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Market flows and price patterns of fresh produce in Papua New Guinea

Bart Minten
Iga Anamo
Harry Gimiseve
Glen Hayoge
Mekamu Kedir
Belinda Monoi
Emily Schmidt
Helmtrude Sikas-Iha

CONTENTS

TABLES

FIGURES

ABSTRACT

This study analyzes the fresh produce market in Papua New Guinea (PNG) using unique market flow and price data collected by the Fresh Produce Development Agency (FPDA) over the past 15 years across multiple markets. We document substantial flows of fresh produce from diverse production zones to major urban centers, with Port Moresby emerging as the primary terminal market. Hard fresh produce and sweet potato supplied there largely originate from the Highlands, while other staples and soft fresh produce are mostly sourced from other regions. Price analysis reveals four key patterns: (i) fresh produce prices have risen significantly relative to non-food products, particularly for items less supplied by the Highlands; (ii) prices exhibit strong seasonality—lowest at year-end and highest mid-year (June–August)—reflecting major cultivation periods and possibly seasonality in household labor availability; (iii) marketing margins have increased substantially, especially for soft fresh produce, creating new opportunities for Highland producers to compete in Port Moresby markets; and (iv) in 2023–2025, marketing and wastage costs accounted for the largest share of retail prices in Port Moresby—up to 85 percent for cabbage—while producer shares ranged from 15 percent for cabbage to 61 percent for Irish potatoes. These findings underscore evolving market dynamics and the critical role of supply chain efficiency in PNG's fresh produce sector.

INTRODUCTION

Despite their critical role in promoting healthy diets and dietary diversity, fresh produce value chains remain understudied in many low- and middle-income countries. The affordability of fresh produce—and by extension, healthy diets—is a major global concern. For poorer populations in these countries, the cost of a healthy diet is often prohibitively high (Headey et al., 2024). Bai et al. (2021) estimate that the cost of the most affordable nutrient-adequate diet is 2.7 times higher than that of an adequate energy-only diet. This pattern holds true in Papua New Guinea (PNG) as well, where households tend to over-consume staples and fats while falling short of recommended daily intake of vegetables and fruits (Mahrt et al. 2025).

Recognizing the importance of fresh produce, the PNG government has made substantial investments in recent years to promote its production, primarily through the Fresh Produce Development Agency (FPDA) (DAL 2023). However, limited evidence exists on how fresh produce actually flows through the country, how prices are formed, and how they vary over time, across seasons, across regions, and along value chains. Improving understanding of these market dynamics is essential for supporting value chain actors in developing profitable and sustainable systems that provide farmers with the incentives they need to supply fresh produce to trustworthy and transparent markets.

This study aims to fill that gap by analyzing unique market flow and price data collected over a 15-year period by FPDA, with more recent support from the International Food Policy Research Institute (IFPRI). By examining flows of produce from supplying to terminal markets and through the assessment of long-term price trends and dynamics, the study seeks to generate insights that can inform more effective policies to improve the affordability of healthy diets in PNG.[1]

The structure of the analysis is as follows. Section 1 provides background on climatic conditions in Papua New Guinea, as these are key determinants of fresh produce production. Section 2 describes the data sources and methodologies employed. Section 3 presents patterns of fresh produce market flows. Sections 4 and 5 examine price trends and seasonal price variation in fresh produce markets. Section 6 analyzes price margins along the supply chain. Section 7 concludes with key findings and implications.

SECTION 1: BACKGROUND

PNG is among the wettest countries globally, yet rainfall and climate conditions vary significantly across regions. Rainfall patterns in PNG show no uniform seasonal trend: some areas experience little seasonal variation, while others—such as the Eastern Highlands—are highly seasonal (Bourke and Harwood, 2009; Bourke, 2017). Although most Highlands regions can possibly produce year-round[2], FPDA (2008) reports that gardening in the National Capital District and Central Province follows a distinct seasonal cycle, with most activity occurring between mid-November and late March. Altitude is a key determinant of agricultural suitability, particularly for introduced temperate fresh produce commodities, which explains the Highlands' central role in supplying these commodities (Bourke, 2017). Port Moresby (POM), the country's largest urban market, is the primary destination for fresh produce. While earlier estimates (FPDA, 2008) suggested that the Highlands played a relatively minor role in supplying Port Moresby, this seems to have changed substantially in recent years as we will document in this study.

Typically, for fresh produce supply chains from the Highlands, produce is transported by road to Lae and then shipped in containers – chilled as well as dry containers, depending on the product and company - by boat to POM.[3] Shipment of produce from Mt. Hagen to Lae typically takes less than a day, whereas transport by boat to POM takes about four to five days. Key informants in POM estimated that roughly two-thirds of fresh produce comes from the Central region and NCD area, and one-third from the

[1] It should be noted that a more detailed and in-depth analysis—drawing on surveys of vegetable producers and value chain actors—is required to strengthen the evidence base for informed decision-making and improvements in fresh produce value chains. This is planned for future research by IFPRI and partners.

[2] However, irregular weather patterns (insufficient or excess) might disrupt production. Continuous production would require that land/soil management practices are applied and used including water storage and irrigation, drainage, and appropriate land management for production on slopes.

[3] Some fresh produce products are airfreighted from Mt. Hagen to POM; however, the quantities transported this way are relatively small. As airfreight is expensive and these products are mostly sold through modern retail outlets in POM, they are not included in our price observations.

Highlands, though the product mix differs.[4] The Central region and NCD area are reported to supply bananas, perishable vegetables (such as cucumber and cherry tomatoes), leafy greens, coconut, watermelon, sweet potatoes, yam, cassava, peanuts, ginger, capsicum, and lemon, among others. In contrast, the Highlands primarily supplies sweet potatoes, Irish potatoes, cabbage, bulb onion, carrots, broccoli, taro, and similar crops. We will analyze this in more detail for a major wet market (Gordon's Market) in POM in Section 4. Stakeholders also noted perceived quality differences, particularly with sweet potatoes from the Highlands being considered superior (and therefore more expensive).

Marketing of fresh produce has undergone significant changes in recent years, driven by several factors. First, urban populations—particularly in Port Moresby—have grown substantially, with an officially estimated annual growth rate of 2.9 percent, implying an approximate 50 percent increase over the past 15 years.[5] Second, as observed in many low- and middle-income countries (Reardon et al., 2003), modern retail and institutional demand (e.g., restaurants and hotels) has become increasingly important in urban PNG markets. This development, coupled with greater willingness to pay for quality, has attracted large modern commercial suppliers—such as Hilans Fresh and NKW Fresh—into fresh produce value chains. These firms target high-end markets, emphasizing quality and freshness through uninterrupted cold chains and rapid transport, sometimes relying on costly airfreight rather than road or sea transport. Third, open wet markets in Port Moresby—such as Gordon's Market, Boroko Market, Tokarara market, and Waigani Market—remain the primary outlets for fresh produce, accounting for an estimated 80 percent of all fresh produce sold in the city, according to one stakeholder. These markets often host farmers, wholesalers, and retailers. In total, fifteen open markets currently function in the city, and growing demand from peri-urban areas is driving calls for the establishment of additional markets.[6] Fourth, investments in large-scale fresh produce farms—particularly in Central Province—have expanded supply to growing fresh produce markets.[7] Finally, infrastructure improvements have enhanced transport reliability in the Highlands, enabling spatial expansion of fresh produce production in these areas, though challenges remain in transportation from feeder roads connecting to the main high-way.

SECTION 2: DATA AND METHODS

2.1 Data and descriptives

Since 2009, the Fresh Produce Development Agency (FPDA) has been collecting market prices for 27 different fresh food items every two weeks in urban markets across major towns and centers. Data

[4] See Chang et al. (2015) and Birch et al. (2015) for additional information on vegetable production in the Central Province.

[5] https://www.macrotrends.net/global-metrics/cities/22064/port-moresby/population

[6] As stated by key informants of the POM Market Authority.

[7] Notable examples, mostly focusing on modern retail, include IAI's 9 Mile Vegetable Farm, a state-of-the-art greenhouse complex, and the modern farm operated by the Pacific Adventist University near Port Moresby.

collection is carried out by trained FPDA enumerators in key locations, including a main wet market (Gordon's) in Port Moresby and main markets in Kokopo, Mt. Hagen, Goroka, and Lae. The 27 food items include staples, vitamin-rich vegetables, dark leafy greens, citrus fruits, other fruits, nuts, and various vegetables. Before recording prices and quantities (in heaps, bundles, or single items), enumerators first assess the availability of produce in the market to determine the level of supply—categorized as high, medium, or low. They also evaluate the quality of each item, classifying it as poor, good, or excellent. Next, enumerators purchase three samples of each vegetable type from three different vendors. For each sample, they record the price, quantity, and ask the vendor about the source district of the produce. After completing these steps for all 27 items, the samples are taken to the FPDA office, where they are weighed using scales and the weights are recorded.[8] It is important to note that these data are not nationally representative. However, they provide valuable insights into price variations across regions, seasonal supply fluctuations, and patterns of production specialization by location, among other useful information.

Each of these markets offers a substantial number of price observations over the period considered (Table 1). While these data provide a unique resource for analysis, several caveats apply. First, the time series are not fully consistent, with some months completely missing in certain years—most notably 2015 (5 months available), 2016 (2 months), 2017 (3 months), and 2020 (9 months). Second, there is very little variability in the reported quality of each commodity, reflecting more the methodology employed to collect price and weight data of fresh produce. Third, coverage of the country varies. For this analysis, we focus only on markets with consistent data over the study period: Mt. Hagen, Banz (data collection started in 2021), Goroka, Lae, Port Moresby, and Kokopo.

Table 1: Markets surveyed and number of price observations, 2009 - 2025

Market	Number of Observations
Mt. Hagen	3,770
Banz	868
Goroka	3,879
Lae	2,377
Port Moresby	3,809
Kokopo	3,209
Total	**17,912**

Source: Authors' calculations using FPDA price data

[8] The resulting data are available at https://www.fpda.com.pg/market-info/. Price series might not be complete as fresh produce might not have been available, or data collection might sometimes not have happened.

For our assessments, we classify fresh produce into three main categories: (i) staples (sweet potato, taro, cooking banana (plantains)); (ii) soft fresh produce (broccoli, capsicum, pawpaw (papaya), pineapple, tomato); and (iii) hard fresh produce (cabbage, carrot, ginger, bulb onion, Irish potato). This distinction is made because texture and structural firmness significantly influence transport, storage, and wastage.. These products generally have lower water content and are more durable during storage and transport. In contrast, soft fresh produce is tender, has higher water content and is more perishable, this classification has important implications for expected wastage levels and, consequently, marketing and pricing. It is important to note that, due to the absence of urban consumption data in proximity to the study markets, we use simple averages to aggregate produce within these categories, which does not reflect their relative importance in household consumption baskets.

We use price data spanning 2009 to 2025. Over this period, nominal prices increased substantially, with the official price index in 2025 standing 41 percent higher than in 2009. To enable meaningful comparisons over time, we therefore deflate prices using the official Consumer Price Index (CPI), setting January 2025 as the base (index = 1) and expressing all real prices in January 2025 terms. We retain only those products for which sufficient price observations are available across the selected period and markets.

Table 2 presents descriptive price statistics for the retained products.[9] Several patterns emerge. First, some products are significantly more expensive on average: bulb onion is the most expensive fresh produce per kilogram, while sweet potato (kaukau) – the major staple in PNG – is the least expensive. Second, based on median prices, hard and soft fresh produce are 142 and 122 percent more expensive, respectively, than staple fresh produce. Finally, price variability is substantial, with coefficients of variation averaging 65 percent for staples, 67 percent for soft fresh produce, and 79 percent for hard fresh produce over the study period.[10] Looking at the commodity level, variability is low for major staples such as sweet potato and cooking bananas, capsicum and pawpaw in soft fresh produce, and Irish potato in hard fresh produce.

[9] We winsorized or trimmed prices at the 2 and 98 percentile and replace them with the winsorized values.

[10] As a comparison, the coefficient of variation of international wheat prices over the period January 2009 – June 2025 (using U.S. No.2 HRW, Gulf export price, published by IndexMundi) stood at 0.28.

Table 2: Descriptive prices, 2009-2025

	Mean	Median	Standard Deviation	Coefficient of Variation	Number of Observations
Staples					
Banana-Cooking	2.84	2.57	1.38	0.49	1,456
Sweet Potato	1.74	1.44	0.88	0.51	1,667
Taro True	3.80	3.16	2.28	0.60	944
Total	2.61	2.19	1.69	0.65	4,067
Soft Fresh Produce					
Broccoli	7.18	6.24	4.00	0.56	1,015
Capsicum	8.67	7.80	4.27	0.49	1,585
Pawpaw	2.65	2.32	1.26	0.47	1,202
Pineapple	4.04	3.37	2.43	0.60	1,545
Tomato	6.37	5.53	3.33	0.52	1,637
Total	5.85	4.87	3.91	0.67	6,984
Hard Fresh Produce					
English cabbage	4.04	2.98	2.89	0.72	1,620
Carrot	5.46	4.21	3.83	0.70	1,313
Ginger	8.80	7.42	4.96	0.56	1,234
Onion Bulb	10.53	8.15	6.72	0.64	1,409
Potato	3.99	3.41	1.76	0.44	1,285
Total	6.49	5.29	5.11	0.79	6,861

Source: Authors' calculations based on FPDA price data

2.2 Methods

We follow the hedonic price modeling framework as has been outlined by Lancaster (1966). Using this framework, a hedonic price regression can be estimated, where product prices are modeled as a function of characteristics such as quality and location. A simplified model can be expressed as follows:

$$p = \sum_{k=0}^{N} \beta_k X^k + \nu$$

where p is the price of the commodity, X^k is the level of the attribute k, β_k the implicit price of a change in attribute k, and v a stochastic error term. We apply this conceptual framework to fresh produce prices in PNG and analyze price formation using a regression approach. Specifically, we regress the price of the vegetable (p_{it}) on a set of binary variables for each level of the value chain (going from producing areas to the major city in the country) as follows:

$$p_{it} = \sum_{w=1}^{n} \beta_w W_{it} + \sum_{m=1}^{12} \gamma_m M_{it} + \sum_{r=1}^{p} \alpha_r T_{it} + \varepsilon_{it}.$$

Setting the price level in Mt. Hagen – the major producing area for a large number of hard fresh produce) – as the base category, variables W_{it} equal 1 if the vegetable price i in time period t was observed at other markets. Variable M_{it} captures monthly dummies, equaling 1 if the price i was observed in a particular month while T captures yearly dummies. ε_{it} is the error term. The computed standard errors are adjusted for heteroskedasticity (White, 1980). This specification is our base regression.[11] We estimate this equation separately for different product groups (staple, fresh and soft fresh produce) as well as all products separately. We use the logarithm of prices as the dependent variable for analyzing price trends and seasonality, while real price levels are retained for assessing marketing margins.

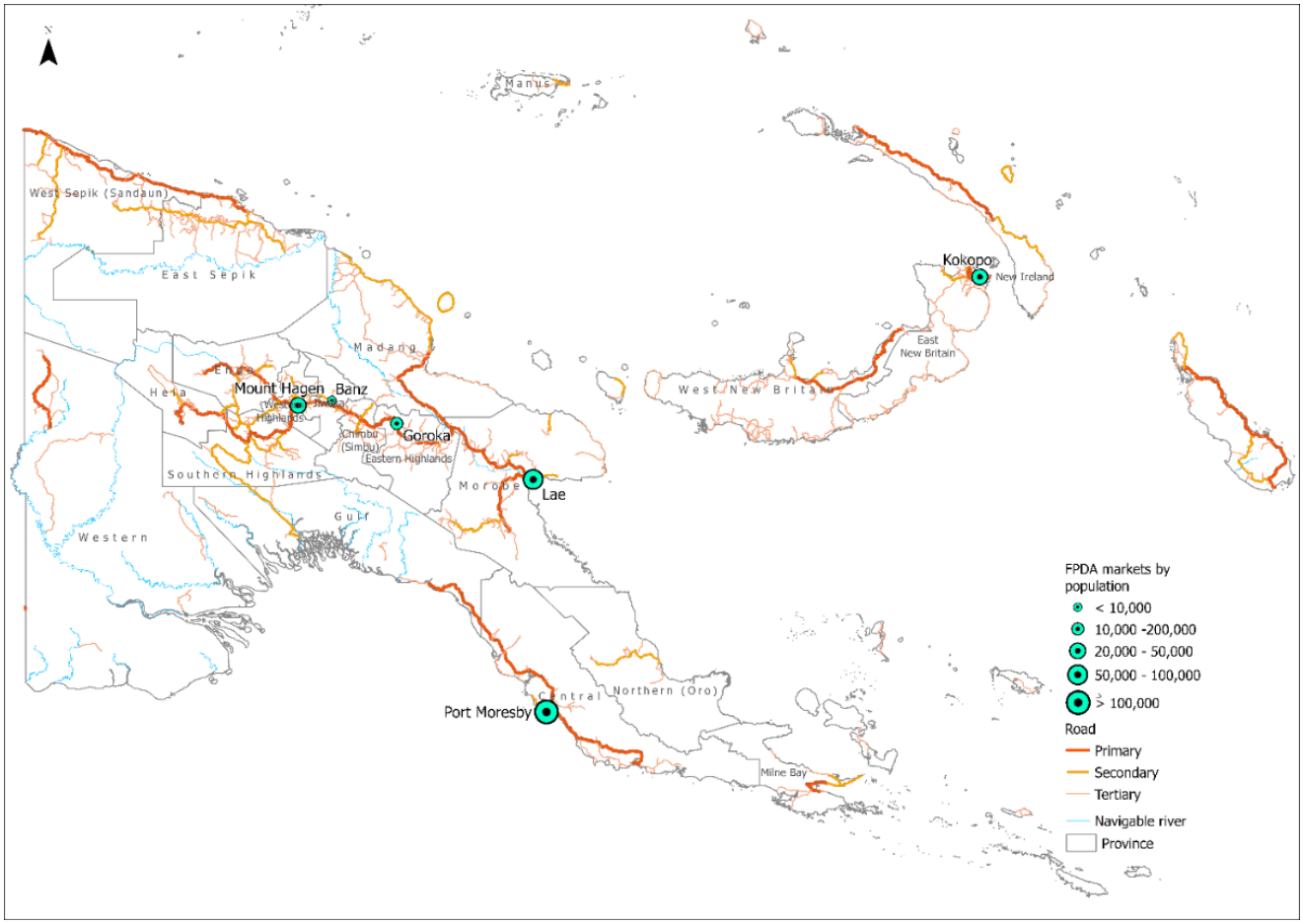
SECTION 3: MARKET FLOWS

The Fresh Produce Development Agency (FPDA) has collected data on market prices of fresh produce since 2009. More recently, FPDA expanded its data collection to include information on the location of production (at district level) of marketed fresh produce across 6 major open wet markets in major cities including: Goroka, Mt. Hagen, Banz (since 2021), Kokopo, Lae, and Port Moresby (Figure 1). In doing so, enumerators document three samples for each of the 22 monitored fresh produce commodities, respectively, capturing the price and the origin district of each commodity.[12] We use a subset of these data (data collected in 2024) to evaluate the flows of fresh produce from origin to destination across the 6 market areas.

[11] The full results are shown in the appendix.

[12] This includes 6,783 observations across 22 commodities that were sold within the 6 monitored markets.

Figure 1: FPDA market locations for food price data collection



Source: Authors' creation using road and town data from OpenStreetMap, administrative boundaries from National Statistical Office (NSO) of PNG

For each commodity, we calculate the annual share of the marketed commodity that comes from each reported production location. Table 3 provides a selection of the commodities and their respective production origin that are sold in the Lae main market and the Port Moresby Gordon's market (one of the biggest markets in the city). While these numbers provide an illustration of major producing areas by commodity, it is important to note that the FPDA market data is collected from select markets within each of the 6 major cities. Note also that we do not control for seasonality in supply sources, as these may vary throughout the year.

Table 3: Share of fresh produce supplied to Lae and POM markets by commodity and production location (district)

Commodity	Main supplier districts	Lae-main market (%)	POM – Gordon's market (%)
Staples			
Sweet potato	Hagen Central, Tambul / Nebilyer, Mul/Baiyer (WHP); Goroka, Daulo (EHP); Kairuku-Hiri (Central)	76% Hagen Central; 16% Tambul/Nebilyer; 8% Other	41% Goroka; 36% Hagen Central; 18% Daulo; 5% Kairuku-Hiri
Taro	Nawae, Huon, Finschafen, Markham (Morobe); Goilala, Kairuku-Hiri, Rigo, Abau (Central); Hagen Central, Tambul/Nebilyer (WHP)	100% (Morobe)	60% Hagen Central; 28% Central; 6% Tambul / Nebilyer; 6% Other
Cooking banana	Nawae, Huon (Morobe); Rigo, Kairuku-Hiri, Abau (Central)	91% Nawae; 9 % Huon	82% Rigo; 14% Kairuku-Hiri; 4% Abau
Hard fresh produce			
English cabbage	Tambul/Nebilyer, Hagen Central, Mul/Baiyer (WHP); Kundiawa/ Gembogl (Chimbu); Okapa, Kainanatu, Goroka, Lufa (EHP)	36% Tambul/ Nebilyer; 31% Hagen Central; 24% Kundiawa/ Gembogl; 9% (EHP)	44% Tambul / Nebilyer; 32% Hagen Central; 6% Mul/Baiyer; 18% (EHP)
Carrot	Goroka, Daulo, Henganofi, Lufa (EHP); Hagen Central, Tambul / Nebilyer (WHP)	56% Daulo; 24% Hagen Central; 18% Tambul/Nebilyer; 2% Goroka	55% Goroka; 18% Henganofi; 18% Hagen Central; 5% Daulo; 4% Lufa
Bulb onion	Kundiawa / Gembogl (Chimbu); Mt Hagen (WHP); Goroka (EHP)	100% (Chimbu)	43% Kundiawa / Gembogl; 43% Hagen Central; 14% Goroka
Irish potato	Okapa (EHP); Hagen Central, Tambul / Nebilyer (WHP)	91% Okapa; 7% Tambul / Nebilyer; 2% Other	48% Tambul / Nebilyer; 45 % Hagen Central; 7% Other
Soft fresh produce			
Capsicum	Kainanatu, Goroka (EHP); Hagen Central (WHP); Rigo, Kairuku-Hiri, Abau (Central); National Capital (NCD)	67% Kainanatu; 29% Hagen Central; 4% Other	35% Rigo; 29% NCD; 13% Kairuku-Hiri; 10% Abau; 9 % Goroka; 5% Hagen Central
Broccoli	Tambul / Nebilyer, (WHP)	100% Tambul / Nebilyer	100% Tambul / Nebilyer

Tomato	Unggai / Benna; Goroka; Henganofi, Daulo (EHP); Hagen Central (WHP); National Capital (NCD); Abau (Central)	69% Unggai/Benna; 16% Goroka; 11% Henganofi; 4% Daulo	55% National Capital; 35% Hagen Central; 5% Abau; 5% Goroka
Pawpaw	Markham, Huon (Morobe); Kairuku-Hiri, Goilala, Abau, Rigo (Central)	70% Markham; 30% Huon	73% Kairuku-Hiri; 18% Goilala; 6% Abau; 3% Rigo;
Pineapple	Hagen Central (WHP); Markham (Morobe), Kairuku-Hiri, Abau, Rigo (Central)	98% Hagen Central; 2% Markham	33% Kairuku-Hiri; 31% Abau; 28% Rigo; 8% Hagen Central

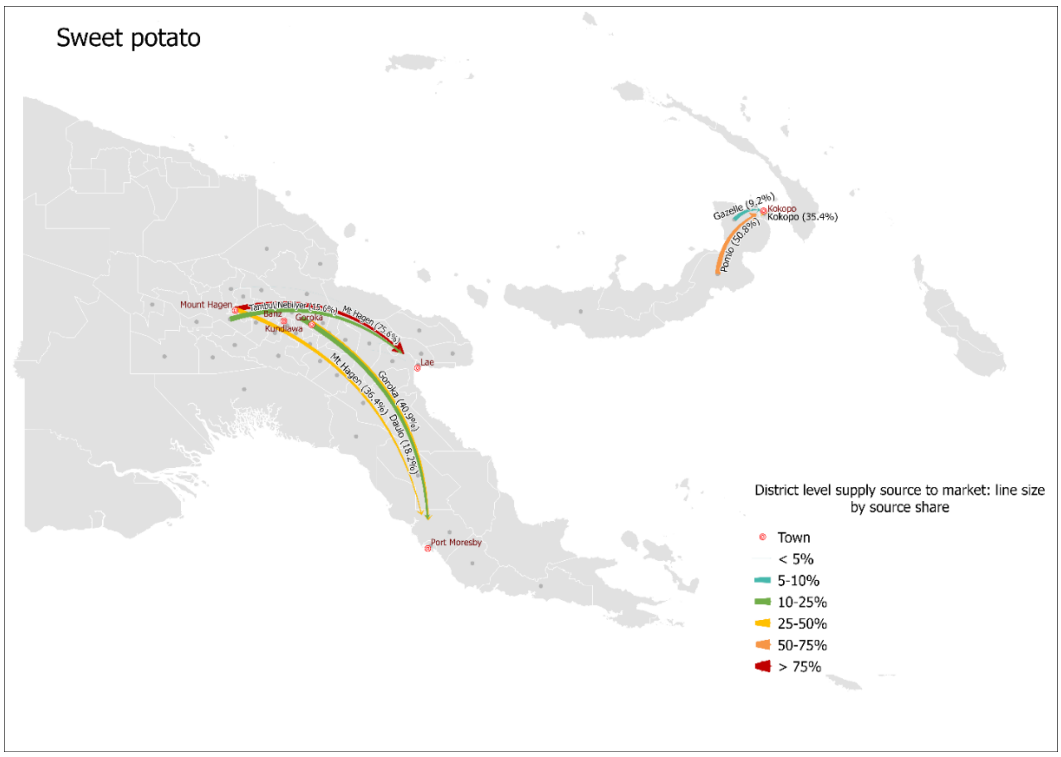
Source: FPDA Food Price Monitoring data

We also use flow maps to compare origin and destination of the three main fresh produce categories to Lae and Port Moresby. Across all market locations, there are substantial flows moving from the highlands fresh produce production areas to Lae, Port Moresby and Kokopo. There is less produce moving from lowland areas (Morobe and Madang) into the Highlands. For most of the fresh produce moving from the highlands to Port Moresby and Kokopo, Lae wharf is the primary transit point where fresh produce is loaded onto sea containers and shipped via boat to its final destination. The flow maps show arrows moving directly from highlands provinces to Port Moresby and Kokopo for visual clarity, however it is important to note that Lae is the first transit point for these final locations.

3.1 Staple crop flows

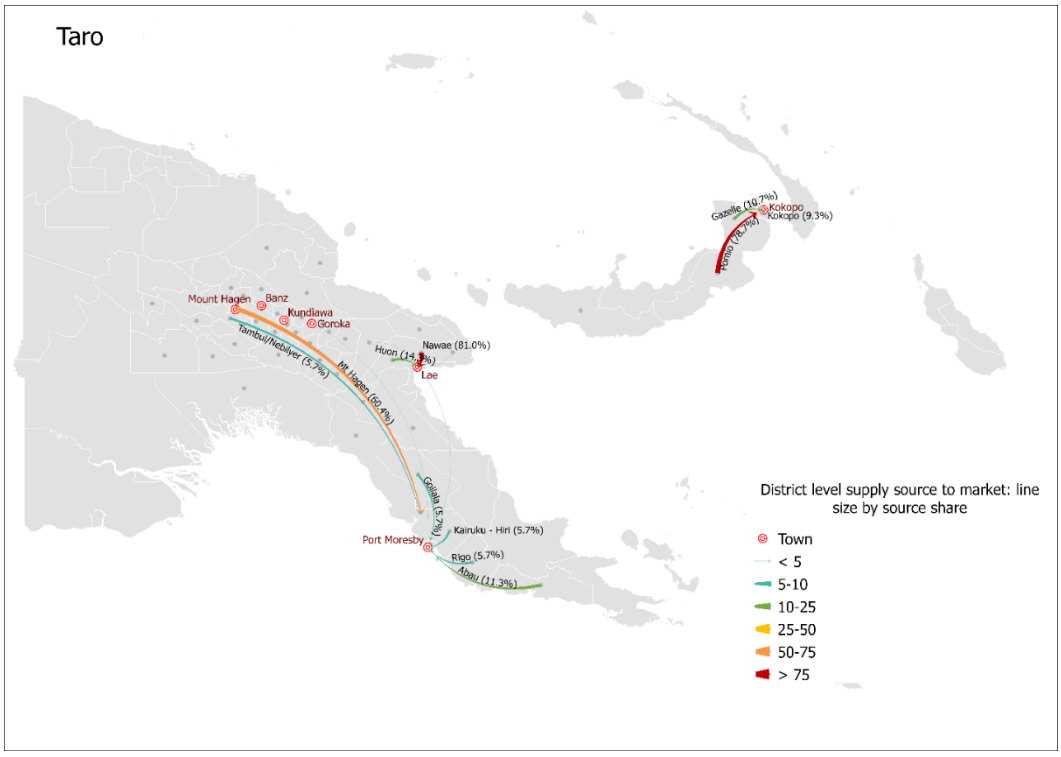
Sweet potato, taro, and cooking banana (three of PNG's most important staple crops) have diverse commercial production locations, and depending on market demand, also differ with regards to origin / destination flows. While the highlands produce both sweet potato and taro, data suggest that highland sweet potato is transported in greater volume to lowland markets compared to taro (Figures 2 and 3). Conversely, taro has a wider dispersion of commercial production. Highlands' taro comprises the largest share of taro sold in the highlands markets (Mt. Hagen, Goroka, and Banz), while lowlands taro grown in Morobe comprises close to all of the taro sold in the Lae market. Approximately 28 percent of taro sold in Gordon's market in Port Moresby comes from Central province. Contrary to sweet potato and taro, vendors in Lae obtain their cooking banana from Morobe province, while vendors in POM source almost all of their cooking banana from Central province (Figure 4).

Figure 2: Sweet potato flows to POM, Lae, and Kokopo



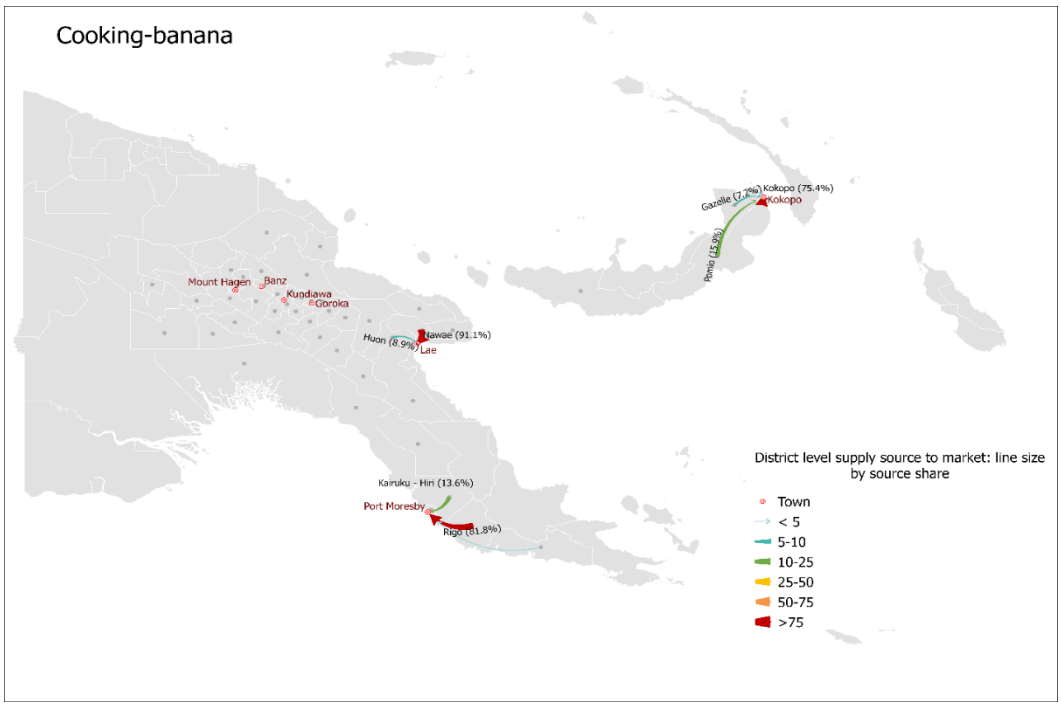
Source: FPDA Food Price Monitoring data

Figure 3: Taro flows to POM and Lae



Source: FPDA Food Price Monitoring data

Figure 4: Cooking-banana flows to POM and Lae



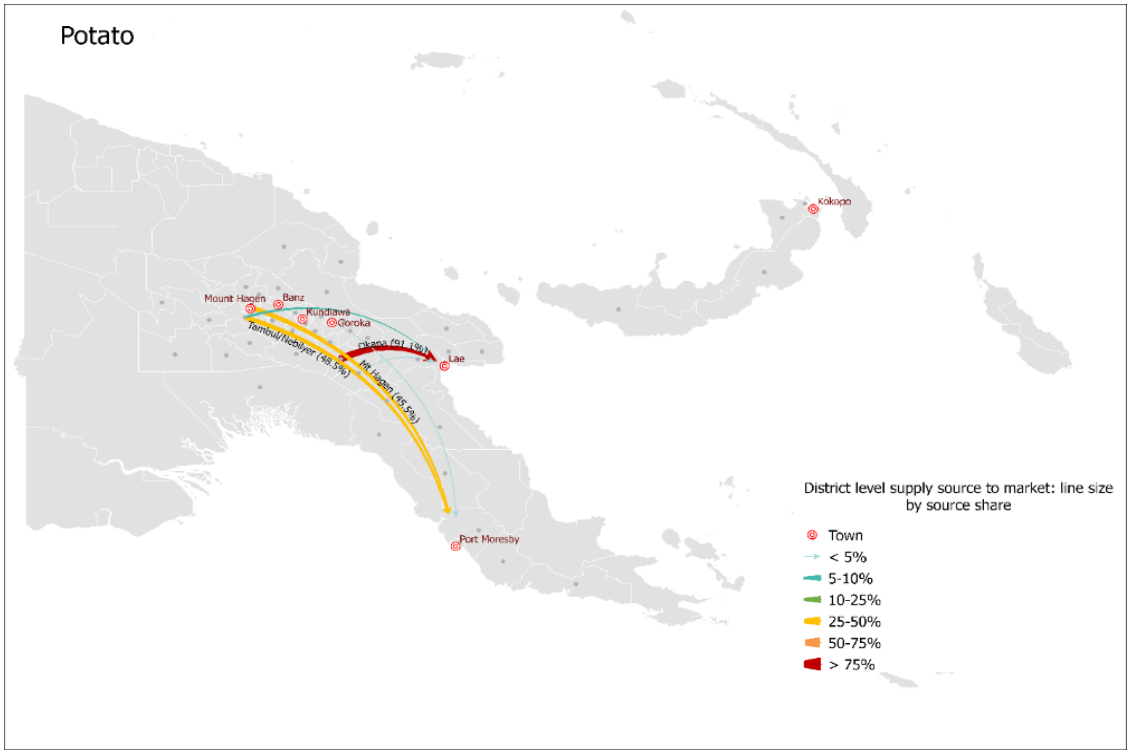
Source: FPDA Food Price Monitoring data

3.2 Hard fresh produce

Focusing on Irish potato, cabbage, onion and carrot, a large share of these hard fresh produce commodities that are sold in Lae and Port Moresby are produced in the Highlands. According to the FPDA vendor survey data, Irish potato and onion cultivation represent the most geographically specialized commercial production of the hard fresh vegetables produced in PNG. Given colder climates and agro-ecological conditions in the highlands for Irish potato cultivation, Tambul / Nebilyer (Western Highlands) and Hagen Central supply 48 and 45 percent, respectively, of the marketed Irish potatoes in Port Moresby (Figure 5). According to market vendors in Lae, Okapa district (Eastern Highlands) supplies 91 percent of vendors with marketed Irish potatoes.

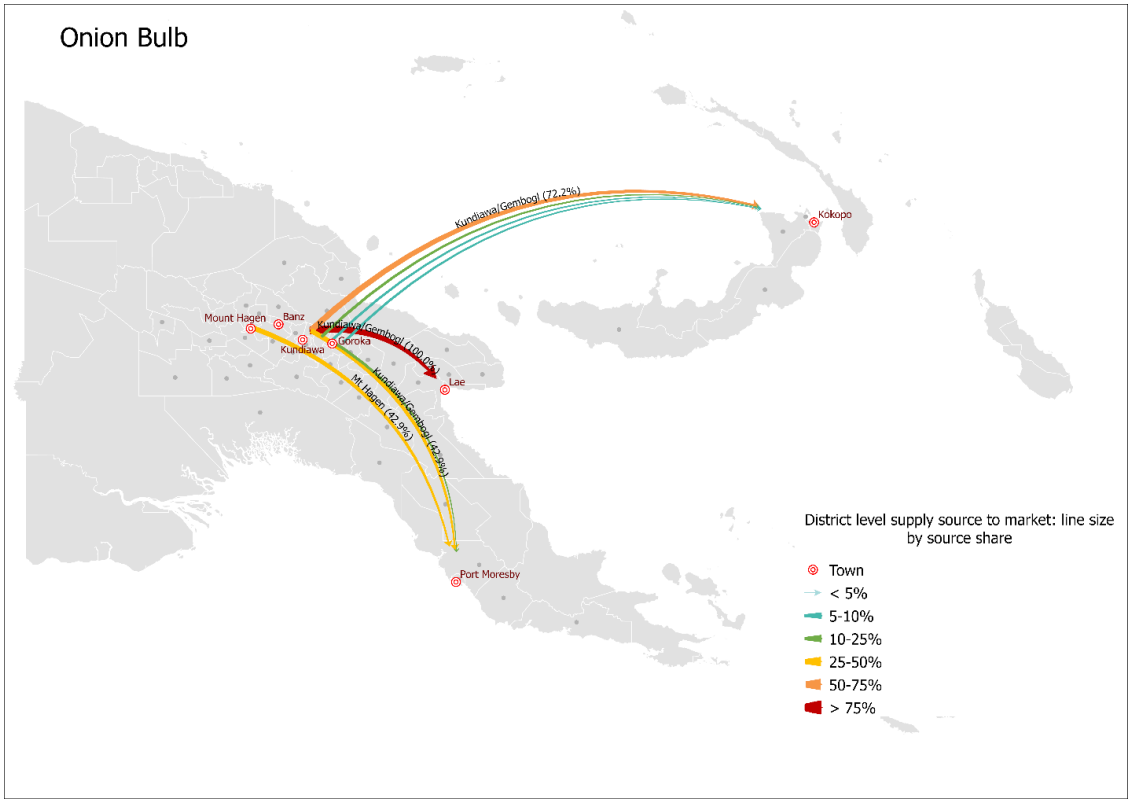
According to the FPDA data, 86 percent of surveyed vendors selling domestic onion in Port Moresby sourced from Kundiawa / Gembogl and Hagen Central districts. In Lae, 100 percent of vendors selling domestic onion indicated that it was sourced from Kundiawa / Gembogl. While slightly less specialized, vendors selling carrots at Port Moresby (Gordon's) reported sourcing most of their carrots from Goroka (55 percent) and Henganofi (18 percent) districts of Eastern Highlands Province. Similarly, 42 percent of Lae vendors reported carrot sources from Western Highland Provinces of Tambul (24 percent) and Mt Hagen (18 percent) districts and over half from Eastern Highland Province (Daulo - 56 percent).

Figure 5: Irish Potato flows to POM and Lae



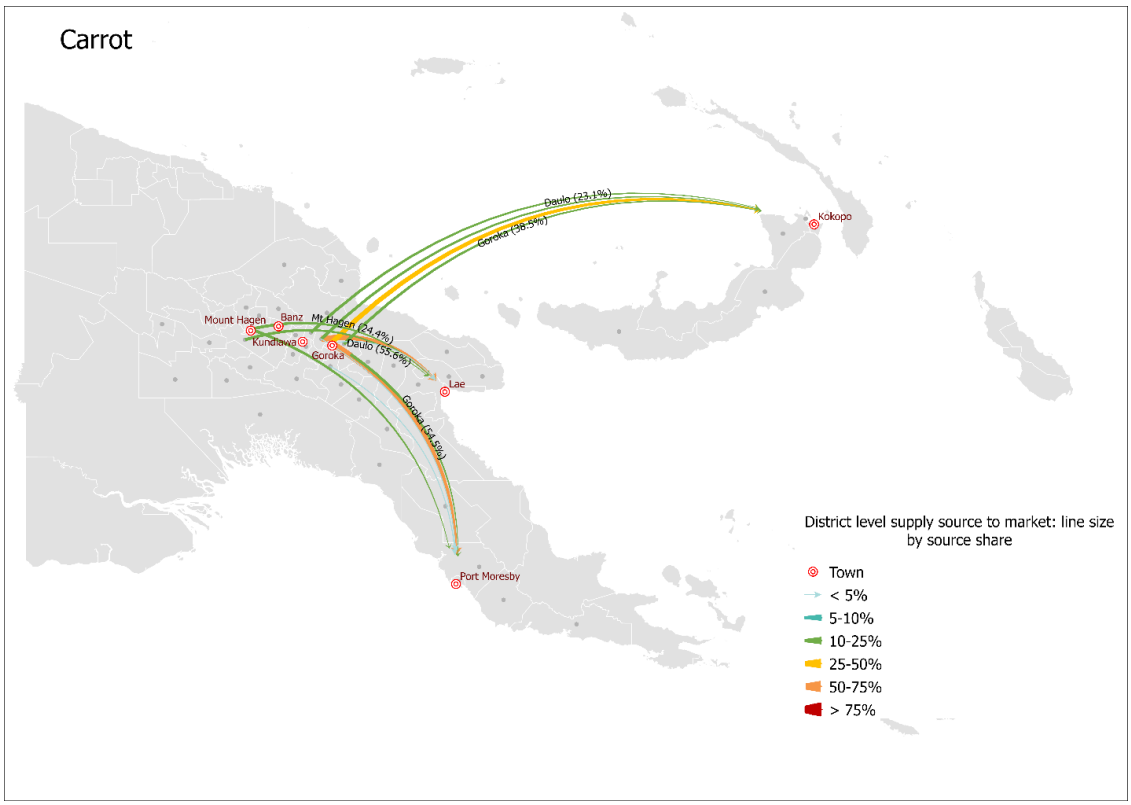
Source: FPDA Food Price Monitoring data

Figure 6: Onion bulb flows to POM and Lae



Source: FPDA Food Price Monitoring data

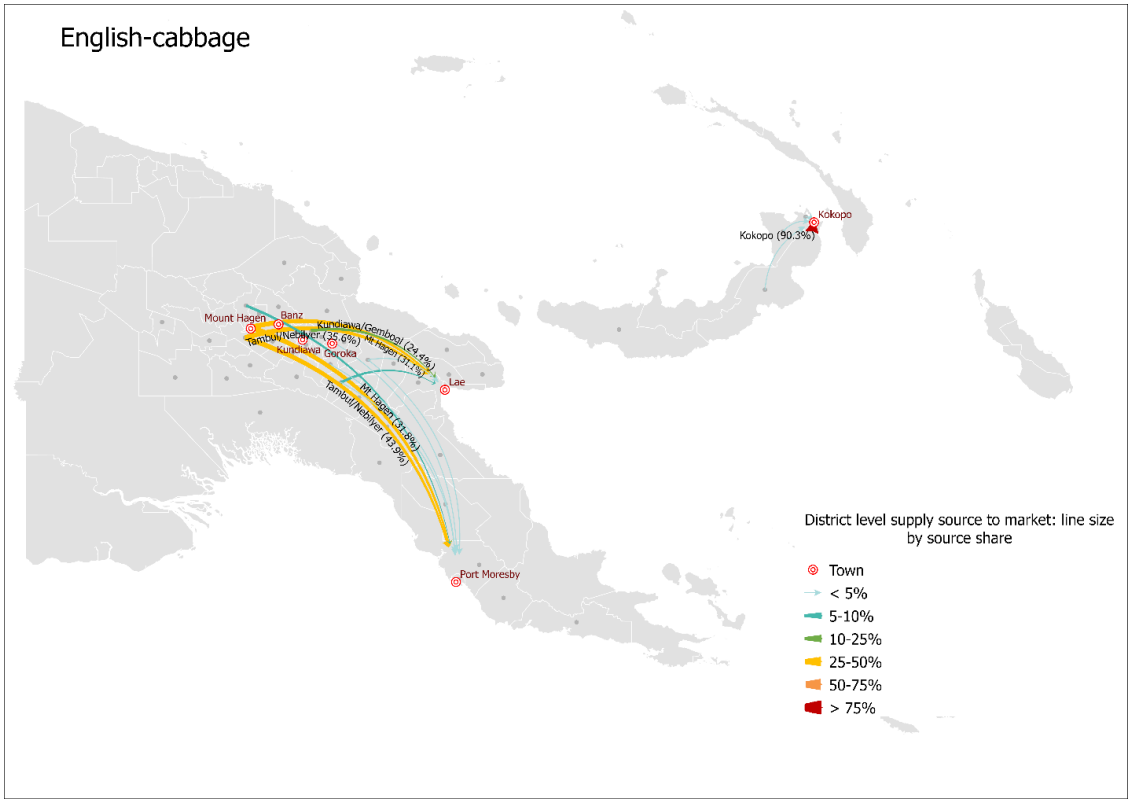
Figure 7: Carrot flows to POM and Lae



Source: FPDA Food Price Monitoring data

Cabbage commercial cultivation has a wider geographic production area in the highlands compared to the other hard fresh produce, and most cabbage in Port Moresby and Lae markets is sourced from the highlands. Over 3/4 of vendors in Gordon's market of Port Moresby reported cabbage was sourced from Tambul / Nebilyer (44 percent) and Hagen Central (32 percent) districts of Western Highlands Province. Similarly, 36 and 31 percent of vendors in Lae reported sourcing their cabbage from Tambul / Nebilyer and Hagen Central, respectively. However, for Kokopo market, all vendors source their cabbage from within East New Britain province.

Figure 8: English-cabbage flows to POM and Lae



Source: FPDA Food Price Monitoring data

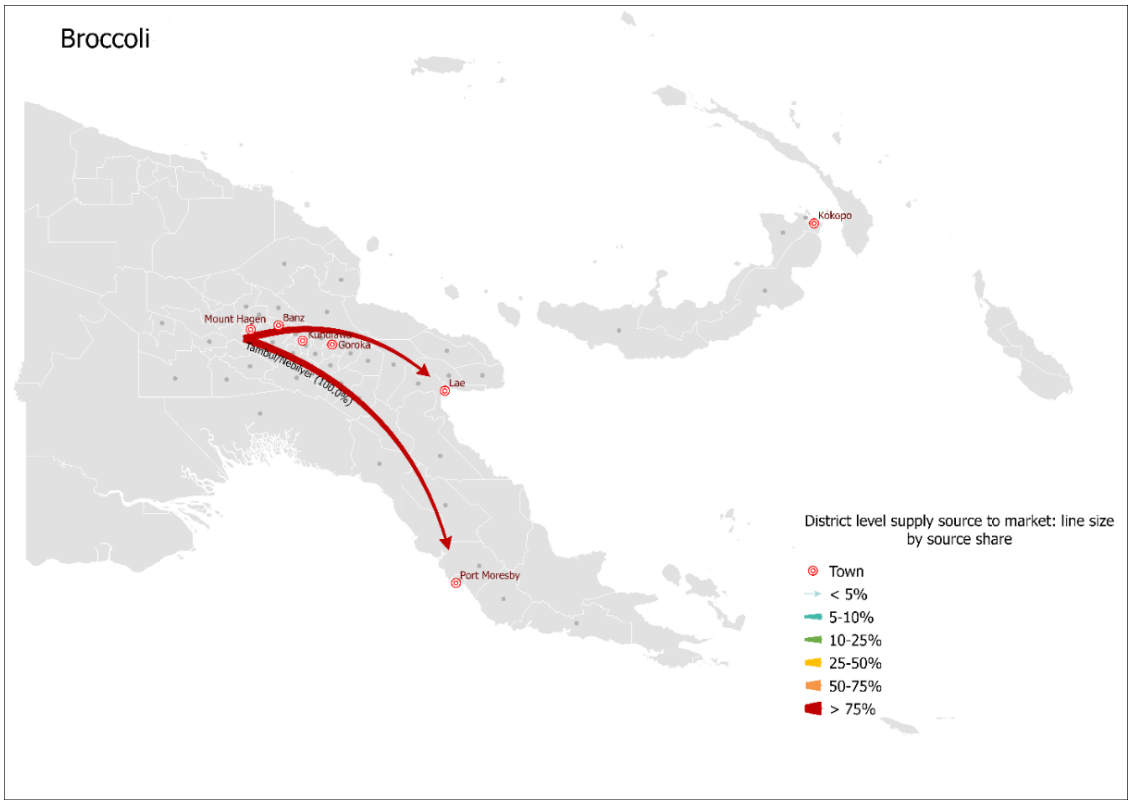
3.3 Soft fresh produce

Given the higher perishability of soft fresh produce, sales vendors reported sourcing a greater share of these products from localized sources. Earlier work has also suggested that an important share of perishable vegetables supplied to POM markets are sourced from peri-urban producers outside of POM and diverse areas across Central province (Chang et al., 2015; NZ MFAT/Program evaluation, 2018). As stated previously, the Port Moresby vendor source data used in this analysis is based solely on data from Gordon's Market. Further evaluation of other markets and informal channels (which were estimated to comprise 60 percent of POM's traded fresh produce according to Bonney et al. (2015) should be incorporated in future analyses of fresh produce trade flows into Port Moresby and other cities.

An exception to localized soft fresh produce specialization is broccoli, which demonstrates strong geographic specialization. It is important to note that vendor data for broccoli sources were limited in POM given the less frequent availability of broccoli in Gordon's market. Nevertheless, the available data indicates that in both POM and Lae markets, broccoli is primarily sourced from Tambul / Nebilyer district of Western Highland Province (Figure 9). This pattern reflects the concentration of cool-climate, high-

value vegetable production in high-altitude areas where conditions favor crops such as broccoli, cauliflower, and cabbage (Bourke, 2005; Bonney et al., 2015).

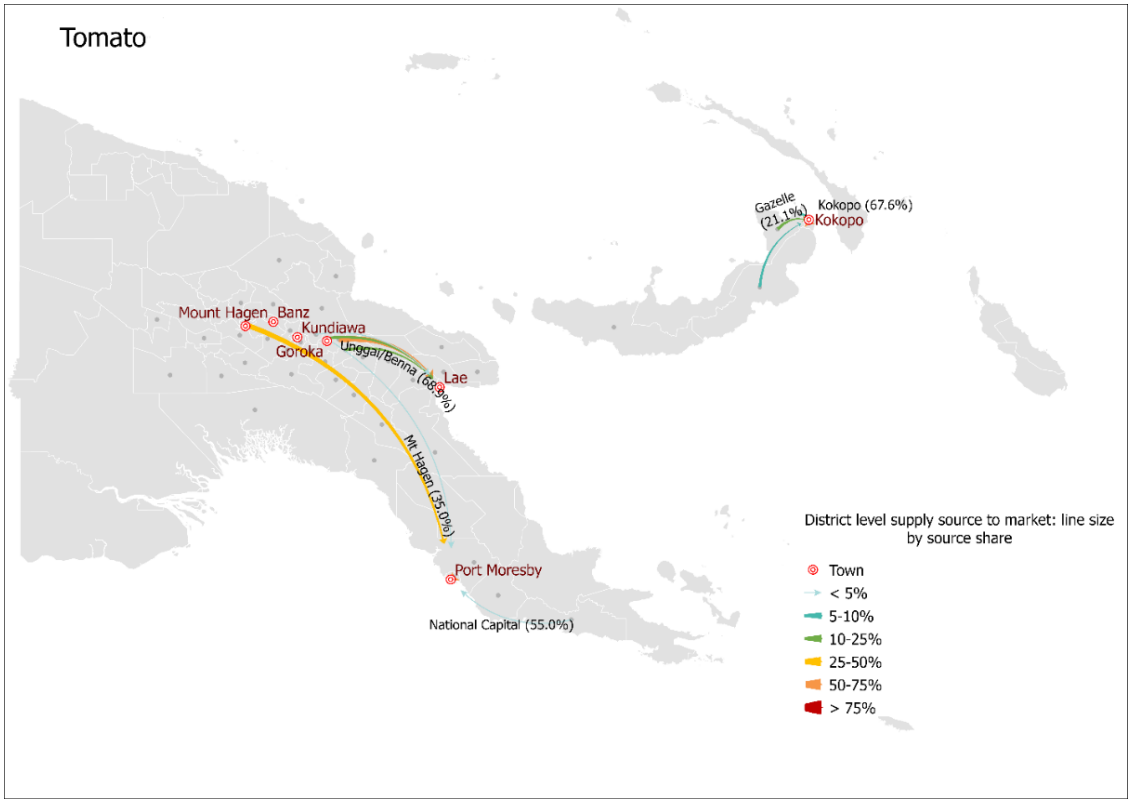
Figure 9: Broccoli flows to POM and Lae



Source: FPDA Food Price Monitoring data

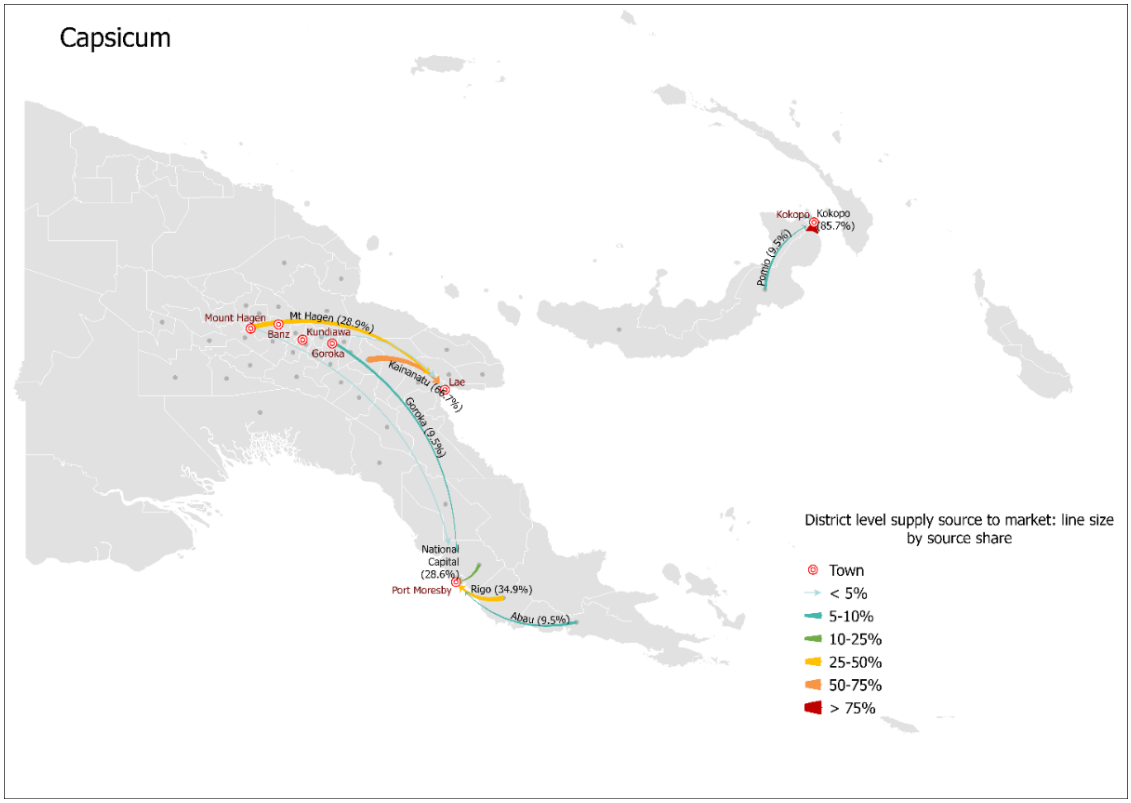
Vendor sourcing of tomatoes and capsicum reflect proximity preference, where a majority of POM vendors source these items from peri-urban areas of POM or nearby Central province and NCD production areas such as Rigo, Abau, NCD, and Kairuku-Hiri (Figures 10 and 11). Lae vendors have better access to differing production areas given their linkage with the Highlands highway. Thus, for Lae, capsicum and tomato are primarily sourced from highlands provinces. This differs for pawpaw (papaya) and pineapple, which grow well in warmer temperatures in lowland areas. Lae vendors source all of their papaya from Morobe province and Port Moresby vendors obtain almost all papaya and pineapple from Central province growers.

Figure 10: Tomato flows to POM and Lae



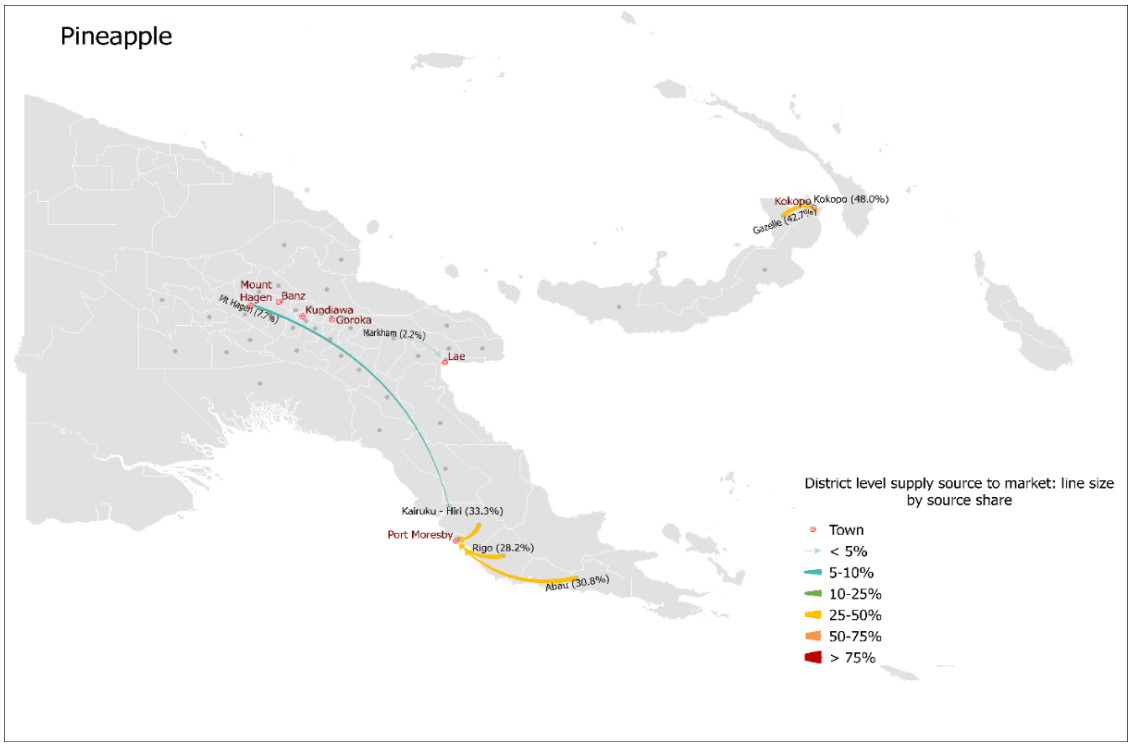
Source: FPDA Food Price Monitoring data

Figure 11: Capsicum flows to POM and Lae



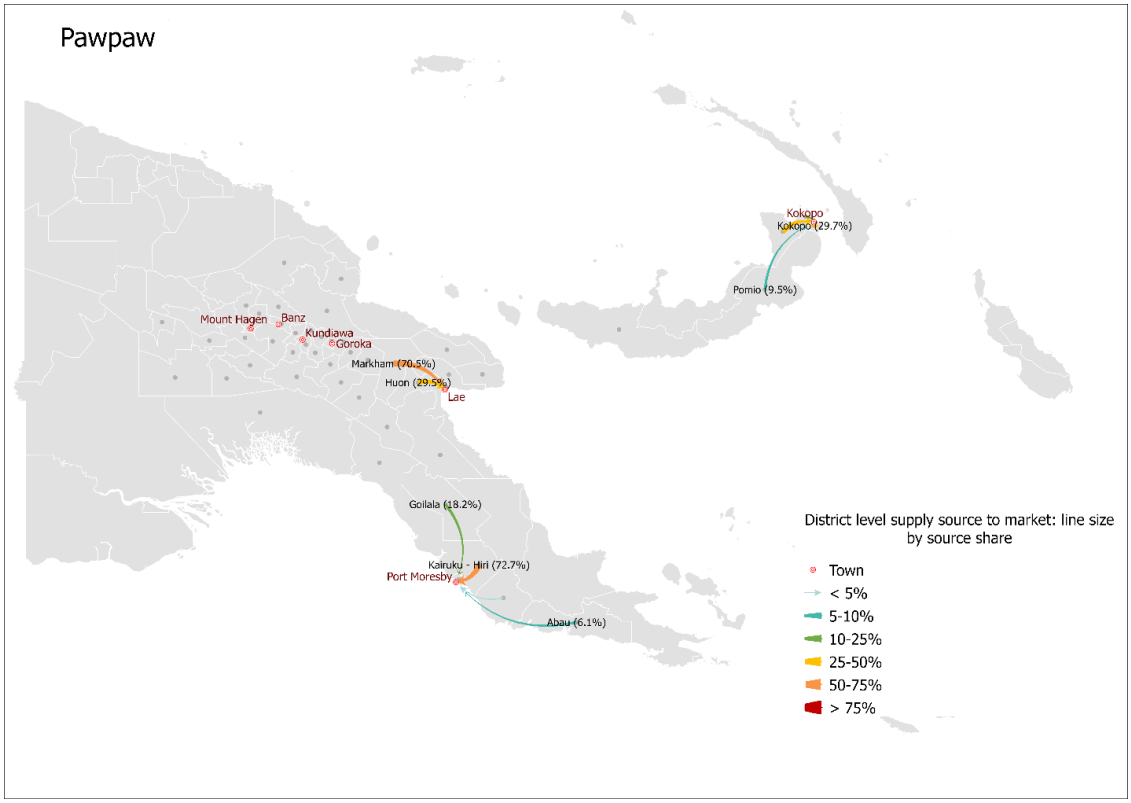
Source: FPDA Food Price Monitoring data

Figure 12: Pinenapple flows to POM and Lae



Source: FPDA Food Price Monitoring data

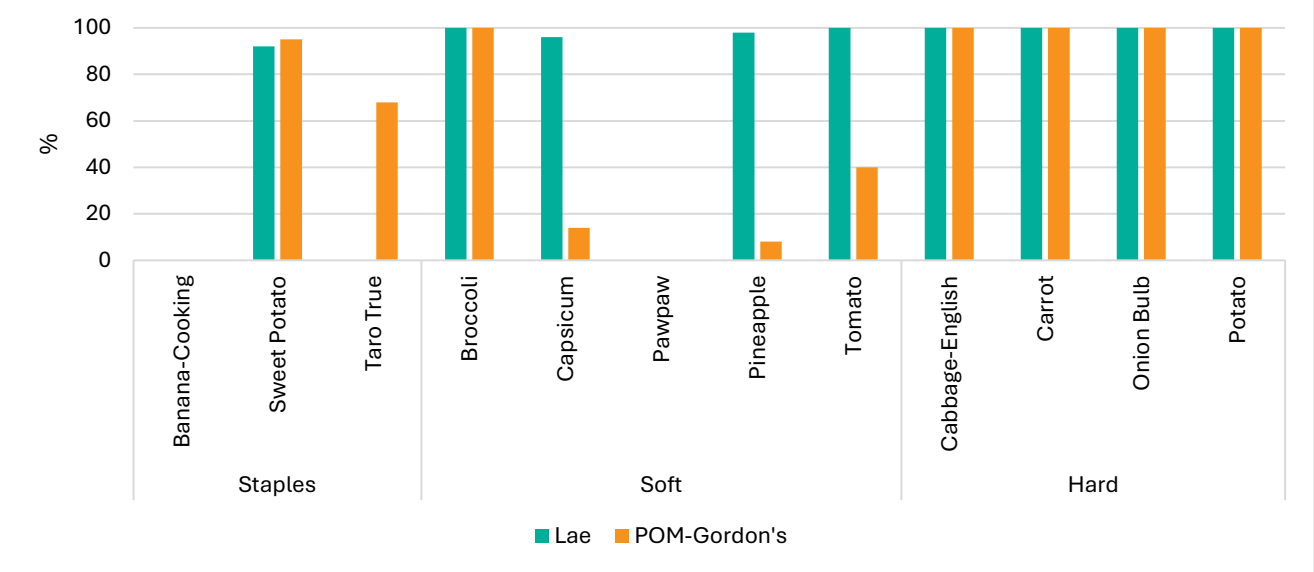
Figure 13: Pawpaw flows to POM and Lae



Source: FPDA Food Price Monitoring data

We synthesize the flow analysis in Figure 14 by calculating the overall share of the Highlands in supplying staples, fresh produce, and hard fresh produce to open markets in Lae and Port Moresby. For staple fresh produce, the Highlands account for 92 percent and 95 percent of supply to Lae and Port Moresby markets, respectively. Cooking bananas are not sourced from the Highlands, whereas taro originating from the Highlands represents nearly 70 percent of taro sold in Port Moresby markets. Hard fresh produce (cabbage, carrot, domestically produced bulb onion, and Irish potato) is supplied exclusively by the Highlands. The picture is more mixed for soft fresh produce: all broccoli sold in Port Moresby comes from the Highlands, but shares are much lower for other items. The only notable case is tomatoes, of which about 40 percent sold in Port Moresby originate from the Highlands.

Figure 14: The share of Highlands origins in fresh produce sold in the main market in Lae and Gordon's market in POM (2024)



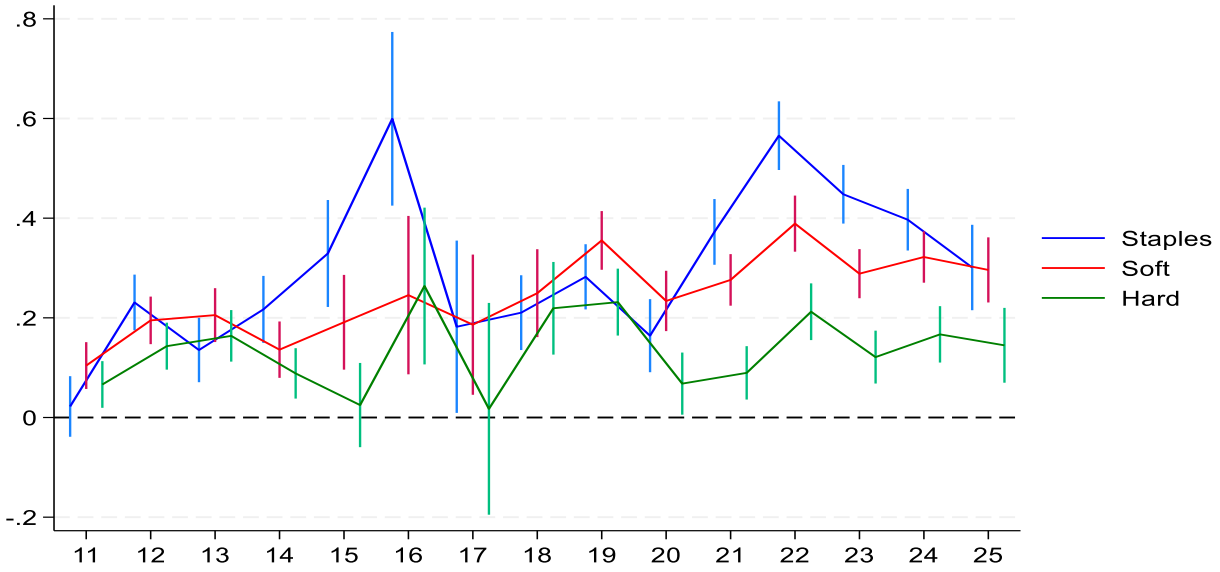
Source: FPDA Food Price Monitoring data

SECTION 4: PRICE TRENDS

We assess (real) price changes over the last 15 years. Figure 15 presents the results of this exercise, illustrating the changes of prices compared to the Mt. Hagen market in 2010 (through a ratio). Several important patterns emerge. First, all groups exhibit significant real- price are deflated by the overall price index - price increases compared to 2010, indicating that food price inflation has outpaced non-food inflation. Second, prices for staples and hard fresh produce spiked in 2016, likely linked to severe El

Niño-induced droughts and frosts that year.[13] The PGK also depreciated by nearly 10 percent against the Australian dollar in 2016, raising the cost of imported agricultural products (such as bulb onion, carrots, and Irish potatoes), explaining the significant raise of prices for hard fresh produce that year. Third, prices dipped slightly in 2020, possibly due to the government's freight subsidy for food transport by boat between Lae and Port Moresby during the COVID-19 period. However, they again rose significantly – especially staples – in 2021-2022. Fourth, we observe a downward trend or slightly lower prices between 2017 and 2020, potentially associated with low international coffee prices during that period. Stakeholders reported significant labor shifts in the Highlands from fresh produce to coffee when coffee prices were more remunerative, suggesting strong interlinkages of prices between these commodity groups.[14] Finally, we observe markedly different price trends across crop groups. Hard fresh produce shows the smallest overall increase, with prices in 2025 less than 20 percent higher than in 2010. In contrast, soft and staple fresh produce prices were approximately 30 percent higher in 2025 compared to 2010.

Figure 15: Price changes compared to 2010, all markets, 2011-2025 (ratio)



Note: Markers are coefficients, vertical lines are confidence intervals; Source: FPDA Food Price Monitoring

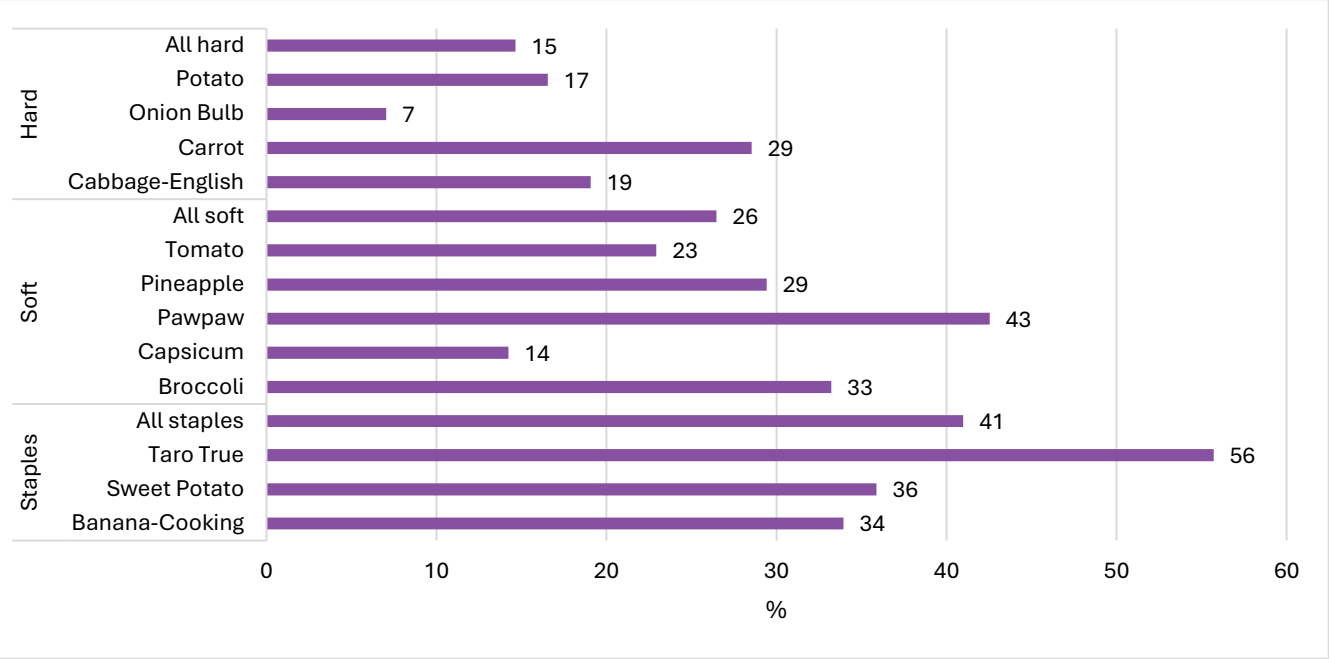
Using the same regression methodology, Figure 16 illustrates how individual commodity prices have evolved, comparing the period 2009–2011 with 2023–2025. The results show that prices for all commodities increased more than the overall price inflation in the country. Staples recorded the largest increases, driven in part by sharp rises in taro prices, though other staples also saw substantial gains—

[13] 2016 was also the year before the national general elections when it has been reported by some stakeholders that fewer people plant to sell, leading to lower market fresh produce supplies. National elections were held in 2012, 2017, and 2022.

[14] More in-depth research would be required to substantiate these reported linkages.

sweet potato, for example, increased by 36 percent. Hard fresh produce overall experienced the smallest increase at 15 percent, while bulb onion – that is typically also imported in large quantities from abroad – registered the lowest price growth among all commodities, at just 7 percent.

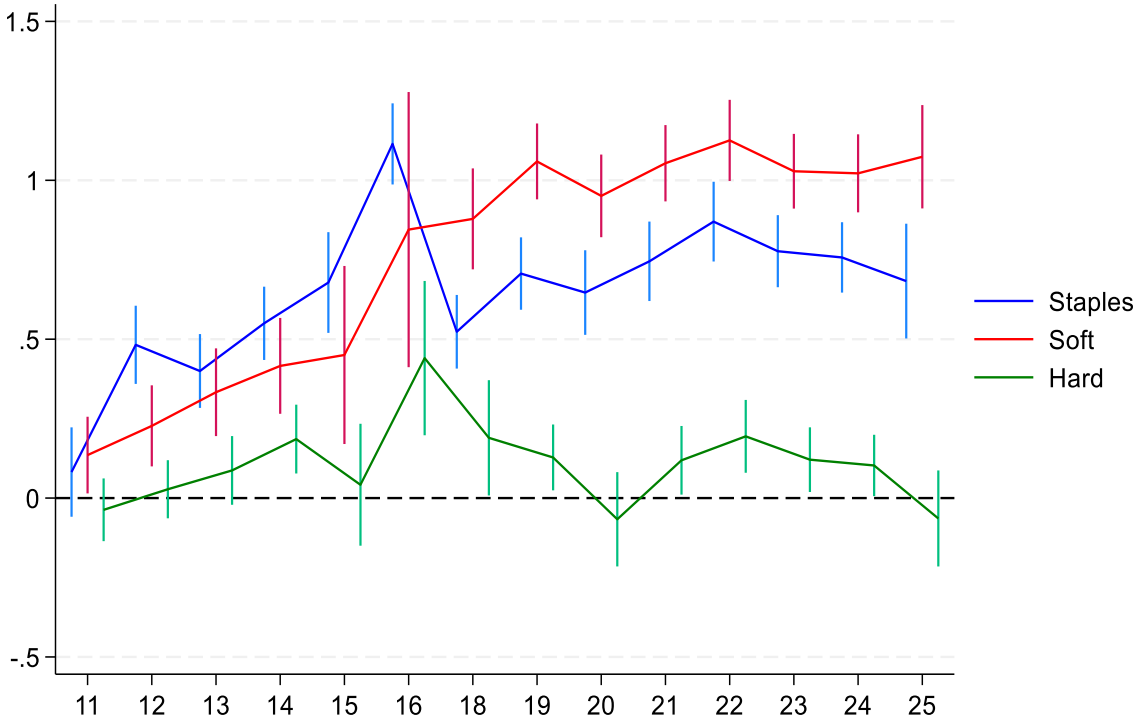
Figure 16: Price levels in 2023-25 compared to 2009-2011, percentage increase, all markets



Source: FPDA Food Price Monitoring data

We also examine the price evolution of different fresh produce categories in Port Moresby (Figure 17). Prices for soft and staple fresh produce have increased significantly over the period, with soft fresh produce prices roughly doubling, while prices for hard fresh produce have remained relatively stable. Given that hard fresh produce is almost exclusively supplied by the Highlands, this suggests that marketing channels for fresh produce not sourced from the Highlands—namely staples and soft fresh produce—have comparatively deteriorated. Further investigation into the underlying causes of this trend would be valuable.

Figure 17: Price changes compared to 2010, POM, 2011-2025 (ratio)

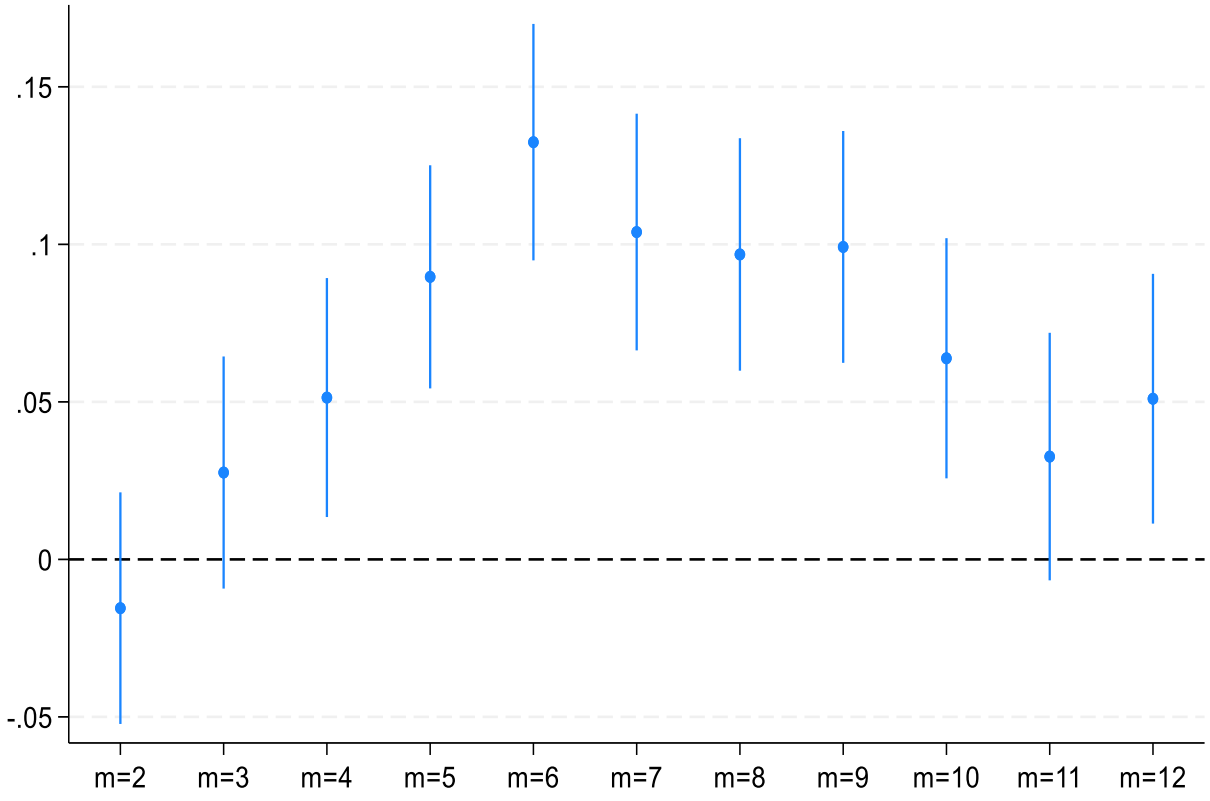


Note: Markers are coefficients, vertical lines are confidence intervals; Source: FPDA Food Price Monitoring

SECTION 5: SEASONALITY

To assess seasonal price movements, we again apply the method outlined in Section 2, using the logarithm of prices as the dependent variable. The results reveal significant seasonal variation in fresh produce prices across all products combined. Prices are estimated to be substantially higher in the middle of the year compared to the beginning and end, averaging almost 15 percent higher in June relative to January (Figure 18). January and February consistently record the lowest prices of the year. Several factors may explain this pattern. First, low prices at the beginning of the year have been linked by key informants to education-related expenses during that period, which induce producers to plant crops for harvest in January–February, resulting in greater supply. Second, family labor availability may increase as boarding students return home for holidays (secondary schools, colleges, and universities), enabling higher production and supply. Third, higher mid-year prices may partly reflect labor competition between fresh produce cultivation and coffee harvesting (PPAP 2016), particularly in the highlands where coffee is significant (Mukerjee et al. 2024). Finally, in some areas, mid-year coincides with the dry season, leading to lower supplies before planting resumes in October–November.

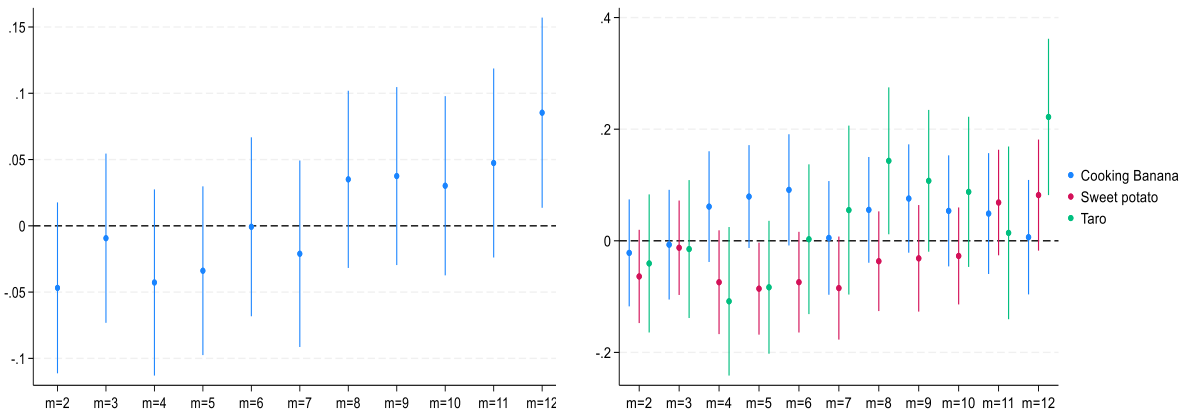
Figure 18: Seasonal price movements, all products, 2009-2025 (ratio, compared to January)



Note: Average prices compared to January, 13 products; markers are coefficients, vertical lines are confidence intervals; Source: FPDA Food Price Monitoring

We next disaggregate these seasonal effects by fresh produce group (Figure 19). The graph on the left shows seasonal patterns for staples overall, and the second graph on the right illustrates trends for the three individual staples. Staple crops prices generally rise toward the end of the year (August to December), with December prices significantly almost 20 percent above January levels – possibly reflecting increased household demand and expenditures associated with year-end festivities. Examining individual staples reveals distinct patterns: sweet potato prices do not show any significant seasonal movement, while taro shows a significantly higher price in December. Cooking bananas display a different pattern, with prices a bit higher in the second quarter of the year, likely linked to production-related factors.

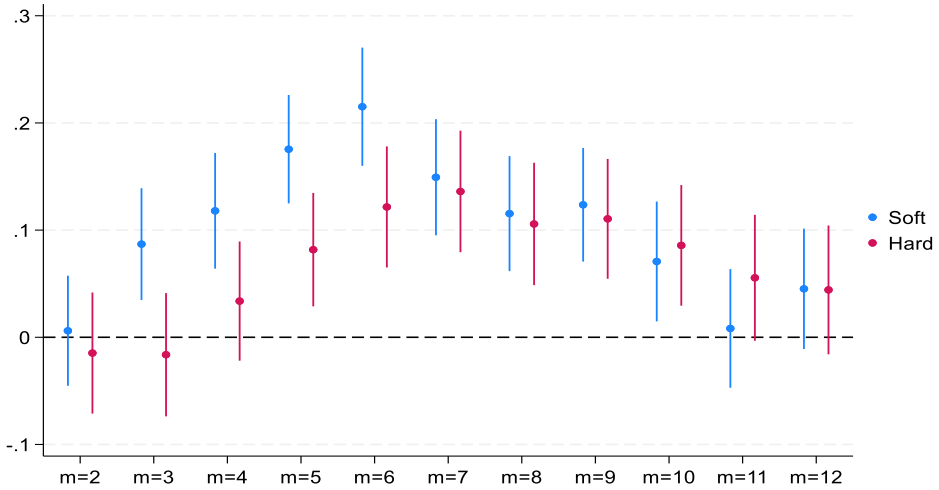
Figure 19: Seasonal price movements, staples, 2009-2025 (ratio, compared to January)



Note: Average prices compared to January, 3 products, 2009-2025; markers are coefficients, vertical lines are confidence intervals; Source: FPDA Food Price Monitoring

We next compare seasonal patterns for soft and hard fresh produce (Figure 20). These product categories exhibit markedly different seasonal price movements compared to staples, with prices for fresh produce rising more sharply toward the middle of the year. Soft fresh produce reaches its peak between May and July, while hard fresh produce peaks slightly later, from June to August. Seasonal amplitudes also differ significantly: soft fresh produce shows the largest variation, with prices in June more than 20 percent higher than in January. Hard fresh produce has a smaller amplitude, of just over 10 percent.

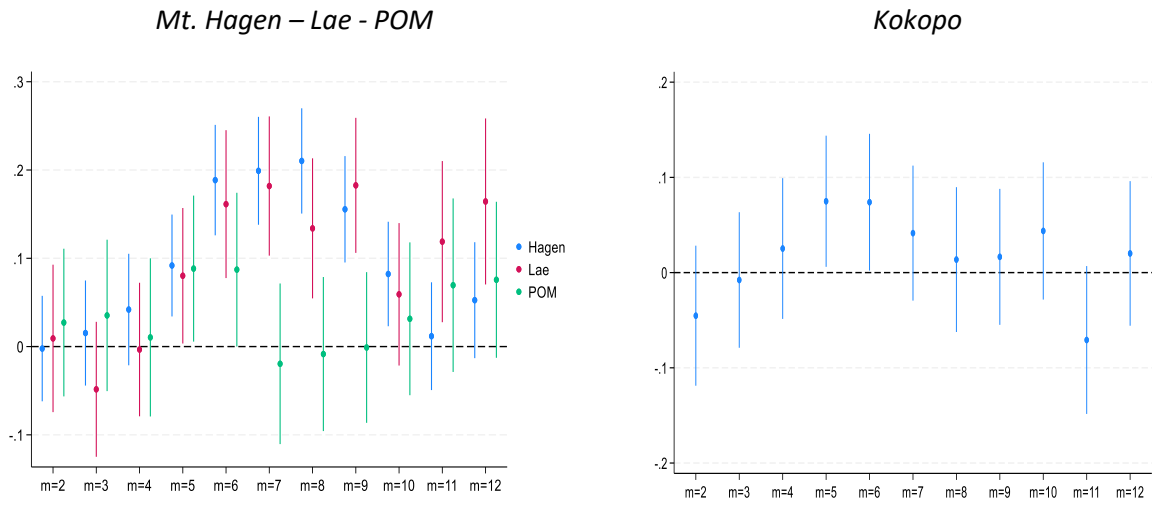
Figure 20: Seasonal price movements, soft versus hard fresh produce, 2009-2025 (ratio, compared to January)



Note: Average prices compared to January, soft (5 products), hard (5 products), 2009-2025; markers are coefficients, vertical lines are confidence intervals; Source: FPDA Food Price Monitoring

We also compare seasonal indices across markets (Figure 21). Seasonal peaks are highest in Mt. Hagen and lowest in Port Moresby. The lower seasonality in Port Moresby prices is partly explained by its diverse supply sources—including the Highlands, Central Province, and imports (See Figure 14)—as well as its generally higher price levels and the relatively greater contribution of marketing costs to final price formation. Seasonal fluctuations in Kokopo are also smaller overall than in other regions (see graph on the right).

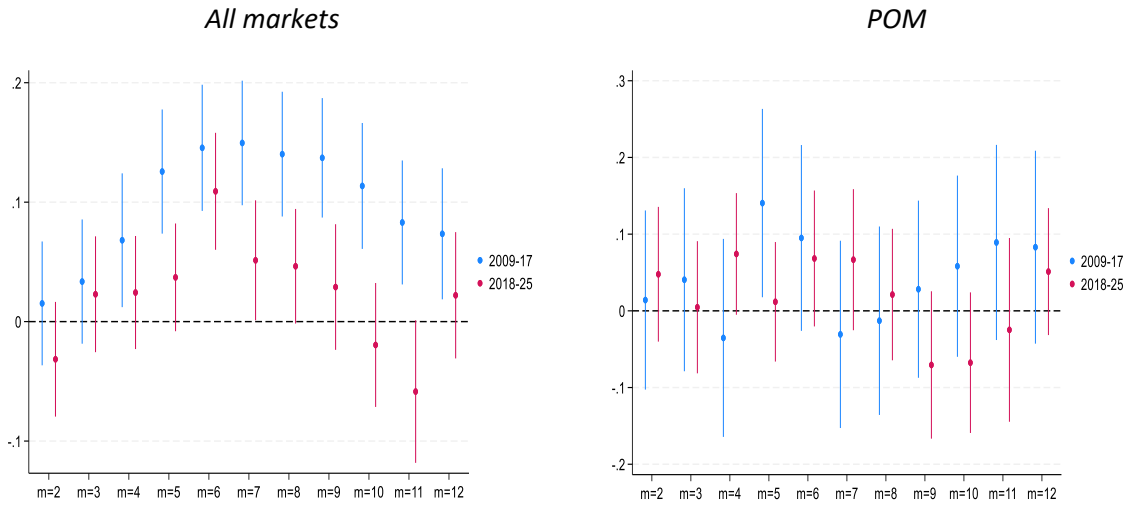
Figure 21: Seasonal price movements by market, all products, 2009-2025 (ratio, compared to January)



Note: Average prices compared to January, 13 products, 2009-2025; markers are coefficients, vertical lines are confidence intervals; Source: FPDA Food Price Monitoring

Finally, we examine how seasonal patterns have shifted over time (Figure 22), comparing the period 2009–2017 with 2018–2025. The results indicate a substantial decrease in seasonal price amplitude. In the later period, only August showed a difference greater than 10 percent, whereas in the earlier period, six months exceeded this threshold. We also observe a shift toward lower prices at the end of the year: in the most recent period, peaks occurred mainly in mid-year, while in the earlier period, elevated prices extended into the final months. This decrease in seasonal amplitude appears to be driven primarily by supply regions, as Port Moresby shows only a slight change in seasonal variation over time. This might possibly be explained by the decreased importance of coffee in PNG's agricultural economy (Dorum et al. 2023) and the lower competition for labor with fresh produce production in the most recent years. Increasingly irregular weather patterns may represent another plausible hypothesis that best requires testing.

Figure 22: Seasonal price movements by time period, 2009-2017 versus 2018-2025 (ratio, compared to January)



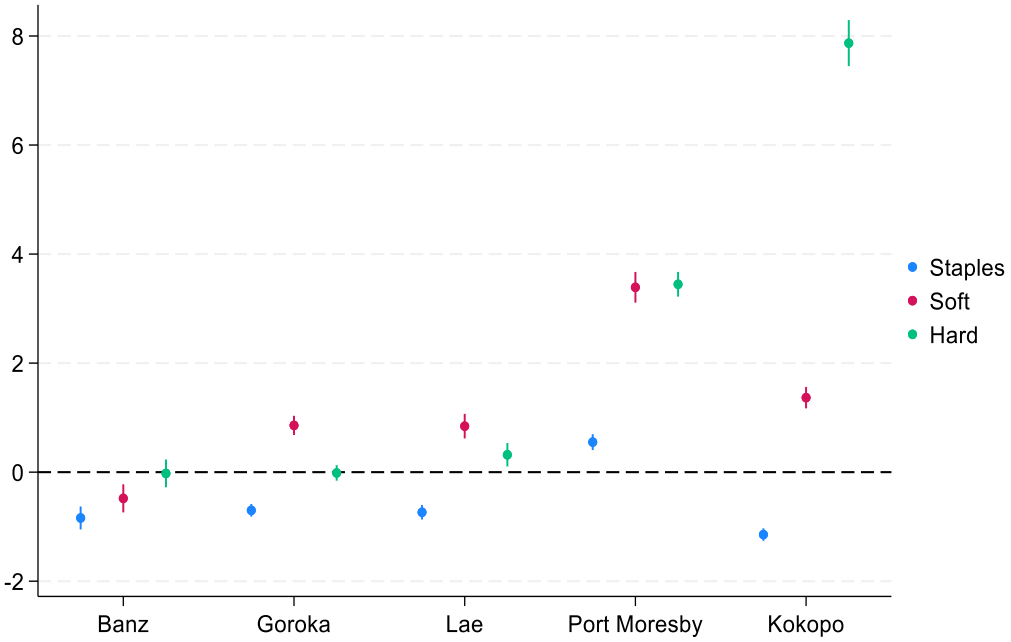
Note: Average prices compared to January, 13 products, 2009-2025; markers are coefficients, vertical lines are confidence intervals; Source: FPDA Food Price Monitoring

SECTION 6: MARGINS

Marketing costs of fresh produce from production areas to Port Moresby are substantial. For marketing to be profitable, price differences between these different markets should reflect the costs incurred by aggregators and traders. In this section, we examine these margins based on retail prices observed in the different markets. The available data only includes retail prices—thus not capturing the full marketing costs from producers to end consumers—however, they provide a useful indication of the costs involved in moving fresh produce from the Highlands to Port Moresby.

Using the methodology described in Section 2, we compare price differences across markets with Mt. Hagen (Figure 23). As before, food groups are categorized into staples, soft fresh produce, and hard fresh produce. Prices are significantly higher in POM than in Mt. Hagen for all three food groups. Over the entire period (2009-2025), the average prices of soft and hard fresh produce—the latter most often sourced from the Highlands—are nearly 4 PGK/kg higher in POM than in Mt. Hagen. In contrast, staple price differences between POM and other regions are much smaller, reflecting that most staples are not sourced from the Highlands but also indicating lower marketing costs for those products. For fresh produce, price differences between Mt. Hagen and Lae are relatively small, whereas substantial increases occur between Lae and POM, highlighting the contribution of higher marketing and transportation costs from Lae to POM. We also observe very high prices (compared to Mt. Hagen) for hard fresh produce in Kokopo, the capital of East New Britain Province, located on New Britain Island, separate from the mainland.

Figure 23: Price differences (PGK/kg) of different markets in PNG with Mt. Hagen, 2009-2025



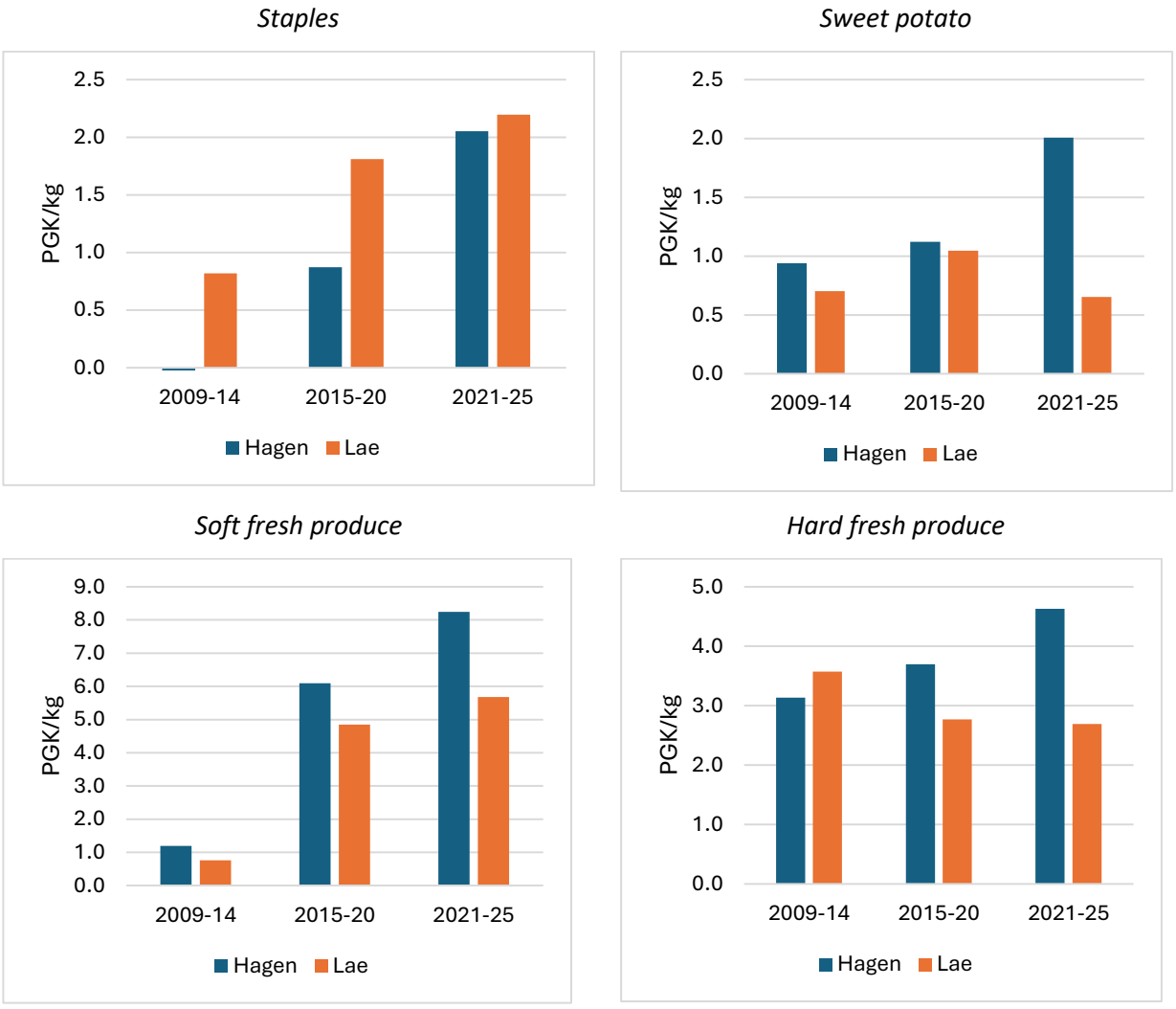
Note: Average prices compared to Mt. Hagen, staples (3 products), soft (5 products), hard (5 products), 2009-2025; markers are coefficients, vertical lines are confidence intervals; Source: FPDA Food Price Monitoring

To facilitate interpretation and address data gaps in some years, we divide the time series into three periods—2009–14, 2015–20, and 2021–25—to assess how margins have evolved across the three crop groups between Lae and POM, and Mt. Hagen and POM. The difference between Lae and POM reflects transport costs by sea, while the difference between Mt. Hagen and Lae indicates road transport costs. The price gap between Mt. Hagen and POM therefore captures marketing costs incurred over both land and sea routes. It should be noted that these price differences with POM also include additional loading and unloading costs at ports, as well as likely higher distribution margins in POM, since produce must be transported from the port to markets within the city.

The results are shown in Figure 24. Margins between Mt. Hagen and POM increased across all groups, with the largest rise observed for soft fresh produce. In the most recent period (2021–25), price differences reached 2.2 PGK/kg for staples, 4.6 PGK/kg for hard fresh produce, and 8.2 PGK/kg for soft fresh produce. Margins from Lae to POM are generally lower than those from Mt. Hagen, except for staples. This exception in the price gradient likely reflects the limited marketing flow of staples from Mt. Hagen to POM. A separate analysis focusing on sweet potatoes (graph on the top right) – that has been observed to be marketed from Mt. Hagen (section 4) – shows the expected larger price differences for Mt. Hagen compared to Lae.

Sea transport costs—measured by the price gap between Lae and POM—are substantially higher for soft fresh produce (5.7 PGK/kg) than for hard fresh produce (2.7 PGK/kg), likely due to the need for chillers and greater wastage during transit for soft fresh produce. In contrast, road transport costs between Mt. Hagen and Lae are much smaller, at 2.5 PGK/kg for soft fresh produce and 1.9 PGK/kg for hard fresh produce, reflecting the shorter journeys (and availability of transport options, frequency of transport options)

Figure 24: Price differences (real PGK/kg) with retail prices in POM, 2009-2025[15]



Source: FPDA Food Price Monitoring

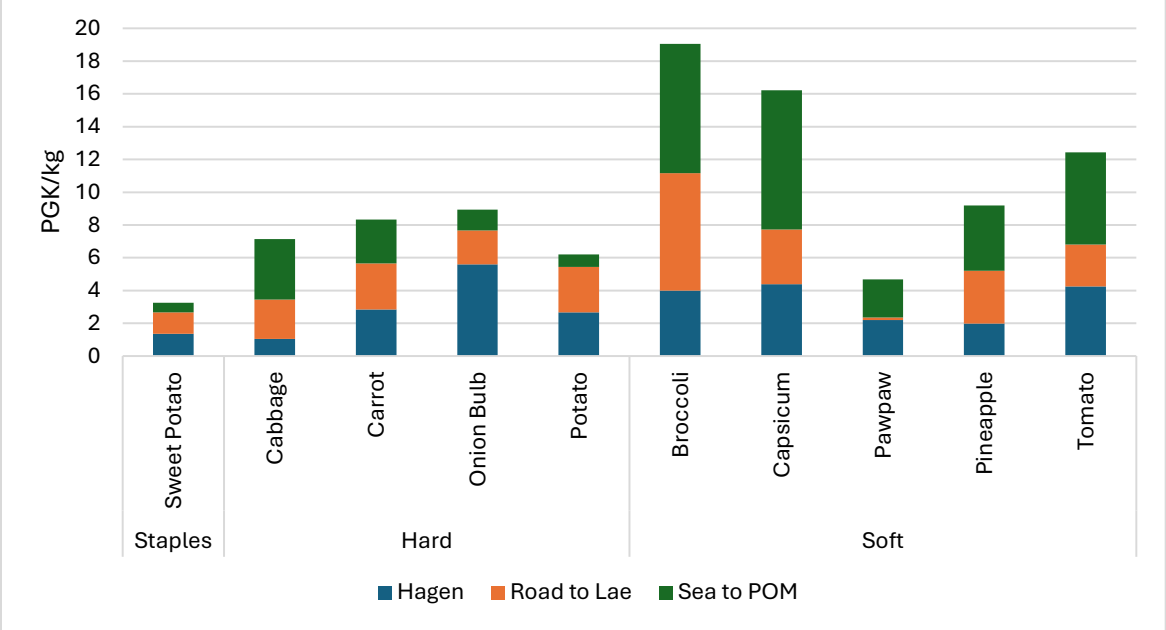
We further calculate simple price averages for each crop—without using the regression framework—to focus on the most recent period (2023–2025) and better understand the composition of retail prices in

[15] Differences in staple fresh produce between Mt. Hagen and POM were not statistically significant for the period 2009-14; therefore, that bar is omitted from the figure in the top-left corner.

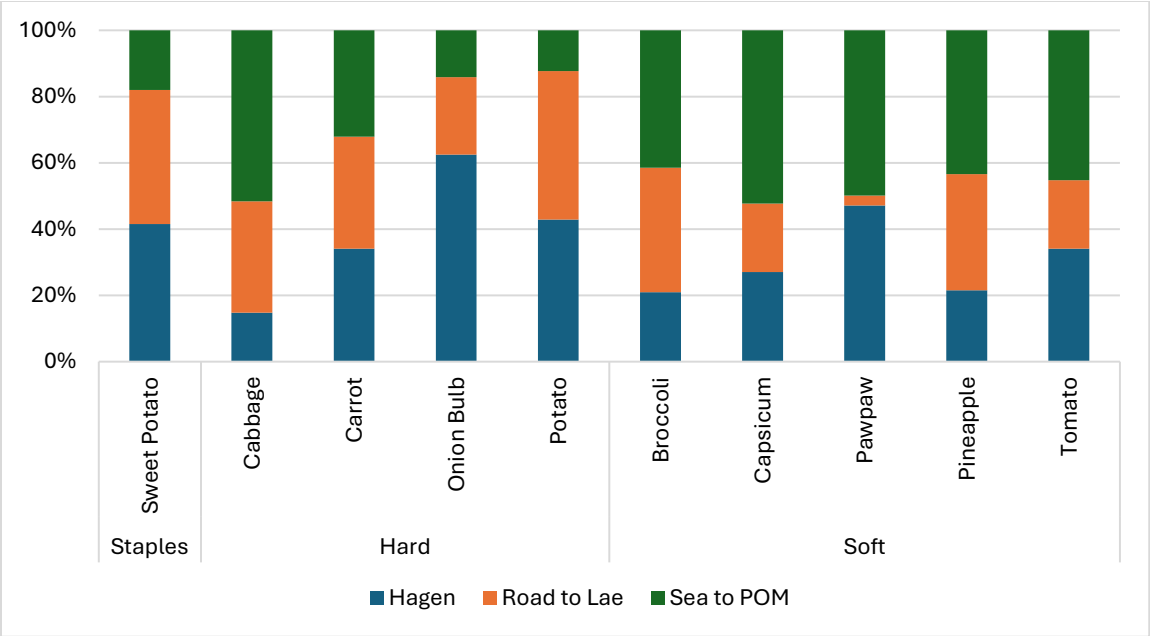
POM for each crop. The price gradients in Figure 25 (top graph) are all illustrative of the effective flow of produce from Mt. Hagen to Lae (by road) and then to POM (by boat) for the crops shown.[16] As noted earlier, marketing costs differ sharply between soft and hard fresh produce, with sea and road costs per kilogram—represented by the orange and green bars, respectively—being significantly higher for soft fresh produce. Absolute marketing costs are highest for broccoli and capsicum and lowest for sweet potatoes.

A price composition exercise (Figure 25, bottom graph), where the final retail price in POM is set to 100 percent, allows us to assess the relative importance of different components in that retail price. This is admittedly a rough approximation, as we only observe retail prices in Mt. Hagen rather than producer prices and cannot account for quality differences. We find substantial variation in the producer's share of final consumer prices in POM, ranging from a low of 15 percent for cabbage and 21 percent for sweet potato to a high of 61 percent for Irish potatoes. Consequently, marketing costs – including packaging, handling, transport, as well as wastage - account for the largest share of retail prices in POM, ranging from 85 percent for cabbage to 39 percent for Irish potatoes. This underscores the importance of reducing marketing costs to improve the affordability of fresh produce in POM and to increase the producer's share in the final retail price.

Figure 25: Price composition POM prices, real prices, 2023-2025



[16] Prices for taro were excluded because taro prices in Mt. Hagen were, on average, lower than in Lae, possibly linked to different varieties.



Source: FPDA Food Price Monitoring

SECTION 7: CONCLUSION

We use monthly retail price data collected by the Fresh Produce Development Agency (FPDA) to analyze fresh produce prices in Papua New Guinea (PNG). Leveraging this rich dataset, the analysis examines price behavior across: (a) three main fresh produce categories: staples (sweet potato, taro, cooking banana), soft fresh produce (broccoli, capsicum, pawpaw (papaya), pineapple, tomato), and hard fresh produce (cabbage, carrot, ginger, bulb onion, Irish potato); (b) the period 2009–2025; (c) seven retail markets: production areas in the Highlands (Mt. Hagen, Banz, Goroka), the city of Lae, the country's major city (Port Moresby), and an island city (Kokopo). We also rely on information on location of production of fresh produce marketed in Lae and POM. The main findings are the following.

1. For staple fresh produce, the Highlands supply 92 percent and 95 percent of the total to Lae and Port Moresby markets, respectively, while taro from the Highlands accounts for nearly 70 percent of taro sold in Port Moresby. Hard fresh produce is provided almost exclusively by the Highlands, whereas the contribution of the Highlands to soft fresh produce in Port Moresby's open markets is limited, except for broccoli.
2. Over the last 15 years, food commodity prices have increased substantially compared to non-food products in all surveyed markets, with notable differences by category. The largest increases occurred for staples (+42 percent), followed by soft fresh produce (+26 percent) and hard fresh produce (+16 percent). Taro recorded the highest price increase among all commodities, while items competing with imports (e.g., bulb onion) showed the smallest increases. Marketing

channels for fresh produce not sourced from the Highlands—namely staples and soft fresh produce—have comparatively deteriorated as we see large increase of prices of these compared to hard fresh produce.

3. Significant seasonality exists in fresh produce prices. Overall, prices peak mid-year (June–August), averaging more than 10 percent higher than other months. Patterns vary by category: staples, which are relatively more produced in lowland areas (with the exception of sweet potato), tend to peak toward year-end, while soft and hard produce, often being marketed from the Highlands, peak mid-year. Producing markets exhibit greater seasonality than Port Moresby, which benefits from diversified supply sources and imports but suffers from high non-seasonal transport costs to market produce to the city.
4. Price levels between Port Moresby and supplying regions differ markedly, primarily reflecting marketing costs, which are highest for soft fresh produce, followed by hard fresh produce and staples. Marketing margins have increased substantially over time, with the sharpest growth observed for soft fresh produce.
5. In the most recent period (2023–2025), marketing costs represent the largest component of retail prices in POM, ranging from 85 percent for cabbage to 39 percent for Irish potatoes. Conversely, the producer's share (for producers in Mt. Hagen) of final consumer prices in POM ranges from a low of 15 percent for cabbage and 21 percent for sweet potatoes to a high of 61 percent for Irish potatoes.
6. These differences in produce prices between Mt. Hagen – a major producing area in the Highlands – and POM averaged 2.0 PGK/kg for sweet potato, 4.6 PGK/kg for hard fresh produce, and 8.2 PGK/kg for soft fresh. Price differences are explained by marketing costs over land and sea. The marketing costs on sea – as measured by the differences in prices between Lae and POM – is twice as high for soft fresh produce (5.7 PGK/kg) compared to hard fresh produce (2.7 PGK/kg), likely due to the higher costs of chillers (used for some fresh produce) as well as higher wastage levels during the journey for soft fresh produce. Differences in transport costs by road (from Mt. Hagen to Lae) are smaller (2.5 and 1.9 PGK/kg respectively), due to shorter journeys traveled exclusively by road (rather than being shipped via barge).

ABOUT THE AUTHORS

Bart Minten is a Senior Research Fellow in IFPRI's Development Stretagies and Governance Unit.

Harry Gimiseve is a Research Consultant for IFPRI in PNG

Glen Hayoge is a Manager of Information Management & Communication Program in the Fresh Produce Development Agency based in Goroka, PNG.

Iga Imano is a Senior Market Information Officer in the Fresh Produce Development Agency based in Goroka, PNG.

Mekamu Kedir is a Senior Research Analyst in IFPRI's Development Stretagies and Governance Unit.

Belinda Monoi is a Agribusiness Development Officer in the National Agricultural Research Institute based in Lae, PNG.

Emily Schmidt is a Senior Research Fellow in IFPRI's Development Strategies and Governance Unit.

Helmtrude Sikas-Iha is a Research Consultant for IFPRI in PNG

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REFERENCES

Bai, Y., Alemu, R., Block, S.A., Headey, D. and Masters, W.A., 2021. Cost and affordability of nutritious diets at retail prices: evidence from 177 countries. Food policy, 99, p.101983.

Birch, CJ, Bonney, L., Doyle, R., Sparrow, L.A., Chambers, B., Palaniappan, G., et al. 2015. Final report: increasing vegetable production in Central Province for Port Moresby markets. University of Tasmania. Report. https://hdl.handle.net/102.100.100/495747

Bonney, L., Sparrow, A., Moxon, J., & Gorman, L. 2015. A feasibility study for a new wholesale fresh produce market in Port Moresby, Papua New Guinea. Acta Horticulturae, 1103, 103–110. https://doi.org/10.17660/ActaHortic.2015.1103.13

Bourke, R. M. 2005. Marketed fresh food and vegetable production in the Papua New Guinea highlands. Canberra, Australia: Australian Centre for International Agricultural Research (ACIAR).

Bourke, R.M. and Harwood, T. eds., 2009. Food and agriculture in Papua New Guinea. ANU E Press.

Bourke, R.M., 2017. Environment and food production in Papua New Guinea. Ten Thousand Years of Cultivation at Kuk Swamp in the Highlands of Papua New Guinea. ANU Press, Canberra, pp.51-64.

DAL, 2023. National Agriculture and Livestock Implementation plan 2024-2033. Port Moresby.

Chang, C, L., Griffith, G., & Maino, G. (2015). Assessing the potential for expanding vegetable production in Central Province, Papua New Guinea (Australasian Agribusiness Perspectives, paper 103). Australian Agribusiness Association https://agrifood.info/perspectives/2015/Chang_et_al.pdf

Dorum, R., Poka, D., Mambon, K. 2023. What ails PNG's coffee production? Elections and more. Downloaded on December 11th, 2025, from https://devpolicy.org/what-ails-pngs-coffee-production-elections-and-more-20230717/?output=pdf.

Fang, P., Anamo, I., Gimiseve, H., Hayoge, G., Mukerjee, R., Schmidt, E., and Zhang, Z. 2025. Commercialization of Papua New Guinea's vegetable sector: Identifying constraints using quantitative, qualitative and large language model methods. PNG Working Paper 7. International Food Policy Research Institute, Washington, D.C.

FPDA. 2008. Feeding Port Moresby Study.

Headey, D., Hirvonen, K. and Alderman, H., 2024. Estimating the cost and affordability of healthy diets: How much do methods matter? Food Policy, 126, p.102654.

Hirvonen, K., Minten, B., Mohammed, B., and Tamru, S. 2021. Food prices and marketing margins during the COVID19 pandemic: Evidence from vegetables in Ethiopia, Agricultural Economics, 52(3): 407-421

Lancaster, K. 1966. New Approach to Consumer Theory. Journal of Political Economy, 74 (2), pp. 132-157.

Mahrt, K., Schmidt, E., and Hayoge, G. 2025. Declining purchasing power of minimum wages in Papua New Guinea. PNG Project Note 20. International Food Policy Research Institute, Washington, D.C.

Mahrt, K., E. Schmidt, P. Fang, R. Mukerjee. 2025. "Household wellbeing in rural Papua New Guinea: Poverty analysis from the 2023 PNG Rural Household Survey." IFPRI Discussion Paper 2326. Washington, DC: International Food Policy Research Institute (IFPRI). https://hdl.handle.net/10568/173408

Mukerjee, R., Sikas-Iha, H., and Warambukia, D. 2024. Opportunities and challenges for coffee production in Papua New Guinea's highlands. IFPRI Blog, retrieved on December 11th at https://www.ifpri.org/blog/opportunities-and-challenges-for-coffee-production-in-papua-new-guineas-highlands/

New Zealand Ministry of Foreign Affairs and Trade (MFAT). (2018). Papua New Guinea Country Programme Evaluation — Linking farmers to markets (evaluation report).

PPAP. 2016. The Papua New Guinea Coffee Handbook. Goroka (PNG): Coffee Industry Corporation.

Reardon, T., Timmer, C.P., Barrett, C.B. and Berdegué, J., 2003. The rise of supermarkets in Africa, Asia, and Latin America. American Journal of Agricultural Economics, 85(5), pp.1140-1146.

APPENDIX : RESULTS STANDARD REGRESSION

		Robust		
	Coefficient	std. err.	t	P>t
Year (default = year 9 (year 2009))				
10	0.09	0.02	4.41	0.00
11	0.15	0.02	8.35	0.00
12	0.27	0.02	14.27	0.00
13	0.26	0.02	12.62	0.00
14	0.22	0.02	10.68	0.00
15	0.24	0.03	7.31	0.00
16	0.42	0.06	7.28	0.00
17	0.21	0.06	3.41	0.00
18	0.28	0.03	9.16	0.00
19	0.36	0.02	16.00	0.00
20	0.24	0.02	10.38	0.00
21	0.33	0.02	16.19	0.00
22	0.48	0.02	21.81	0.00
23	0.38	0.02	18.95	0.00
24	0.39	0.02	19.02	0.00
25	0.34	0.03	12.53	0.00
Month (default = 1 (month January))				
2	-0.02	0.02	-0.83	0.41
3	0.03	0.02	1.47	0.14
4	0.05	0.02	2.66	0.01
5	0.09	0.02	4.96	0.00
6	0.13	0.02	6.92	0.00
7	0.10	0.02	5.42	0.00
8	0.10	0.02	5.14	0.00
9	0.10	0.02	5.28	0.00
10	0.06	0.02	3.28	0.00
11	0.03	0.02	1.63	0.10
12	0.05	0.02	2.52	0.01
Market (default is the Hagen market)				
Banz	-0.08	0.02	-4.94	0.00
Goroka	0.01	0.01	1.18	0.24
Lae	0.06	0.01	4.92	0.00
Port Moresby	0.47	0.01	38.04	0.00
Kokopo	0.30	0.01	22.67	0.00
Crops (default is cooking bananas)				
Broccoli	1.07	0.02	52.18	0.00
Cabbage-English	0.24	0.02	11.19	0.00
Capsicum	1.16	0.02	60.44	0.00
Carrot	0.65	0.02	31.77	0.00
Ginger	1.17	0.02	55.23	0.00
Onion Bulb	1.33	0.02	64.31	0.00
Pawpaw	-0.06	0.02	-2.93	0.00
Pineapple	0.37	0.02	18.18	0.00
Potato	0.45	0.02	25.67	0.00
Sweet Potato	-0.45	0.02	-24.37	0.00
Taro True	0.27	0.02	12.45	0.00
Tomato	0.84	0.02	44.20	0.00
Intercept	0.41	0.03	15.19	0.00
Number of observations		17,912		
F(44, 17867)		598		
Prob > F		0.00		
R-squared		0.58		
Root MSE		0.48		

Source: FPDA Food Price Monitoring

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1201 Eye Street, NW, Washington, DC 20005 USA | T. +1-202-862-5600 | F. +1-202-862-5606 | Email: ifpri@cgiar.org | www.ifpri.org | www.ifpri.info