availability, accessibility, and affordability amidst the threat of the COVID-19 pandemic (Department of Agriculture, 2020). The findings of Aparta (2021) supported the program and revealed that communities strongly agreed that they all benefitted from the DA's Plant, Plant, Plant Program and that the program increased their needs for food in times of pandemic.

The government is continuously seeking ways to ensure a food-secure Philippines. To help mitigate the effects of the pandemic, the government implemented different initiatives and programs: the government invested P2.8 billion in a loan facility to agri-fisheries with a maximum of P25,000 loan with no interest, occasional assistance to farmer and farming communities in kind and in cash, the Food Resiliency Action Plan to ensure access to safe, affordable food in large cities, providing of assorted vegetable seeds and seedlings in cities and rural areas, among others (Hossain, 2020). NEDA, in the Economy Recovery Plan: We Recover as One, enumerates several emergency measures that were implemented during the early stages of the pandemic: cash assistance, in-kind assistance, wage subsidy for small businesses, grants/loan assistance, emergency employment program, and emergency/calamity loan assistance (IATF – TWG for AFP, 2020). Other notable responses mentioned by Gregorio & Ancog (2020) included the cargo land and food pass accreditation system, bulk buying of farm produce from farmers in some localities, and regulations related to price freeze for basic commodities.

5. Result and Discussion

Marketing practices of farmers, middlemen, and resellers

Data reveals that the marketing practices of the respondents vary with their occupation. Looking at the farmers, data shows that more than two-thirds of the farmer-respondents sold their agricultural produce between one and three times per week; meanwhile, almost 90% of the resellers interviewed sold vegetables on a daily basis. In addition, all farmers interviewed reportedly sold their produce immediately after harvest. The data showcases the prevalence of immediate action when marketing perishable commodities. As for purchasing, both resellers and middlemen purchase vegetables multiple times per week, with roughly half of the resellers interviewed purchasing on a daily basis, while 40% of middlemen purchased between one and two times per week. The difference in the frequency of purchases could be attributed to middlemen requiring more time between purchases for delivery and other necessary operations. Interestingly, a significant majority of all respondents interviewed did not utilize social media in their marketing operations. Specifically, 98%, 96%, and 85% of farmers, middlemen, and resellers did not use social media in marketing vegetables, respectively; resellers had the lowest figure due to them being the last step between the farm produce and the consumer.
During interviews with the respondents, the majority of farmer-respondents (58%) would first conduct transactions in the public markets and then would either approach commissioners or sell the agricultural products themselves. Meanwhile, the remaining respondents would transact through either the commissioners or

middlemen, without physically going to the public markets. However, it should be noted that less than 7% of the farmers interviewed personally sold their produce. In summary, the marketing of vegetables is a time-sensitive process, requiring farmers, middlemen, and resellers to conduct immediate action due to the perishable nature of their commodities.

Data from the Philippines Statistics Authority (PSA) reveals that in 2021, farmers had the highest poverty incidences among the basic sectors, with 30.00% of farmers nationwide belonging to families with income below the poverty threshold (Philippine Statistics Authority [PSA], 2023). Additionally, the Comprehensive Agrarian Reform Program (CARP) prohibits landowners from the retention of more than five hectares of agricultural land. Farmers in the country are severely fragmented and are limited both by internal and external factors, which results in most farmers having small-scale farm production capabilities. To maintain a sustainable livelihood for their families, farmers are forced to conduct almost non-stop operations, even at the cost of reduced profits due to the lack of capital for other essential farm equipment and postharvest capabilities.

Marketing problems encountered during the pandemic

When the farmer-respondents were asked if the marketing of cabbage, pechay, and spring onion was affected by the pandemic, 82% of the 745 total respondents reported that their marketing was significantly impacted during the period March-June 2020. Remarkably, these figures flipped during the period between the initial wave and the delta surge, with approximately 86% of respondents noting that their marketing was no longer affected by the pandemic, which decreased to 73% during the delta surge in July-September 2021. It can be observed that the farmer-respondents faced initial challenges at the beginning of the pandemic in 2020; they gradually made a recovery over time, although they experienced a slight impact during the rise of the Delta variant in 2021.

Figure 2 below showcases the marketing problems encountered by farmers during the pandemic. The marketing problems for farmers were consistent between the different areas in Cebu. In total, the four most commonly reported problems were the following: low prices of produce (47.2%), market inactivity due to lack of buyers (17.1%), and transportation constraints (7.6%). Other problems reported by the respondents included quality issues causing sales reductions, delayed payments, prices dictated by commissioners, surplus-related sales reductions, price instability, transportation costs, and price discrepancies.

The primary marketing problems faced by the farmer-respondents could be attributed to several factors prompted by the COVID-19 pandemic. One possible cause could be the disruptions in supply chains caused by lockdowns and travel restrictions, which hindered the smooth movement of produce and decreased the number of buyers. Furthermore, the changes in consumer behavior and the closure of hospitality establishments could have contributed to a reduced demand for agricultural produce, resulting in an oversupply and subsequent price drops.

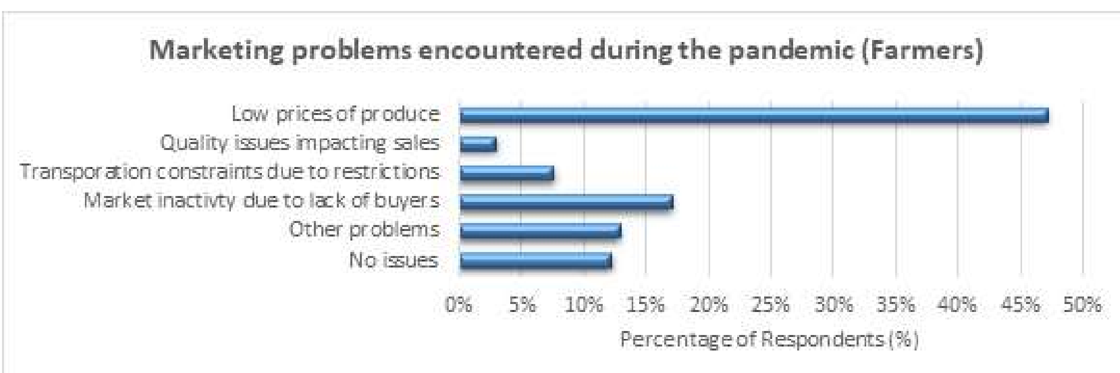

Figure 2. Marketing problems encountered during the pandemic (Farmers)

The figure below (Figure 3) presents the marketing problems encountered by middlemen and resellers during the pandemic. Data reveals that middlemen and resellers both struggled with quality issues (48% and 42%, respectively), which could be a result of strict movement restrictions imposed during the pandemic causing difficulties/delays in the transportation of these perishable commodities. Market inactivity was also a significant problem cited by 37% of the resellers, however, this problem was only cited by 8% of middlemen; this reveals that middlemen were not as affected as resellers when it comes to reduced consumer activity, which is because the resellers are the people that deal directly with the consumers, unlike middlemen who usually act as the

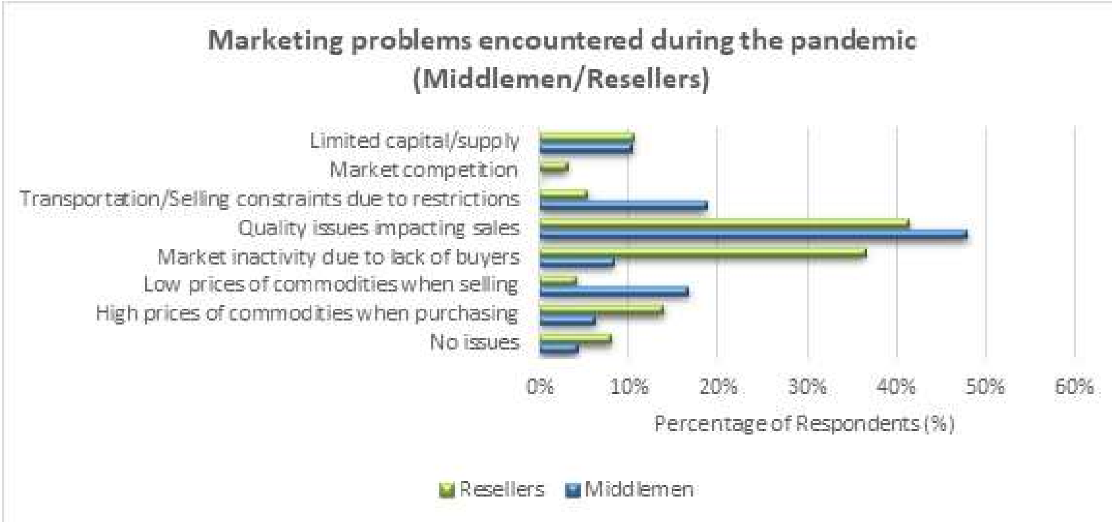

Figure 3. Marketing problems encountered during the pandemic (Middlemen/Resellers)

intermediary between farmers and resellers. Similarly, transportation/selling constraints due to restrictions had a greater impact on middlemen compared to resellers, with 19% and 5% of respondents citing said problem during the interview, respectively; this is also explained by the differences in their operations, with middlemen being more concerned with the transportation of the commodity from the farmer to the market. As for the price of the vegetables and the comparison between the two groups, middlemen struggled more with low prices of vegetables during sales; meanwhile, resellers had a greater issue with high prices of vegetables during purchases. Essentially, both groups are struggling with the same core issue which is that the prices of the commodities have currently reached a point where both middlemen and resellers struggle to maintain a profit, while also covering all the operational expenses such as the transportation of goods or the payment of rent.

When the farmer-respondents were asked if the marketing of cabbage, pechay, and leaf onion was affected by the pandemic, 82% of the 745 total respondents reported that their marketing was significantly impacted during the period March-June 2020; meanwhile, only 27% claimed that their marketing was affected during the period July-September 2021. The farmer-respondents highlighted the primary factors affecting the marketing (Figure 4) over three periods: March to June 2020 (onset of the pandemic and corresponding restrictions); months between the original & delta surge; and July to September 2021 (delta surge). The data revealed that the most commonly reported factors are the following: absence/limited number of traders due to lockdown, low price of vegetables, and transportation problems due to travel restrictions. During the period March-June 2020, the three aforementioned factors were roughly equally distributed, with the absence/limited number of traders due to the lockdown being reported by the greatest number of farmer-respondents. Meanwhile, in July-September 2021, low prices of vegetables as a factor were more commonly reported, while absence/limited number of traders due to lockdown & transportation problems due to travel restrictions both had a decrease in the percentage of farmer-respondents experiencing said factors. It seems that during the period between 2020 and 2021, some farmers were able to adapt to the following factors that were primarily caused by the pandemic: absence/limited number of traders due to lockdown & transportation problems due to travel restrictions; however, the prevalence of low prices of vegetables as a factor affecting marketing increased during these time periods. Other factors affecting marketing during the pandemic that were reported by the farmer-respondents included the following: oversupply of agricultural products, high cost of farm inputs, high level of competition in the market, and unstable prices of commodities.

In a study conducted by The World Bank (2020), the findings noted that there are currently weak logistics systems in place in Philippine agriculture. This poor transport connectivity is especially problematic for the HVC producers as the lack of internal connectivity results in food wastage, double handling, and failure of product consolidation; this leads to higher per unity transport and handling costs. Additionally, the diversification of agriculture is a long-standing policy goal in the country; however, rural farmers continue to plant crops that they are more familiar with, without taking into consideration other factors. This lack of foresight from some farmers usually results in large volumes of similar crops entering the market at the same time, leading to oversupply and a significant drop in prices. Although most cited marketing problems faced by farmers, middlemen, and resellers existed before the pandemic, the conditions and restrictions imposed during the Covid-19 pandemic have significantly magnified these issues, highlighting the pre-existing weaknesses present within the local agricultural production sector.

Changes in purchasing/selling practices during the pandemic

The figures below (Figures 5 & 6) highlight the changes in purchases for resellers and middlemen during the pandemic over three periods. The most significant observable change observed in the figures is the respondents who experienced no significant changes in purchasing during the pandemic; with this figure initially being low

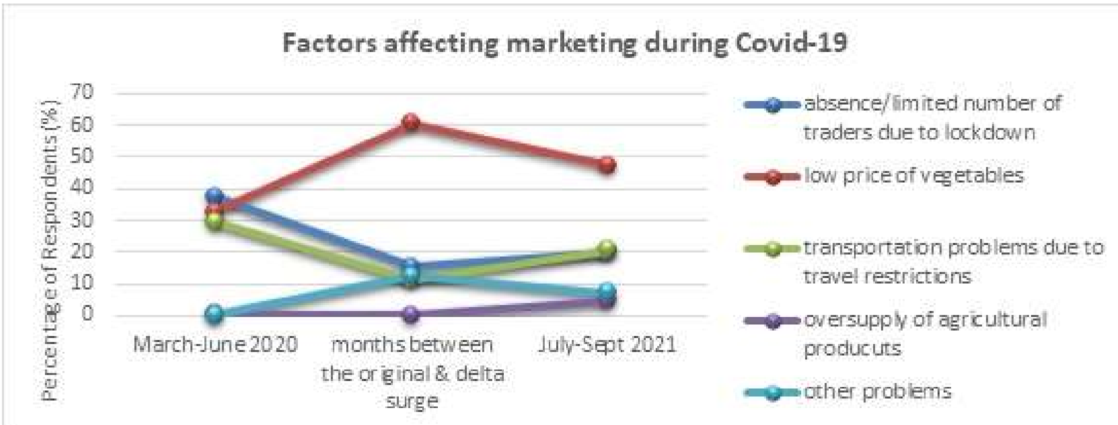

Figure 4. Factors affecting marketing during the Covid-19 pandemic

during the onset of the pandemic, increasing significantly before decreasing slightly during the surge of the delta variant in 2021. This trend indicates that the pandemic had initially impacted respondents' purchasing experience, but they adapted over time with a less dramatic increase during the delta variant. In addition, a significant portion of middlemen and resellers stopped purchasing during the onset of the pandemic (48% and 23%, respectively); this figure decreased during the months between and rose slightly during the delta variant in 2021. Quality issues impacting purchase and increased purchasing both shared the same trend as mentioned above, with a significant number of respondents initially reporting this change in 2020, decreasing during the months between, and rising slightly during 2021.

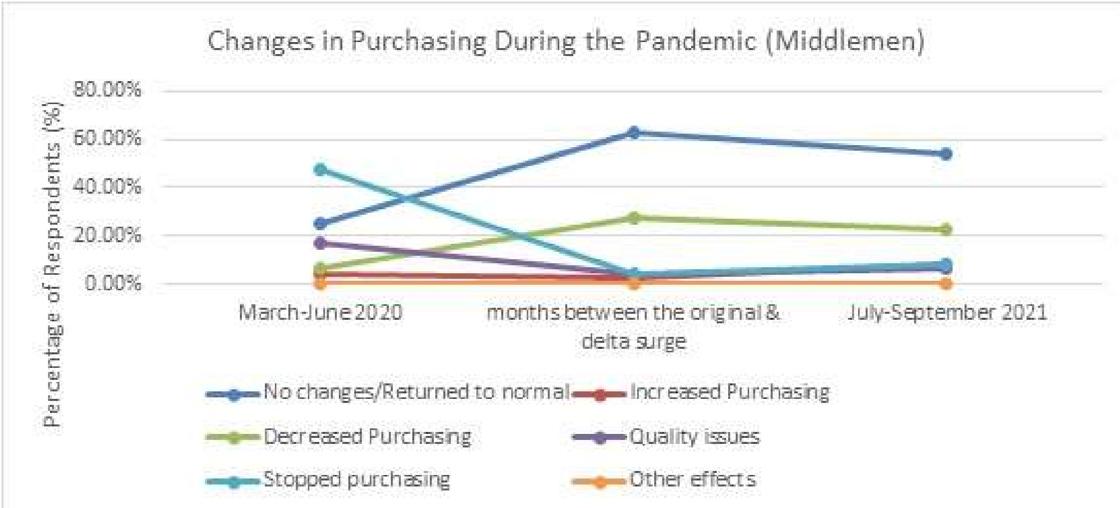

Figure 6. Changes in purchasing during the pandemic (Middlemen)

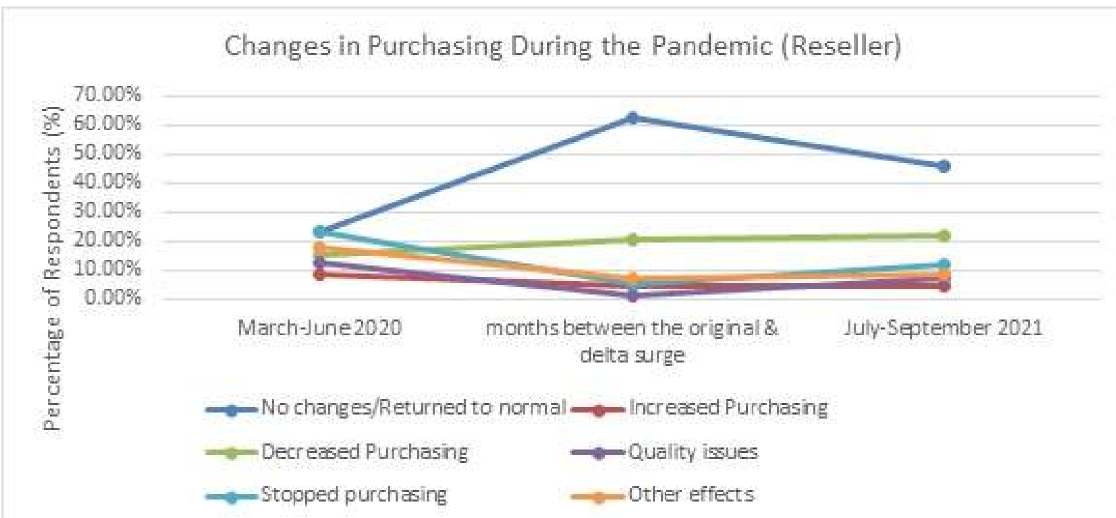

Figure 5. Changes in purchasing during the pandemic (Resellers)

The changes in selling for resellers and middlemen during the pandemic are presented in Figures 7 & 8. Similar to the figures above, resellers and middlemen were initially impacted during the onset of the pandemic (as shown by the "no changes" figure in the graph) and were able to adjust and improve as time went on, with only a slight decrease during the surge of the delta variant in 2021. Meanwhile, a significant number of middlemen and resellers (25% and 18%, respectively) stopped selling during the onset of the pandemic in 2020 and this figure decreased during the months between but increased slightly during the delta surge. Overall, the changes in selling and purchasing had similar trends revealing that both middlemen and resellers were significantly impacted during the onset of the pandemic. The respondents were in ongoing recovery during the months between but had difficulties once more during the delta sure (although not as significant as during the onset of the pandemic).

The local agricultural markets, like all other sectors, were significantly impacted by the large drop in consumer spending during the Covid-19 pandemic. The analysis conducted by Elleby et al. (2020) showed that the economic

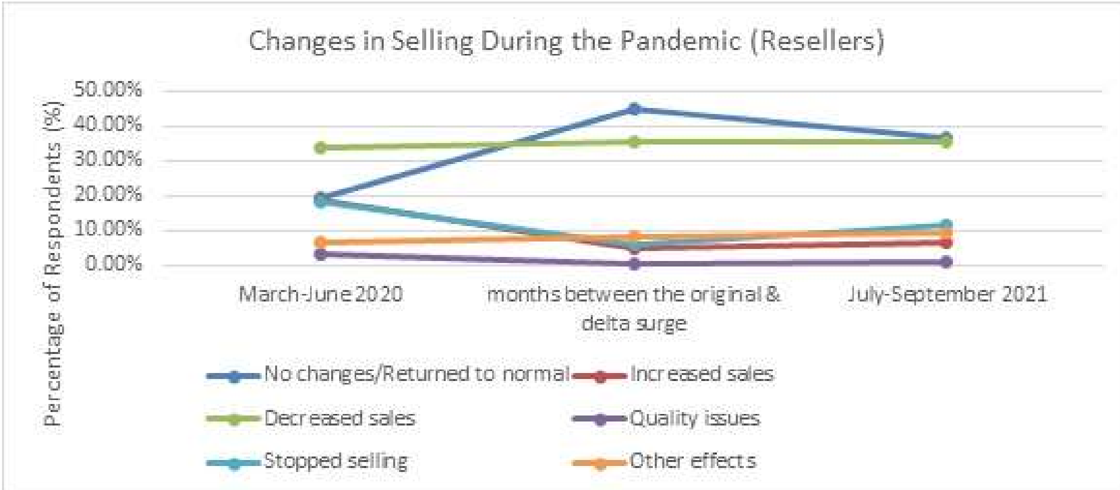

Figure 8. Changes in selling during the pandemic (Middlemen)

Figure 7. Changes in selling during the pandemic (Resellers)

recession during this period exerted a downward pressure on prices, especially for high-value-added commodities. Additionally, high-value-added products were also the commodities whose production changed the most during this period. Ali & Khan (2020) also conducted an analysis of prices across various agricultural markets in India, and observed that wholesale prices have not been affected much in terminal markets; however, the weighted average wholesale price of agricultural produce has declined over the phases of the lockdown. The study cited that the decline in the wholesale prices of agricultural produce may be due to the sudden closure of the restaurant and hospitality sector along with a restriction on the export markets.

Marketing Strategies

The farmer-respondents interviewed had different approaches on how to tackle their marketing problems; their responses are recorded in the figure below (Figure 9). The most commonly reported marketing problem management strategy is lowering the prices of their agricultural produce, which was conducted by 35% of the 745 farmer-respondents surveyed. The decrease in demand forced some farmers to waste their agricultural produce to spoilage, while some utilized unsold agricultural products as food or animal feed. Furthermore, some farmers explored alternative marketing or production strategies, which included the following: selling in other markets,

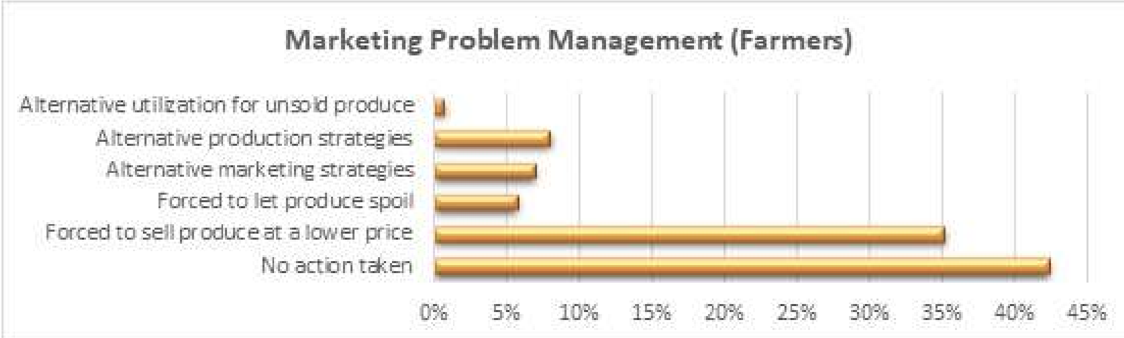

Figure 9. Marketing problem management (Farmers)

order-based transactions, house-to-house selling, crop switching, personally delivering agricultural produce on foot, barter system transactions, and online selling; however, only a small percentage of farmer-respondents conducted these strategies. Notably, data reveals that out of the 745 total farmer-respondents surveyed, most (42%) did not change their approach towards marketing during the pandemic.

The marketing problem management strategies adopted by middlemen and resellers are summarized in Figure 10. Data reveals that the most commonly conducted strategy is the alternative utilization for unsold produce, done by 35% and 31% of middlemen and resellers, respectively. These alternative utilization practices included using as fertilizer, producing sari-sari from leftover vegetables, donated, or consumed by the sellers themselves. Alternative marketing strategies were also utilized and included purchasing/selling at other areas, improving approach/relationship with the consumer, providing explanations and reasonings for the change in prices, improving transportation/storage, allowing credit/discounts, adding delivery services, or simply complying with the minimum protocols set during the pandemic; however, these strategies were only adopted by 8% and 11% of middlemen and resellers, respectively. Same with the figure above, most of the middlemen and resellers did not modify their approach to marketing during the pandemic, which was reported by 48% and 46%, respectively. Overall, the responses provided by the farmers, middlemen, and resellers revealed hesitance in changing the established marketing approach, which could be due to the lack of knowledge of other approaches. Alternatively, the pandemic merely magnified marketing problems that were mostly present pre-COVID-19; the respondents are used to these difficulties and would usually just push through the struggles.

In both figures, data reveals that most farmers, middlemen, and resellers chose to take no action during the pandemic. Resiliency is one of the most commonly used strategies conducted by the respondents. Other studies

stated that Filipino farmers had evolved resilience due to their frequent exposure to economic shocks and excessive risks in their respective farm activities. Farmers maintained resilience despite the many challenges

Figure 10. Marketing problem management (Middlemen/Resellers)

posed by the restrictions during the pandemic; however, it is likely due to the fact that most farmers simply lack the resources, opportunities, expertise, and voice required to manage risk and maintain their livelihoods (Soriano et al., 2020).

6. Findings

The findings revealed pre-existing issues in agricultural marketing have been magnified by the restrictions and shifts in consumer behavior during this time period. The significance of this study lies in its revelation of the significant impact of the pandemic on the agricultural sector, particularly on High-Value Crop (HVC) farmers who experienced substantial income losses. The identified marketing problems, such as quality issues, market inactivity, transportation constraints, and price fluctuations, underscore the vulnerability of local vegetable production and trade to external shocks. Implications drawn from the study highlight the need for targeted interventions to support farmers, middlemen, and resellers. Addressing issues related to supply chain resilience, market access, and financial support can contribute to the overall sustainability of the local agri-food system. Moreover, understanding the adaptive strategies employed by farmers, middlemen, and resellers provides insights into potential avenues for policy interventions and capacity-building initiatives.

7. Limitations and Research Gaps

This study is focused on certain areas in Cebu, Philippines, which means that the findings may not apply to other regions or crop types. Data collection occurred at different times during the pandemic, so it may not capture long-term impacts. Additionally, the limited use of digital tools by small farmers and middlemen restricts the scope for understanding how online marketing could have been used. Further research could explore how digital marketing and other regions adapt to similar crises.

8. Conclusion

The COVID-19 pandemic disrupted vegetable marketing, creating challenges in pricing, logistics, and market access for farmers and middlemen in Cebu. These issues highlight the need for better market connections, stronger supply chains, and new approaches to handle similar disruptions in the future. This study suggests that support through policy, improved infrastructure, and more flexible marketing methods will help strengthen the local agricultural market.

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