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Research Article

Exchange Rate Changes and Philippine Fresh Mango Export Volume to Hong Kong: A Monthly Time-Series Analysis (2015 – 2025)

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ABSTRACT

The study examined the effect of changes in exchange rate between Philippine peso and Hong Kong dollar to the volume of Philippine fresh mangoes exported to Hong Kong given its perishable nature and demand for the country. The study applied time-series analysis using a total of 132 observation collected from January 2015 to December of 2025. The data underwent a logarithmic transformation, stationary testing, and differencing. Additionally, the study used the ordinary least squares (OLS) method for regression and include seasonal dummy variables. The findings revealed that changes in exchange rate had a positive effect on the export volume of fresh mangoes, however, the result is statistically insignificant (p=0.826). Seasonal factors were found to be more influential, with export quantity significantly higher in April and May. The model explained about 28.8 percent of the variation in export volume. These finding tells that short-term changes in exchange rate were not the main factor of mango export performance during the studied period. Instead, timing of harvest and supply availability played more important role. The findings suggests that exporters and policymakers should focus more on harvest time and shipping logistics instead of short-term exchange rates.

Keywords: *Agricultural export, Exchange rate, Export volume, Hong Kong market, Philippine mangoes, Seasonality, Time-series analysis*

Background

International trade is an important aspect of economic growth, particularly in the economies that are agricultural based. In developing countries, export activities plays part as an important source of national income and foreign exchange earnings. As stated by Puspitasari (2024), trading internationally contributes to economic development of a country, specifically through export generation that helps their overall economic performance. Among different determinants of export performance, considered one of the most influential factor is movements in exchange rate. Mao (2019)

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found that exchange rate appreciation tends to lessen export quantities and market entry across firms and products, highlighting its strong effect on trade competitiveness. In general, movements in exchange rate can either contribute or weaken a country's export performance depending on how they affect relative prices and foreign demand (World Bank, 2024).

In the Philippines, agriculture remains a big part of export sector, with fresh mangoes considered one of its high-value agricultural products. Additionally, the Philippines is globally recognized as one of the major mango-producing countries, with its different mango products distributed across numerous international markets (Department of Trade and Industry, 2018). Among these international markets, Hong Kong is considered as one of its major importers due to its strong demand for fresh mangoes and its geographic proximity to the Philippines, which reduces transportation cost and delivery time (Tridge, 2024). However, in spite of Hong Kong's strong demand for mango products, export volume of fresh mangoes still fluctuate, suggesting the influence of economic and non-economic factors. One of the key economic factor is the movement of the Philippine peso (PHP) against the Hong Kong dollar (HKD), which directly affects export pricing and competitiveness.

Numerous empirical studies consistently prove that export exchange rate movements have significant effect on agricultural export performance. For example, by using monthly data from 1998 to 2019, Ojede (2025) showed that exchange rate shocks affect agricultural export sector, while Dang et al. (2020) found that exchange rate movements influence agricultural commodity price. Similarly, Tulasombat and Ratanokomut (2015) also found that exchange rate changes have a significant negative effect on Thailand's agricultural goods export volume, while Ogunjobi et al (2022) confirmed that exchange rate significantly affect agricultural exports across different country context. These findings altogether suggests that exchange rate movements is an important determinant of agricultural export performance.

Recent literatures suggests that when analyzing trade dynamics, the use of monthly data is recommended, especially when short-term fluctuations and seasonality are present. Grant et al. (2021) showed that monthly trade data can capture what often missed in annual datasets, seasonal pattern that's present within the year. Jin et al. (2023) also emphasized that the use of monthly export data allow a more precise measurement of short-term export response. In addition, Helmy et al. (2018) showed that monthly exchange rate data can better captures pass-through effects when analyzing trade. In the Philippines, monthly data of exchange rate movements can easily be sourced from the official website of Bango Sentral ng Pilipinas (BSP), central bank of the Philippines, making it more accessible and consistent with monthly export data for econometric analysis.

Moreover, the perishable nature of fresh mangoes strengthens more the relevance of monthly-level analysis. Mangoes can easily deteriorate after harvest due to their biological characteristics and sensitivity to environmental conditions. According to Hailu (2016), mango's shelf and quality can significantly be affected by numerous factors namely temperature, atmosphere, and postharvest handling. While interventions such as edible coatings can extend its storage life (Sothornvit & Klangmuang, 2015), and effective supply chain management are essential in reducing postharvest losses (Tsang et al., 2018). More recent studies also confirm that logistics, storage conditions, and transit time are also important factors that affects mango export quality and its survival during long-distance trade. (Makule et al., 2022; Pattanaik & Jenamani, 2024; Pham et al., 2025; Zakaria, 2023; Sheoran, 2025). These findings suggest that when analyzing export performance, perishable product makes monthly variations highly relevant.

Despite the existing literature, more studies on exchange rate and agricultural exports still depend on gathered datasets that combine multiple commodities or countries, limiting product-specific observation. In addition, many empirical studies use annual or quarterly type of data, which may fail to capture short-term fluctuations and patterns that are mainly im-

portant for agricultural goods that are perishable. This study addresses these gaps by examining the effect of exchange rate changes on Philippine fresh mango export volume to Hong Kong using monthly data from 2015 to 2025.

Methods

Research Design

This study employed a quantitative explanatory time-series to analyze the effect of exchange rate changes of Philippine fresh mango export volume to Hong Kong. A time-series design was employed since the data consist of observations recorded sequentially over time, and the objective of the study was to examine the relationship between the dependent and independent variables across a defined period of monthly data from January 2015 to December 2025. According to Wooldridge (2016), time-series econometric models serve as valuable tools for studying economic variables whose present values depend on their historical patterns of movement which includes exports and exchange rates. Furthermore, the use of time series models in this study is significant since it ensures the systematic patterns and changes in export behavior that are associated with fluctuations in exchange rates over time which ensure it provides accurate future data predictions that would support more reliable analysis and the decision making.

Moreover, the study utilized a log-linear regression model estimated through Ordinary Least Squares (OLS). The researchers used this to determine the effect of exchange rate changes on the volume of Philippine fresh mangoes exported to Hong Kong. It focuses on the explanatory effect of changes of the study rather than focus on the forecast future values. With a particular reason, the application of the OLS is significant and suitable to determine the relationship between variables. However, advanced models such as ARDL, ARIMA, and VECM were not considered in this study since this topic did not specifically focus on a long-run equilibrium analysis or generate forecast. Moreover, it focuses on the explanatory effect of exchange rate changes in regards to export volume within the period of 2015 to 2025. Additionally, the researchers apply OLS for estimating the parameters due to its easy application and provision of statistically correct outcomes in case of fulfilled assumptions on its part, as shown in academic literature sources such as Levendis (2018) and Crooker, J.R (2021). As far as the time series is concerned, the study employed various methods such as stationarity, differencing, and autocorrelation to ensure that the estimated parameters are correct and reliable, as recommended in the time-series econometrics literature of Wooldridge (2016).

Sources of Data

To examine the effect of exchange rate changes of Philippine peso (PHP) to Hong Kong dollar (HKD) on Philippine fresh mango export volume, the study used a secondary time-series data with a total of 132 observations collected from January 2015 to December 2025. Secondary time-series data was an appropriate choice to achieve the study's objective since the study aimed to understand how the variables changed over time. This type of data is commonly used in econometric studies involving trade and macroeconomic indicators and to test hypotheses regarding economic behavior.

For the data sources, the monthly export volume of Philippine fresh mangoes to Hong Kong was obtained from the Philippine Statistics Authority (PSA). This is one of the significant primary sources of data, as it provides reliable and accurate data about the monthly export volume of Philippine fresh mangoes to Hong Kong. The PSA serves as an agency that explains export volume as the physical quantity of products exported that are computed monthly and use the export paperwork submitted as a basis to the Bureau of Customs. Additionally, the statistical system of PSA, which is International Merchandise Trade Statistics (IMTs), provides official information on the value and volume of products traded between the Philippines and its trading partners, classified by commodity and country of destination as stated in PSA (2024).

While the monthly PHP–HKD exchange rate data were obtained from the Bangko Sentral ng Pilipinas (BSP), which is the major monetary authority in the Philippines mandated to ana-

lyze exchange rate policy and ensure the stability and convertibility of the Philippine peso. Moreover, this also provides an official reference exchange rate reflecting the peso equivalent of foreign currencies, which includes the Hong Kong dollar, based on foreign exchange market data compiled through its Reference Exchange Rate Bulletin. According to BSP (2026), these exchange rate statistics are beneficial since they are credible and suitable for macroeconomic and econometric study because they are formally distributed and globally acknowledged under the IMF's Special Data Dissemination Standard.

The study utilized Microsoft Excel for organizing, cleaning, and constructing the dataset prior to analysis, while the R software package was used for data processing and econometric analysis, as it is widely applied in time-series modeling. Before estimation of the data, the collected data were examined for consistency and reliability. Walter Enders (2015) supports this idea since he states that time-series data involves the presentation of data that has been generated from observing economic data over some period of time and using such data in econometric analysis helps forecast, interpret, and test economic models. Moreover, this data is often used by researchers since as stated by Jeffrey Wooldridge (2016) and A. Colin Cameron and Pravin Trivedi (2010), time-series data along with statistical software is used mostly in study with econometric analysis. This emphasizes that the use of time series analysis can be applicable for the study and can help to achieve the study's objective.

Statistical Treatment

For this section, the study used different statistical tests using the R program to examine how exchange rate changes influence the monthly volume of Philippine Fresh Mango Exports to Hong Kong from 2015 to 2025. The process involved performing a series of statistical procedures step-by-step to ensure that the regression results satisfies the requirements necessary for its reliability. As stated by Walter Enders (2015), time-series data is about modeling economic data that has been observed over time in order to forecast, interpret, and test hypotheses regarding economic relationships.

Descriptive and Trend Analysis

The export volume of Philippine fresh mango and the PHP–HKD exchange rate were analyzed over time to help identify the trends, patterns, and fluctuations in the variables.Time-series plots were used in the study for both variables of the fresh mango export volume and the PHP–HKD exchange rate. This was accomplished to determine if there were any patterns or trends in the Philippine fresh mango export volume and the PHP–HKD exchange rate from the period of January 2015 to December 2025. By doing this, the researchers were able to determine how both variables behaved over time. This helped the study to understand if there were any repeating patterns in the variables, which is consistent with time-series analysis as discussed by Enders (2015). Moreover, the study period was affected by the COVID-19 pandemic, which had a major impact on global trade, logistics, and overall economic activity. Consequently, particular attention was given to trends and movements observed between the period of 2020 and 2021, as it also influenced the behavior of export volume and exchange rates during the period under study.

Data Transformation

The statistical treatment also includes transformation of data that are significant to stabilize the variance and improve linearity in regards to the dependent and independent variables, where both export volume and exchange rate were transformed into their natural logarithmic form. Moreover, a logarithmic transformation was utilized to reduce skewness in the data and to allow the regression coefficients to be interpreted as elasticities, as supported by Jeffrey Wooldridge (2016).

After transformation into their natural logarithmic form, enhancement in the residual behavior was examined. The diagnostic plots of the log-linear model indicate a more random and symmetric distribution of residuals compared to the level-based model, showing that it improved linearity and stabilized variance. These results confirm that the log transfor-

mation was successful in addressing non-linearity and heteroskedasticity issues that are present in the original data.

Before log transformation, the Jarque–Bera test for residuals in the level-based model showed a very small p-value of 3.419e-14 which shows that residuals were not normally distributed. After log transformation, the result improved with a p-value of 0.3484 stating that residuals became approximately normally distributed. Moreover, the residual diagnostic plots improved from "failed" in the level-based model to "passed" in the log-linear model which shows better linearity and residual behavior after transformation.

Stationarity Tests

The study employed stationarity tests to ensure that the time-series data would not produce inaccurate or spurious regression results. Specifically, the Augmented Dickey-Fuller test (ADF) and Phillips-Perron test (PP) tests were applied to the logarithmic series (Dickey & Fuller, 1979; Phillips & Perron, 1988). Using both tests strengthened the analysis of the stationarity properties of the variables included in the study.

The results showed that the logarithm of Philippine fresh mango export volume was stationary since both tests rejected the null hypothesis of a unit root at the 1 percent significance level, with a p-value of 0.01. However, the logarithm of the PHP–HKD exchange rate was non-stationary since both tests failed to reject the null hypothesis (PP p-value = 0.546; ADF p-value = 0.5126). These findings show that the exchange rate still needs adjustment before it can be used in regression analysis.

First Differencing

First differencing was applied to the logarithmic exchange rate series to address non-stationarity in the exchange rate variable. The differenced variable was then subjected to stationarity testing, confirming that it became stationary. Observations with missing values resulting from differencing were removed to ensure consistency in the dataset resulting in a total of 131 monthly observations used in the regression analysis.

After the application of first differencing, both the ADF and PP tests rejected the null hypothesis of a unit root at the 1% significance level (p-value = 0.01), confirming that first differencing successfully rendered the exchange rate stationary. As a result, the differenced exchange rate series was suitable for use in the regression model.

Assumption Testing

In this part, the researcher conducted assumption testing to ensure that the results of Ordinary Least Squares (OLS) were statistically reliable and appropriate for time-series analysis. Ordinary Least Squares relies on several assumptions in regards to the behavior of the error term and relationship among variables, and these assumptions must be satisfied to avoid biased or misleading results, especially when using monthly time-series data (Wooldridge, 2016; Cameron & Trivedi, 2010).

First, the assumption of independence of errors was analyzed since in time-series data this assumption is mostly violated due to autocorrelation where residuals are correlated over time. Autocorrelation was tested using the Durbin–Watson test. The result showed the presence of positive autocorrelation with a test statistic of 1.4604 and a p-value of 0.001838, meaning the independence of errors assumption was initially violated.

When autocorrelation was detected, the study utilized the Cochrane–Orcutt transformation, and the enhanced Durbin–Watson statistic confirmed that the problem had been corrected, improving to 2.0818 with a p-value of 0.7026.

The assumption for homoscedasticity was tested using the Breusch–Pagan test which showed no evidence of heteroskedasticity with a p-value of 0.6711, meaning that the variance of the residuals was constant.

With the use of residual diagnostics, the normality assumption was analyzed and investigated. After the process of logarithmic transformation and model corrections, the findings showed that the residuals were generally distributed and showed that model was appropriate for statistical inference.

Furthermore, the residual plots were used for linearity. The residuals-versus-fitted plot following logarithmic transformation showed a random scatter around zero, which means that the linearity assumption was achieved, Consequently, the level-based model displayed a visible pattern that suggests non-linearity.

Moreover, the study also examined the multicollinearity between the independent variables including seasonal dummy variables. The findings showed that multicollinearity was not present from the model, which means that independent variables were not highly correlated and that each variable's effect on export volume could be determined independently.

Cochrane–Orcutt Transformation

For this section, the Cochrane–Orcutt procedure was also used by the researchers since using this tool is an appropriate option to adjust for serial correlation because a positive autocorrelation was found in the data results. However, after calculating the transformed regression model, the post-correction diagnostics showed that the autocorrelation issue had been resolved. Moreover, the value of Durbin-Watson was increased from 1.4604 to 2.0818 following the application of the Cochrane-Orcutt transformation, which indicates that the autocorrelation problem had been effectively resolved.

Result and Discussion

The results of the statistical analysis are discussed in this section to determine whether changes in the PHP-HKD exchange rate influenced the export volume of Philippine fresh mangoes. Graphical analysis was first used to observe patterns and trends in variables over time. The results of the log-linear regression model with seasonal dummy variables are then presented to determine the effect of exchange rate changes on export volume.

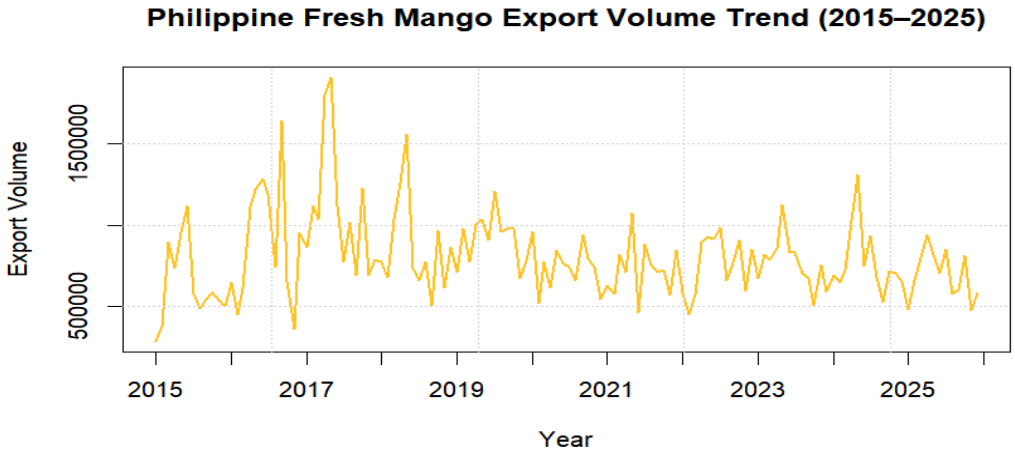

Figure 1. Raw data plot of Philippine export volume to Hong Kong, 2015–2025

Figure 1 shows that Philippine fresh mango export volume to Hong Kong did not follow a stable long-term trend from 2015 to 2025. The export volume increased and decreased over the period, with the largest peaks showing up between 2015 and 2018. In the following years, changes in the monthly values continued, even though the peaks were less extreme than those from the earlier period.

The seasonal availability of mangoes may be connected to the repeated movement seen in the graph. The Australian Centre for International Agricultural Research (2022) stated that the production of Philippine mangoes usually reaches its peak from February to May. Across these months, there may be more mangoes available for harvest and export, leading to higher shipment count. This may explain why export volume was not evenly distributed throughout the year but instead was concentrated in certain months.

Although Figure 1 shows the movement of export volume over time, it does not identify the factors behind each increase and decrease. The changes in production, transportation issues, weather conditions, market demand and quality of fruit may have contributed to these variations. According to The Bureau of Agriculture and Fisheries Standards (2025), mangoes needed for exports should meet the safety and quality standards through proper farming and post-production practices. Additionally, based on the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (2022), the volume of mangoes fit for export can be low when postharvest losses happen. The findings from Figure 1 is that Philippine mango exports showed fluctuations and seemed to move regularly, which could be related to seasonality. This supports the inclusion of monthly seasonal variables in the regression model.

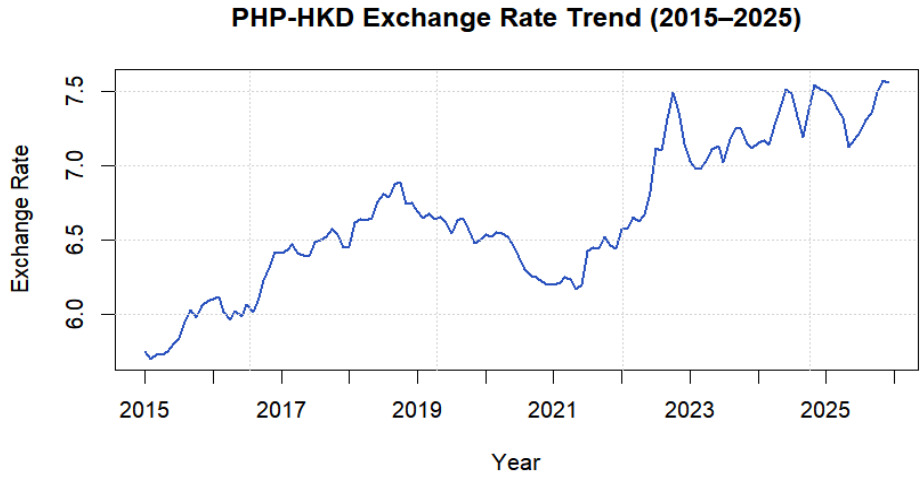

Figure 2. Raw data plot of monthly PHP–HKD exchange rate, 2015–2025

Figure 2 shows the monthly time-series data of the PHP-HKD exchange rate from January 2015 to December 2025. The results indicate that the PHP–HKD exchange rate generally followed an upward trend from 2015 to 2025, indicating a long-term depreciation of the Philippine peso.

The exchange rate increased gradually from 5.7 in 2015 to around 6.9 in 2019. These steady and relatively small changes were unlikely to influence exporters' pricing or export agreements. According to the Bangko Sentral ng Pilipinas (2017), the Philippines experienced steady economic growth during this time, which maintained stable movement because the country achieved continuous GDP growth, low inflation rates, and constant foreign investment. The gradual depreciation of the peso implies that Philippine exports became relatively more affordable in foreign markets.

In the period of 2020–2021, exchange rates fell to 6.2 and 7.0 respectively at the end of 2021 when the economy was affected due to the global impact of the COVID-19 pandemic which became one of the periods of uncertainty in the global financial markets According to Bahmani-Oskooee & Hegerty (2010), exchange rate uncertainty can adversely affect trade by increasing risk and discouraging long-term contractual arrangements, reducing the potential benefits of currency depreciation.

Driven by global inflation and capital outflows, the exchange rate experienced minor fluctuations between 2022 and 2025, remaining within the 7.0 to 7.6 range. This depreciation should have made Philippine mangoes relatively cheaper in Hong Kong and enhanced their price competitiveness. According to the theory of Exchange Rate Pass-Through (ERPT), depreciation of the domestic currency should lower the foreign-currency price of exports, thereby making them cheaper and more competitive internationally. However, the regression results show that exchange rate changes

had no statistically significant effect on export volume, indicating that exchange rates alone were not sufficient to explain the fluctuations in export volumes.

This insignificant relationship may be explained by other factors that have a stronger impact on fresh mango exports, such as seasonal production, postharvest practices, weather conditions, compliance with export quality standards, and supply chain constraints. A decline in the value of the Philippine currency may create opportunities to expand Philippine fresh mango exports to Hong Kong, fluctuations and external shocks limit the extent to which exporters can fully capitalize on these advantages.

Table 1. Regression Result

Variable	Coefficient	Std. Error	t-value	p-value
Intercept	13.4381	0.0803	167.259	<0.001
dlog_exrate	0.420025	1.9109	0.220	0.826409
February	-0.0413	0.0981	-0.421	0.6743
March	0.1549	0.1074	1.442	0.1520
April	0.3354	0.1102	3.043	0.0029
May	0.4947	0.1109	4.461	<0.001
June	0.2043	0.1114	1.834	0.0692
July	0.2184	0.1119	1.952	0.0533
August	0.0400	0.1111	0.360	0.7199
September	0.0662	0.1114	0.595	0.5533
October	0.1294	0.111	1.165	0.2464
November	-0.1355	0.1077	-1.258	0.2111
December	0.0322	0.0969	0.332	0.7401

Note. dlog_exrate refers to the first difference of the natural logarithm of the PHP-HKD exchange rate. January is the reference month for the seasonal dummy variables. The original dataset contained 132 monthly observations whereas 131 remained after the first differencing. The estimates are also based on the Cochrane-Orcutt corrected model.

Table 1 shows the results of the log-linear regression model that was used to identify if monthly changes in the exchange rate of PHP-HKD affected the export volume of Philippine fresh mangoes to Hong Kong. In order to explain the seasonal differences, the model also included monthly dummy variables, using January as the reference month. The coefficient of dlog_exrate was positive at 0.420025, which shows that monthly increase of 1% in the PHP-HKD exchange rate was related to an estimated 0.42% increase in mango export volume, holding the monthly effects constant. However, with the t-value of 0.220 and a p-value of 0.826409, the result was not statistically significant. Because the p-value was higher than the 5% significance level, the study did not find clear evidence that short-run changes in the exchange rate affected monthly mango export volume during the observation period.

In addition, even though the exchange rate coefficient was not statistically significant, this does not automatically mean that exchange rate movements are insignificant to mango exporters. The depreciation of the Philippine peso may still make Philippine mangoes more affordable for buyers with Hong Kong dollars. A study by Parcon-Santos and Tancangco (2024), examined how exchange rates affect exports among countries in the Regional Comprehensive Economic Partnership. However, when the exchange rate becomes favorable, exporters may not be able to increase their shipments quickly. The quantity available for export also depends on fruit quality, transportation arrangements, harvest output, postharvest handling and compliance with export standards. Because fresh mangoes are seasonal and highly perishable, these may limit how fast exporters respond to changes in the exchange rate. This may explain why the expected positive effect of peso depreciation was not clearly shown in the monthly export volume.

The seasonal variables showed a stronger relationship with export volume. April had a coefficient of 0.3354 and a p-value of 0.0029, while May had a coefficient of 0.4947 and a p-value below 0.001. Both April and May were statistically significant at the 5% level. Compared to January, export volume was approximately 39.8% higher in April and 64.0% higher in May, which holds the exchange rate variable constant. These results are consistent with where the usual peak period of mango production in the Philippines is, which usually occurs from February to May. Moreover, June and July also had positive coefficients, but their p-values of 0.0692 and 0.0533 shows that they were only slightly significant at the 10% level. The remaining monthly variables were not statistically significant, which means that their export volumes were not significantly different from January.

The model had an R^2 of 0.2883, which shows that the exchange rate change and monthly seasonal variables were able to explain about 28.83% of the variation in Philippine fresh mango export volume. The adjusted R^2 of 0.2771, showing about the same explanatory strength once the number of variables was considered. These values indicate that more than 70% of the variation in export volume was not explained by the variables used in the regression. The relatively low R^2 shows that the model provides only a partial explanation of mango export performance though it does not automatically mean that the model is invalid. In addition, several factors that may have an influence in the export volume were not directly included, such as weather conditions, domestic mango production, postharvest losses, pest occurrence, fruit quality, export prices, shipping costs and demand from Hong Kong buyers. These factors may have an effect on both the quantity of mangoes available for export and the number that reaches the destination market in proper condition.

The excluded variables may also help explain why the exchange rate coefficient was insignificant. For example, a weaker Philippine peso may increase the price competitiveness of Philippine mangoes, but exporters may still not be able to increase shipments when shipping costs are high, production is low, or the available fruits do not meet the export standards. Moreover, the use of monthly data may capture only the immediate response of exporters to exchange rate changes. Boehm, Levchenko and Pandalai-Nayar (2023) explained that trade adjustments are often smaller in the short-run but become more noticeable over time. Prior to the changes in the exchange rate influence the actual shipment volume, exporters may need more time to organize orders and agreement, prepare the required volume and organize transportation. In practical terms, the outcome show that positive exchange rate shift alone may not be sufficient to increase the Philippine fresh mango exports to Hong Kong. Seasonal supply and other production associated factors seem to have a stronger effect on export volume. Therefore, improving production planning, post harvest handling, transportation, storage and accordance with quality standards may be more efficient in supporting export performance than depending mainly on Philippine peso depreciation.

Conclusion

The findings of this study show that the exchange rate for the mango export volume states that had a positive relation for this data but on the other hand it show that it statistically insignificant effect on the export volume of ($B = 0.420025$, $p = 0.826409$). In that scenario, it shows that the short-term of exchange rate, which typically did not significantly influence the quantity of the fresh mangoes exported, was investigated during that period.

On the other hand, the results show that seasonality plays a big role in explaining this export performance. Because significant effects were observed in April to May, this suggests an association with export volume availability during the peak production period discussed. As previously mentioned, harvest timing and supply conditions are also significant in determining the flow of fresh mango exports, especially for goods that may be strained by seasonality and mortality. The model's R-squared value of 0.2883 further means that the currency exchange rate and seasonal conditions describe only a piece of a variation in export capacity. Closer to this suggestion that other

factors, this including the amount of production capacity, to check the weather conditions of a landfill, create a plan for postharvest practices like adapting of the modern practices, make a logistics more efficiency, manual check for product quality to ensure the quality and shelf life, and lastly to analyze your target market, because in this factors may also make influence for the results regarding to export.

In this scenario, the result also gives a big role to the policymakers, agricultural planners, and for the exporters. For improving the export competition should not only focus on currency movement, but also should be focused on the factors that can directly affect or change the accessibility and the quality of goods. Increase the amount for processing, make more bigger storage facilities, create a supply chain system, make a bigger connection regarding transport systems, and make quality control practices like manual checking of goods that help to reduce the losses and to support more consistent export production supply. For the exporter and the investors, the product may feature the effectivity of supply chain management and to have a proper planning for seasonal changes. Increasing the production periods in the way of being an efficient harvesting, control, and shipment cooperation may also provide more export performance that depends only on a good exchange rate situation.

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