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Post-Pandemic Economic Shifts: A Comparative Study of Cost of Living and Purchasing Power in Major Asian Cities

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Post-Pandemic Economic Shifts: A Comparative Study of Cost of Living and Purchasing Power in Major Asian Cities

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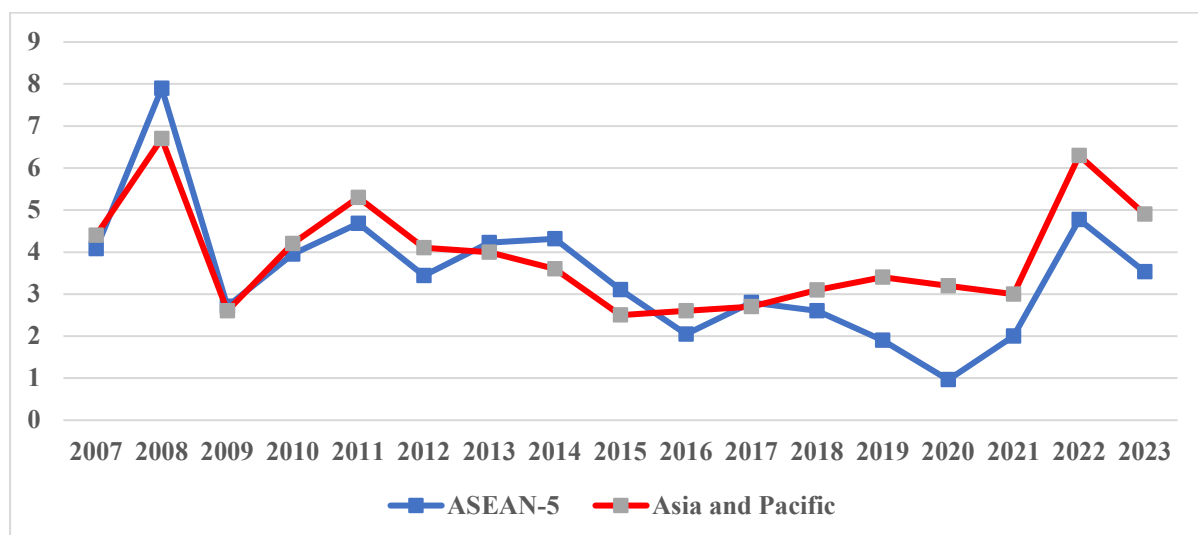
Abstract: This study aims to assess the impact of pandemic-induced disruptions on the cost of living and purchasing power across four Asian cities. Leveraging ACI's cost of living and purchasing power indices, we analyse post-pandemic ranking shifts in four cities, alongside a detailed examination of prices and expenditure weights to identify pandemic-related shocks. Post-pandemic price analysis indicates inflationary trends in essential goods, largely driven by global supply chain disruptions. Changes in expenditure weights highlight shifting consumer priorities, with increased spending on food and a decreased emphasis on transport, likely influenced by rising commodity prices as well as evolving mobility preferences. Singapore has experienced improved purchasing power ranking due to significant wage growth which mitigated price shocks. We find wage-focused policies play a critical role in maintaining purchasing power. These findings provide critical insights for policymakers navigating economic recovery and urban living costs.

Keywords: Inflation, Cost of Living, Pandemic-related disruptions, Purchasing Power

Introduction

The post-pandemic era has been characterized by a complex economic recovery, marked by significant disruptions which have reverberated across global markets. Among the most pressing challenges is the sharp rise in the cost of living, driven by pandemic-induced supply chain disruptions and the post-pandemic economic recovery (Helper and Soltas 2021; Kamali and Wang 2021; McGillivray 2021). Following the pandemic, global inflation rates surged, with the Asia-Pacific region not immune to rising inflation rates. Figure 1 illustrates this trend, showing inflation rate spiked in 2022 before increasing at a more gradual pace in 2023, albeit still higher than pre-pandemic levels. The ASEAN-5 region is also not immune to this global trend, with the inflation rate beginning to rise in 2021 after a fall in 2020, followed by a spike in 2022. Prices continued to increase at a more gradual pace in 2023, albeit still at a higher level than pre-pandemic levels. Commodity prices have seen sharp increases post-pandemic because of supply-chain disruptions. These supply-chain disruptions include production disruptions and transportation bottlenecks (Santacreu and LaBelle 2022; Kemp et al. 2023; Alessandria et al. 2023).

Figure 1: Inflation Rates (%) (2007 – 2023)



Source: IMF World Economic Outlook Database

Note: ASEAN-5 refers to Indonesia, Malaysia, Singapore, Philippines and Thailand

Vulnerable households and economically weaker countries are being particularly hard-hit by inflationary pressures (Amaglobeli et al. 2022). These inflationary pressures have threatened economic recovery by eroding purchasing power through the decline in real wages. As economies stabilize, understanding the intricacies of these cost-of-living changes becomes essential, particularly at the micro-level, where cities – centres of economic activity and population density – are pivotal. Cities remain the main drivers of economic growth and population centres. By 2023, 57% of the world's population lived in urban areas (World Bank 2024a), and in the East Asia and Pacific region, this figure reached 63% (World Bank 2024b). In its 2024 Global Cities Index, Oxford Economics argued that the 1,000 largest cities in the world accounted for 60% of global GDP and over 30% of the world's population (Oxford Economics 2024).

Given the pivotal role that cities play in economic growth, assessing the cost of living at this level offers crucial insights into the broader economic health of a region. This micro-level analysis is crucial for understanding how economic fluctuations impact residents and for developing targeted policies to address these challenges effectively. However, the impact of pandemic-related disruptions on the cost of living in cities remains underexplored, particularly within Asian cities, which are home to some of the world's most dynamic and diverse economies.

This study leverages ACI's cost of living and purchasing power indices to analyse the post-pandemic ranking shifts of four cities, offering insights into the impact of pandemic-related disruptions on cost of living and purchasing power of major Asian cities. Tokyo has seen a decline in cost of living rankings for both expatriates and residents, reflecting economic pressures, while Singapore's improved purchasing power ranking is attributed to wage growth. The purchasing power data suggests that rising wages enable consumers to absorb higher prices, emphasizing the importance of policies designed to foster wage growth. Post-pandemic price analysis reveals inflationary trends across essential goods in all cities, driven by supply chain disruptions. Changes in expenditure weights further illustrate shifting consumer priorities, with increased spending on food due to higher prices and reduced emphasis on transport, likely linked to elevated fuel costs and evolving mobility preferences. By focusing on a micro-level analysis, this study seeks to provide a nuanced understanding of the economic challenges faced by urban residents. These insights are crucial for policymakers who must navigate the delicate balance between managing economic recovery and the cost of living in their cities.

The remainder of the paper is organised as follows: Section 2 examines the literature review of post-pandemic inflation, and Section 3 details the data and methodology used in this paper. Section 4 reports the cost of living and purchasing power rankings, while Section 5 discusses the main results of this paper. Finally, Section 6 concludes the paper.

Literature Review

The COVID-19 pandemic triggered an unprecedented economic shock, followed by a sharp and persistent surge in global inflation. Studies identify a mix of supply-side and demand-side factors, labour market disruptions and corporate pricing behaviour as key drivers. Supply-side disruptions, particularly in global value chains, were among the most significant contributors. Lockdowns and shipping delays created bottlenecks, with sectoral reallocation from services to goods exacerbating pressures. Ferrante, Graves, and Iacoviello (2023) highlight that the shift in demand toward goods increased inflationary pressures, particularly in industries where labour reallocation costs and input-output linkages were most severe. Similarly, Acharya et al. (2023) demonstrate that rising production costs, amplified by firms maintaining or increasing markups, propagated inflation across sectors. These constraints also elevated inflation expectations, as shortages led households and firms to anticipate future price increases, broadening inflationary effects (Acharya et al. 2023).

The post-pandemic economic recovery shifted consumption patterns, with higher demand for goods over services driving inflation. Ferrante, Graves, and Iacoviello (2023) notes that the surge in demand for goods led to significant price increases, especially for goods with more flexible pricing mechanisms compared to services. The reallocation of consumption towards goods placed pressure on already constrained production sectors, amplifying inflation. Shapiro

(2022) quantifies that demand-side factors, including fiscal relief, significantly drove U.S. inflation in 2021 but waned by 2022. In contrast, supply-side factors accounted for approximately half of the inflationary rise, emphasizing the interplay between supply and demand.

Labour market disruptions were another key factor contributing to post-pandemic inflation. Declines in labour force participation, coupled with high job vacancy rates, increased the natural rate of unemployment, according to Crump et al. (2024). Persistent labour market tightness entrenched inflationary pressures, although expectations of rising unemployment helped moderate inflation by late 2023.

Several studies analysing the economic effects of the post-pandemic inflation highlight the detrimental effects of inflation on household welfare, particularly for low-income and vulnerable populations. OECD research by Causa et al. (2022) documented that purchasing power decline across countries ranges from 3% in Japan to 18% in the Czech Republic between August 2021 and August 2022. Rural households and low-income groups were more severely impacted due to their higher expenditure share on energy and food. Disparities in inflation's impact across demographic groups were also evident; Weber, Gorodnichenko, and Coibion (2022) revealed that low-income, low-educated, and Black households faced higher realised inflation rates than others, largely due to differences in spending patterns and price volatility in frequently purchased goods.

On a macroeconomic level, inflation has slowed growth and strained fiscal and monetary policies. OECD (2023) detailed how inflation limited GDP growth globally, particularly in advanced economies, by dampening consumer demand and investment. High inflation has compelled central banks to adopt restrictive monetary policies to anchor inflation expectations and stabilise economies (OECD 2023b; Hansen, Toscani, and Zhou 2023). The pandemic also introduced behavioural biases in inflation expectations. Weber, Gorodnichenko, and Coibion (2022) studied the inflation expectations of US households and found that perceived inflation strongly influenced future expectations, often diverging from realized rates due to selective attention to frequently purchased goods. This mismatch amplified inflation expectations during the pandemic, potentially complicating policy responses.

However, limited literature exists on the economic effects of the recent post-pandemic inflation surge on cities. Commercial studies, such as the EIU's 2023 Worldwide Cost of Living survey, found that prices rose by an average of 7.4% year-on-year in local currency terms, a slower growth from 2022's 8.1% increase (EIU 2023). Mercer's Cost of Living survey reported an average increase of 17.1% in prices of essential goods between March 2022 and March 2023 (Mercer 2023). Non-commercial studies have documented similar trends. Rodrigues and Quinio (2022) noted that poorer UK cities experienced higher inflation rates, worsening pre-existing economic inequalities. Rising energy prices, as observed in European cities further widened disparities in affordability between wealthier and poorer urban centers (Ingoglia, Horkey, and Fidrmuc 2024). The post-pandemic inflation has also amplified the housing crisis in cities, increasing construction and land costs and exacerbating shortages of affordable housing (OECD 2023a). Rising costs of essentials, such as energy and housing, have limited economic mobility, as low-income households face greater barriers to relocation and job opportunities (Rodrigues and Quinio 2022; OECD 2023a).

Data & Methodology

Data

The construction of the cost-of-living index requires data on prices, exchange rates as well as item weights in the index. Price data are obtained from the Economist Intelligence Unit (EIU) CityData database and the UBS Prices and Earnings study. We collect the annual average exchange rates of all cities in the study from the Bank for International Settlement (BIS). Item weights are derived from the World Bank's International Comparison Program (ICP) survey, EIU CityData and household expenditure surveys from various countries. The construction of the purchasing power index requires wage and working hours data and the data is obtained from the International Labour Organisation (ILO). More information on the data sources could be found in the (W. Y. Ng and Xie 2023).

Methodology

This paper employs time-series analysis to examine changes in the cost of living and purchasing power rankings of four Asian cities, namely Singapore, Hong Kong, Tokyo and Kuala Lumpur over time. These cities have been selected for their roles as significant economic hubs within their respective countries. The cost of living ranking is based on ACI's overall cost of living index and its individual consumption categories. ACI's has defined cost of living index for ordinary residents according to 10 Consumption Categories: (1) Food & Non-Acholic Beverages, (2) Alcohol & Tobacco, (3) Clothing, (4) Housing Rents & Utilities, (5) Household Supplies & Dometic help, (6) Health, (7) Transport, (8) Recreation, (9) Education and (10) Miscellaneous Goods & Services. ACI's purchasing power ranking is based on its purchasing power index, which is calculated by dividing the wage index by the cost of living index. The computation of the wages index would involve gross average nominal monthly wages and mean weekly hours worked retrieved from the ILO. Detailed descriptions of deriving ACI's cost of living and purchasing power indices are available in (Xie, Lee, and Chua 2020).

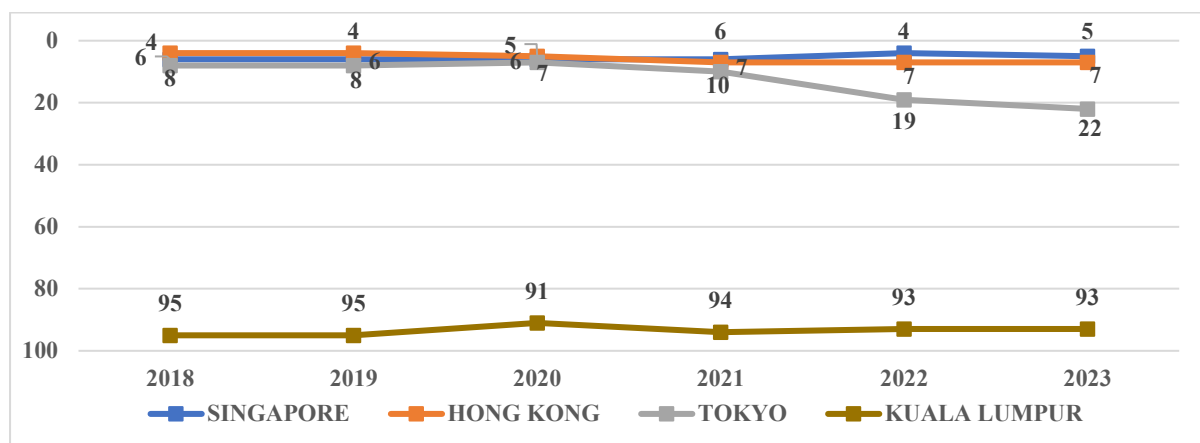
By integrating qualitative and quantitative insights, the paper examines how and why cost of living and purchasing power differ across these cities, with a focus on the economic and policy-specific factors driving these variations. To assess the impacts of pandemic-related disruptions on the cost of living and purchasing power of cities, pre-pandemic (2018) cost of living rankings are compared with those from the post-pandemic period (2020 onward). Furthermore, the study analyses the prices and weights of individual consumption categories to identify post-pandemic shocks. Specifically, data from 2019 (the final pre-pandemic year) and 2023 (the latest post-pandemic year) are compared to assess changes in prices and weights. Average price changes within individual categories are computed to capture the extent of post-pandemic price increases.

Main Results

Shift in Cost of Living Rankings Among Major Asian Cities

Figure 2 shows that while Singapore and Hong Kong are ranked 5th and 7th, respectively, Tokyo experienced significant movements. Tokyo's ranking declined substantially in recent years, dropping from 8th in 2018 to 22nd in 2023. The most drastic fall in rankings occurred from 2021 to 2022 when Tokyo fell by nine places from 10th to 19th. The findings on Tokyo being relatively cheaper in recent years for expatriates are similar to the findings made by other studies, such as Beattie (2024) and Kyodo News (2022) which attributed yen depreciation as an explanation for the lower rankings in recent years. This downward trend persisted, culminating in its 22nd position in 2023. Conversely, Kuala Lumpur displayed stable rankings for the cost of living of expatriates, ranking 95th in 2018 and rising to 93rd in 2023.

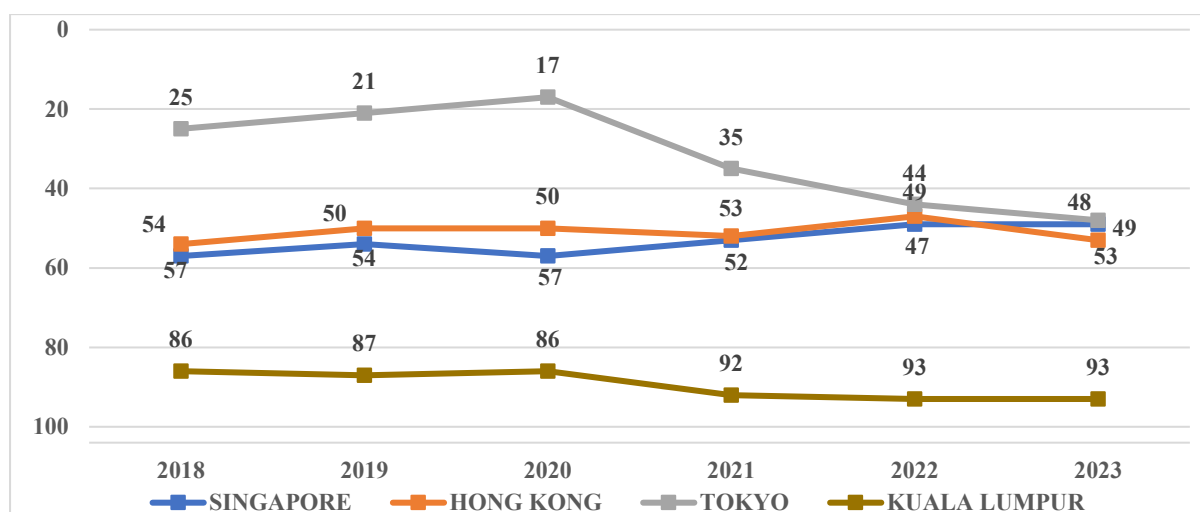
Figure 2: ACI's cost of living rankings for expatriates (2018 – 2023)



Source: ACI's analysis

Using a time-series chart to track the movement of rankings in recent years for ordinary residents in Figure 3, we observe that Tokyo experienced a notable decline in rankings, dropping from 25th in 2018 to 48th in 2023. The fall in rankings was so drastic that Tokyo narrowed the gap in ranking with Singapore and Hong Kong. Although Singapore's rankings did not see significant movement over the years as compared to Tokyo, it has risen from 57th in 2018 to 49th in 2023. Hong Kong on the other hand, rose from 54th in 2018 to 53rd in 2023, but a look at the post-pandemic years shows that the ranking rose from 50th in 2020 to 47th in 2022. Kuala Lumpur has become relatively cheaper over the years, falling from 86th in 2018 to 93rd in 2023. A look at the post-pandemic years shows that Kuala Lumpur experienced a fall in ranking from 86th in 2020 to 92nd in 2021 and then to 93rd in both 2022 and 2023. For all the cities analysed, the cost of living rankings for ordinary residents are lower than for expatriates, reflecting the differences in consumption preferences between ordinary residents and expatriates.

Figure 3: ACI's cost of living rankings for ordinary residents (2018 – 2023)



Source: ACI's analysis

Analysis of Prices

Table 2 provides additional insights into the cost-of-living post-pandemic by comparing prices in 2023 with those in 2019, using prices in local currency units. Table 2 highlights that Tokyo experienced substantial price increases in categories such as food and non-alcoholic beverages, alcohol and tobacco, household supplies and domestic help, housing rents and utilities, and recreation and education. Singapore exhibits strong growth in the average price of items in categories such as food, household supplies and domestic help, health, housing rent and utilities and transport. Hong Kong demonstrated notable increases in categories like food and non-alcoholic beverages, household supplies and domestic help, recreation, and transport. Kuala Lumpur also experienced strong growth in the cost of food, household supplies and domestic help, clothing, recreation, transport, and education. These patterns underscore the varied impacts of post-pandemic economic adjustments on different cost-of-living categories across major Asian cities.

Table 2: Average price increases of items – comparing 2023 with 2019

Category	Average Price Change Per Item in Yen	Average Price Change Per Item in SGD	Average Price Change Per Item in HKD	Average Price Change Per Item in Ringgit
	Tokyo	Singapore	Hong Kong	Kuala Lumpur
Food & Non-alcoholic Beverages	7.93%	4.44%	5.59%	11.17%
Alcohol & Tobacco	7.00%	5.05%	3.37%	1.07%
Household Supplies & Domestic Help	13.80%	9.88%	7.76%	5.57%
Health	3.36%	11.40%	0.70%	-0.69%
Housing Rents & Utilities	6.07%	15.34%	-11.30%	-0.44%
Clothing	-0.67%	1.16%	-4.48%	8.59%
Recreation	11.65%	4.58%	8.36%	10.41%
Transport	2.82%	13.87%	6.27%	4.91%
Education	5.28%	3.45%	5.01%	9.69%

Source: ACI analysis using EIU Prices

Price Analysis of Individual Items

The price increases of individual items are used to identify for any pandemic-related disruptions on prices. The food, household supplies, housing rent, utilities and transport categories are selected for this price analysis as these categories cover basic needs that are indispensable for urban living and are sensitive to supply-chain shocks caused by pandemic-related disruptions such as disrupted food supply chains and energy markets as well as transport logistics. For each of the categories analysed in each city, the price analysis is focused on the top five items that experienced the most significant increase in prices.

Singapore

Table 3: Food & non-alcoholic beverages – top-five items with price increase

Item	Price Increase from 2019 to 2023 (%)
White rice, 1 kg	36.24%
Tonic water (200 ml)	25.23%
White bread, 1 kg	23.86%
Yoghurt, natural (150 g)	21.66%
Chicken: fresh (1 kg)	21.32%

Source: ACI analysis using EIU Prices

Table 3 highlights significant price increases in staples, with rice and bread prices rising by 36.24% and 23.86%, respectively. White rice experienced the most significant price increase post-pandemic, and this may be attributed to pandemic-related disruptions. White bread also experienced a significant price increase post-pandemic, likely attributed to higher global wheat prices in 2021 and 2022 (Hamaide 2023). Yoghurt price is also on the rise post-pandemic, likely driven by a surge in global dairy prices post-pandemic (FAO 2022; 2023). The increase in global dairy prices has been attributed to labour shortages, logistical challenges and rising input prices brought about by pandemic-related disruptions (Liebrand 2022). Being a country dependent on food imports, Singapore is vulnerable to price increases in global food commodities.

Table 3 shows that the price of fresh chicken in Singapore has also seen notable increases post-pandemic, likely driven by a combination of supply chain disruptions, export restrictions, and rising production costs (Yeoh 2023). The pandemic caused significant logistical challenges, elevating the cost of importing poultry. In June 2022, Malaysia, a key supplier of live chickens to Singapore, implemented an export ban to address its domestic supply shortages (V. Tan and Yusof 2022). The domestic supply shortages in Malaysia are attributed to pandemic-related disruptions in the form of higher chicken feed prices and labour shortages (A Paulo 2022). Although the ban was fully lifted in October 2022, it caused substantial supply disruptions and price hikes (Heng 2022; Ang 2022).

Table 4: Transport – top-five items with price increase

Item	Price Increase from 2019 to 2023 (%)
Compact car (1300-1799 cc)	35.61%
Low priced car (900-1299 cc)	30.18%
Deluxe car (2500 cc upwards)	27.08%
Regular unleaded petrol (1 l)	23.45%
Family car (1800-2499 cc)	11.29%

Source: ACI analysis using EIU Prices

Table 4 shows that car prices are at a higher level in 2023 compared to 2019, possibly reflecting a combination of higher demand post-pandemic as well as supply-chain issues affecting car manufacturers, such as semiconductor shortages, which reduced automobile production. Post-pandemic economic recovery and the aim to reduce pandemic risks have also fuelled demand for cars post-pandemic (Choo 2021; Oi 2023). Supply-chain issues such as the semiconductor chips shortage from 2020 to 2023 (Wishart-Smith 2024) caused global auto production to fall by 26% during the first months of 2021 (J.P.Morgan 2023). Petrol prices have also been increasing, likely because of rising crude oil prices. Rising crude oil demand from the economic recovery, as well as the pandemic-related supply-chain issues, contributed to rising crude oil prices post-pandemic (J. S. Ng 2022; C. Tan 2022). Being a major energy importer, Singapore is vulnerable to such global oil shocks.

Table 5: Housing Rents & Utilities – top-five items with price increase

Item	Price Increase from 2019 to 2023 (%)
Electricity, monthly bill	51.32%
Unfurnished residential apartment: 4 bedrooms	35.89%
Unfurnished residential house: 4 bedrooms	21.91%
Furnished residential apartment: 2 bedroom	18.73%
Telephone, charge per local call from home (3 mins)	16.67%

Source: ACI analysis using EIU Prices

Table 5 indicates that electricity prices experienced the strongest growth in this category. This is likely a result of higher fuel costs and increased market volatility (Lee 2022). The global economic recovery and reopening of borders and businesses spurred a surge in energy demand (Lee 2022), particularly for natural gas, which powers about 95% of Singapore's electricity generation. Work from home also drive the increase in electricity demand, thereby putting additional strains on electricity prices. Being a resource-constrained country, Singapore faced higher natural gas prices due to higher global natural gas prices brought about by pandemic-related disruptions in the natural gas market. Pandemic-related disruptions in the form of labour shortages and logistical challenges have raised natural gas prices.

Rentals have also risen sharply post-pandemic, likely driven by a combination of construction delays, heightened demand from returning expatriates, the rise of remote working arrangements, and an influx of foreign workers and students (Lee and Yip 2023; Asiaone 2022; Poh 2021; Tang 2022). Pandemic-related disruptions in the rental market include higher

demand for temporary accommodation due to COVID-19-related construction delays and the higher demand for larger rental apartments for more privacy or space for hybrid work (Tang 2022). This mismatch between supply and demand created competition for limited rental units, enabling landlords to command higher rents.

Table 6: Household Supplies & Domestic Help – top-five items with price increase

Item	Price Increase from 2019 to 2023 (%)
Frying pan (Teflon or good equivalent)	29.84%
Soap (100 g)	22.68%
Maid's monthly wages (full time)	18.64%
Electric toaster (for two slices)	16.13%
Babysitter's rate per hour	16.07%

Source: ACI analysis using EIU Prices

Table 6 highlights strong price growth in household supplies such as frying pans, soap, and electric toasters, alongside increases in maid wages and babysitter rates. The COVID-19 pandemic and geopolitical tensions, including the war in Ukraine, have disrupted global supply chains, driving up costs for imported household essentials (Government of Singapore 2022; Bin Yahya 2022). The increase in the price of soap post-pandemic may reflect increased demand during the pandemic as well as the surge in palm oil prices, which led to higher costs for products like shampoos, hand soaps, and sanitizers (Oi 2022). The surge in palm oil prices is attributed to pandemic-related supply-chain disruptions in the palm oil industry of Malaysia and Indonesia (Zahraturrahmi and DemiRcan 2023; Tek 2024). Additionally, the global economic rebound has intensified inflationary pressures, which have been reflected in higher prices for household supplies in Singapore. The increase in the cost of hiring maids and babysitters post-pandemic is likely attributed to rising demand from an ageing population (Metteo and Tang 2024) as well as a lower supply of foreign domestic workers due to the pandemic-related border restrictions (Abu Baker 2021).

Hong Kong

Table 7: Food & non-alcoholic beverages – top-five items with price increase

Item	Price Increase from 2019 to 2023 (%)
Lamb: chops (1 kg)	44.45%
Beef: steak, entrecote (1 kg)	37.16%
Olive oil (1 l)	34.21%
Margarine, 500g	33.93%
Tomatoes (1 kg)	33.02%

Source: ACI analysis using EIU Prices

Table 7 shows significant post-pandemic price growth for meats such as lamb and beef, as well as for olive oil, margarine, and tomatoes. The prices of meat such as lamb and beef have registered strong growth at 44.45% and 37.16%, respectively. This is likely attributed to the supply-chain disruptions brought about by the pandemic. The COVID-19 pandemic disrupted global shipping and logistics, causing delays and increased transportation costs, which heavily impacted Hong Kong, where over 95% of food, including meat, is imported (Yuen 2021). Additionally, a pandemic-induced shift towards home cooking led to sustained higher demand

for groceries (Mastercard Economics Institute 2023), likely contributing to the rising price of meat.

For olive oil, reduced harvests in key producing countries and growing international demand have driven up global prices (Katanich 2024b; 2024a), thereby likely causing the large increase in Hong Kong’s olive oil prices. Margarine price has also seen large increase post-pandemic, this is likely due to the disruption of the production of the main ingredients of margarine such as vegetable oils such as sunflower or soyabean (J.Brooks 2023).

Table 8: Transport – top-five items with price increase

Item	Price Increase from 2019 to 2023 (%)
Regular unleaded petrol (1 l)	44.81%
Yearly road tax or registration fee	20.33%
Low priced car (900-1299 cc)	16.70%
Taxi: initial meter charge	12.50%
Family car (1800-2499 cc)	10.26%

Source: ACI analysis using EIU Prices

Table 8 shows that petrol prices experienced the highest price increases post-pandemic, alongside strong growth in car prices, taxi initial meter charges, and road tax. The rise in petrol prices is likely attributed to global fuel price volatility, to which Hong Kong, as a major oil importer, is particularly exposed. The increase in taxi initial meter charge is likely attributed to the decision by the Executive Council of Hong Kong to approve adjustments to taxi fares with the aim of improving the financial viability of the taxi industry (Government of Hong Kong 2024).

The growth in car prices can be linked to global supply chain disruptions affecting vehicle production and distribution. Furthermore, the Hong Kong government implemented fiscal measures to curb private car growth in response to rising vehicle numbers and traffic congestion. In February 2021, the First Registration Tax (FRT) for private cars was increased by 15%, and vehicle license fees were raised by 30% (Government of Hong Kong 2021b). These policy adjustments, aimed at discouraging private car ownership, may have indirectly contributed to higher car prices.

Table 9: Housing Rents & Utilities – top-four items with price increase

Item	Price Increase from 2019 to 2023 (%)
Electricity, monthly bill	17.54%
Furnished residential house: 3 bedrooms	2.94%
Water, monthly bill	2.54%
Gas, monthly bill	2.26%

Source: ACI analysis using EIU Prices

Note: Only four items are shown here as there were only four items in this category that showed an increase in prices

Table 9 highlights that electricity experienced the highest post-pandemic price growth in this category, while other items saw more modest increases. Hong Kong, relying heavily on imported fuel for electricity generation, faced rising operational costs for power companies, leading to higher electricity tariffs. For example, in January 2022, average net tariffs increased

by approximately 5.8% for CLP Power and 7% for HK Electric. These increases were deemed necessary to offset higher fuel costs (Government of Hong Kong 2021a). This is followed by an increase of about 6.4% and 5.5% in January 2023 (Government of Hong Kong 2022b).

Table 10: Household Supplies & Domestic Help – top-five items with price increase

Item	Price Increase from 2019 to 2023 (%)
Frying pan (Teflon or good equivalent)	24.04%
Hourly rate for domestic cleaning help	22.45%
Dry cleaning, woman's dress	18.30%
Maid's monthly wages (full time)	13.94%
Dry cleaning, trousers	12.26%

Source: ACI analysis using EIU Prices

Table 10 shows that the price of frying pans experienced the highest growth in this category, followed by notable increases in dry cleaning charges, maid’s monthly wages, and the hourly rates for domestic cleaning help. In Hong Kong, domestic cleaning services are predominantly provided by foreign domestic helpers (FDHs) employed on a full-time, live-in basis. The Minimum Allowable Wage (MAW) for FDHs, set by the Hong Kong government, has been increased periodically in recent years to account for inflation and cost-of-living changes (Government of Hong Kong 2022a; 2023). These wage adjustments may have contributed to higher cost for domestic cleaning services as well as maid’s monthly wages. Meanwhile, the increase in dry cleaning charges reflects the higher operating costs faced by dry cleaners post-pandemic, including elevated expenses for labour, utilities, and raw materials.

Tokyo

Table 11: Food & non-alcoholic beverages – top-five items with price increase

Item	Price Increase from 2019 to 2023 (%)
Peanut or corn oil (1 l)	39.23%
Margarine, 500g	28.97%
Flour, white (1 kg)	24.85%
Fresh fish (1 kg)	24.03%
Instant coffee (125 g)	22.14%

Source: ACI analysis using EIU Prices

Table 11 shows that edible oils, such as peanut and corn oil, experienced the strongest price growth in this category, followed by margarine, flour, fresh fish, and instant coffee. The surge in prices for edible oils and margarine is likely attributed to pandemic-related disruptions affecting the global food supply-chains. The depreciation of the Japanese yen exacerbated the situation, raising the cost of importing commodities priced in stronger currencies, such as the U.S. dollar (Yuji 2022). Additionally, rising crude oil prices increased transportation and logistics costs, further inflating prices for imported goods (Yuji 2022). Being a major food importer, Japan is especially vulnerable to higher global food prices.

The strong price growth of fresh fish is likely linked to the booming tourism trade in Japan post-pandemic which increases demand for seafood dishes (Huang 2024). It may also be related to higher prices of imported fresh fish, with pandemic-related disruptions in the form of labour shortages and higher commodity prices leading to higher import prices (Chunchi 2024). The increase in prices of instant coffee prices is likely linked to pandemic-related disruptions

creating supply shortages in major coffee producing countries such as Vietnam and Brazil (Cantor 2023).

Table 12: Transport – top-four items with price increase

Item	Price Increase from 2019 to 2023 (%)
Taxi: initial meter charge	21.95%
Regular unleaded petrol (1 l)	16.65%
Taxi rate per additional kilometre	15.98%
Compact car (1300-1799 cc)	2.40%

Source: ACI analysis using EIU Prices

Note: Only four items are shown here as there were only four items in this category that showed an increase in prices

Table 12 highlights that the taxi initial meter charge experienced the highest price growth in this category, followed by increases in petrol prices, taxi rate per additional kilometre and compact car prices. Being a major oil importer, Japan is especially vulnerable to fluctuations in global fuel prices. The increase in petrol price is likely attributed to higher global fuel prices and the yen depreciation (Natsumi 2023; Yuka and Kiyoshi 2023). Rising taxi charges are likely attributed to the recent decision by taxi companies to raise fares to cope with rising fuel costs and reduced ridership post-pandemic (Nippon TV 2022; Imada 2022).

Table 13: Housing Rents & Utilities – top-five items with price increase

Item	Price Increase from 2019 to 2023 (%)
Heating oil (100 l)	22.71%
Furnished residential apartment: 1 bedroom	12.50%
Unfurnished residential house: 4 bedrooms	11.11%
Unfurnished residential apartment: 4 bedrooms	9.09%
Unfurnished residential apartment: 2 bedrooms	6.67%

Source: ACI analysis using EIU Prices

Table 13 indicates that heating oil experienced the highest price growth in this category, followed by strong increases in apartment and house rentals. Being a major oil importer, Japan is especially vulnerable to higher global oil prices. The higher price of heating oil is likely linked to the higher global oil prices. Rental prices for apartments and houses have also risen sharply, likely driven by Japan’s reopening of its borders in 2022.

Table 14 shows that light bulbs experienced the highest post-pandemic price growth in this category, followed by babysitter rates, hourly rates for domestic cleaning help, and dry cleaning charges. The higher prices of light bulbs and dishwashing liquid are likely attributed to post-pandemic supply-chain disruptions and the weaker yen. Babysitter and domestic cleaning rates have also increased, likely a result of higher wage demands in response to the higher inflation in Japan (Yuri 2023). Dry cleaning charges have also risen, likely driven by increasing operating costs and staffing challenges in the sector. These factors collectively underline the broader economic pressures affecting labour-intensive services post-pandemic.

Table 14: Household Supplies & Domestic Help – top-five items with price increase

Item	Price Increase from 2019 to 2023 (%)
Light bulbs (two, 60 watts)	33.05%
Babysitter's rate per hour	28.57%
Hourly rate for domestic cleaning help	23.21%
Dishwashing liquid (750 ml)	22.26%
Dry cleaning, man's suit	21.24%

Source: ACI analysis using EIU Prices

Kuala Lumpur

Table 15: Food & non-alcoholic beverages – top-five items with price increase

Item	Price Increase from 2019 to 2023 (%)
Lemons (1 kg)	40.61%
Lettuce (one)	29.46%
Onions (1 kg)	28.68%
Beef: steak, entrecote (1 kg)	26.02%
Apples (1 kg)	25.24%

Source: ACI analysis using EIU Prices

Table 15 shows that, in the post-pandemic period, Kuala Lumpur has experienced substantial price increases for lemons, lettuce, onions, beef, and apples. These rising prices are primarily driven by global supply chain disruptions and elevated food price inflation following the pandemic (Malay Mail 2022a). Additionally, the depreciation of the Malaysian ringgit against major currencies has significantly increased the cost of imports. Given that Malaysia relies heavily on imported food, including items like apples and onions, the weakened currency has directly contributed to higher prices for these goods (Lim 2023). The combination of these factors—disrupted supply chains and currency depreciation—has resulted in the notable price increases observed in these food items.

Table 16: Transport – top-five items with price increase

Item	Price Increase from 2019 to 2023 (%)
Regular unleaded petrol (1 l)	36.00%
Cost of a tune up (but no major repairs)	19.86%
Family car (1800-2499 cc)	14.75%
Compact car (1300-1799 cc)	11.13%
Taxi: initial meter charge	6.67%

Source: ACI analysis using EIU Prices

Table 16 highlights that unleaded petrol experienced the highest price growth in the post-pandemic period, followed by significant increases in car prices and taxi initial meter charges. The surge in petrol prices is likely attributed to fluctuations in global oil markets, which might have directly influenced local fuel prices in Malaysia. The cost of vehicle tune-ups has also risen, likely due to higher operational costs faced by service centers and supply chain disruptions affecting the availability of automotive parts. These factors have driven up the expenses associated with vehicle maintenance, leading to higher prices for tune-up services.

Table 16 also highlights that car prices have also risen sharply, likely due to post-pandemic supply chain disruptions that have created shortages of essential components and materials required for vehicle manufacturing. These shortages have led to higher production costs, which manufacturers have passed on to consumers. Additionally, as Malaysia’s economy recovers, there has been a surge in demand for personal vehicles (Morhan 2023). This combination of increased demand and constrained supply has further contributed to the escalation in car prices. Lastly, the taxi initial meter charge has also increased, likely because of higher fuel prices in Malaysia.

Table 17: Housing Rents & Utilities – top-five items with price increase

Item	Price Increase from 2019 to 2023 (%)
Furnished residential apartment: 2 bedroom	17.38%
Unfurnished residential house: 4 bedrooms	6.07%
Electricity, monthly bill	2.06%
Unfurnished residential apartment: 3 bedrooms	2.01%
Water, monthly bill	0.42%

Source: ACI analysis using EIU Prices

Table 17 shows that rentals have experienced stronger growth compared to utilities such as electricity and water bills. Several factors may have contributed to this increase in rental prices. The economic rebound in Malaysia has driven higher demand for rental properties, creating increased competition for limited housing units and pushing rental rates upward (A. L. Tan 2024). The reopening of international borders has also led to an increase in demand for rentals from an influx of long-term residents, occupiers of short-term rentals, and international students (A. L. Tan 2024; Malay Mail 2022b). Kuala Lumpur’s position as an economic centre for Malaysia further intensifies demand, attracting both local and international tenants, which places additional pressure on the rental market and contributes to sustained price growth. Rising living costs and higher interest rates have also prompted consumers to switch to renting, thereby increasing demand for rentals (Malay Mail 2022b; A. L. Tan 2024), potentially leading to rental increases.

Table 18: Household Supplies & Domestic Help – top-five items with price increase

Item	Price Increase from 2019 to 2023 (%)
Frying pan (Teflon or good equivalent)	16.67%
Light bulbs (two, 60 watts)	11.64%
Insect-killer spray (330 g)	11.56%
Dry cleaning, man's suit	9.52%
Soap (100 g)	9.19%

Source: ACI analysis using EIU Prices

Table 18 indicates that household supplies experienced strong price growth post-pandemic, likely driven by pandemic-related supply-chain disruptions. In particular, the higher price of soap is likely related to Malaysia’s production woes in the palm oil industry post-pandemic which contributed to higher global palm prices. Border closures during the pandemic (Tek 2024), pandemic-related health measures (Ashaari, Abdullah, and Fuzi 2022), as well as rising

fertiliser prices (Das and Kondalamahanty 2021) post-pandemic have led to lower production and higher costs for palm oil producers. Similarly, dry cleaning costs have risen, likely due to higher business costs post-pandemic (Nambiar 2023).

Analysis of Weights of Consumption Categories

Table 19: Weights of Consumption Categories of Ordinary Residents – comparing 2023 with 2019

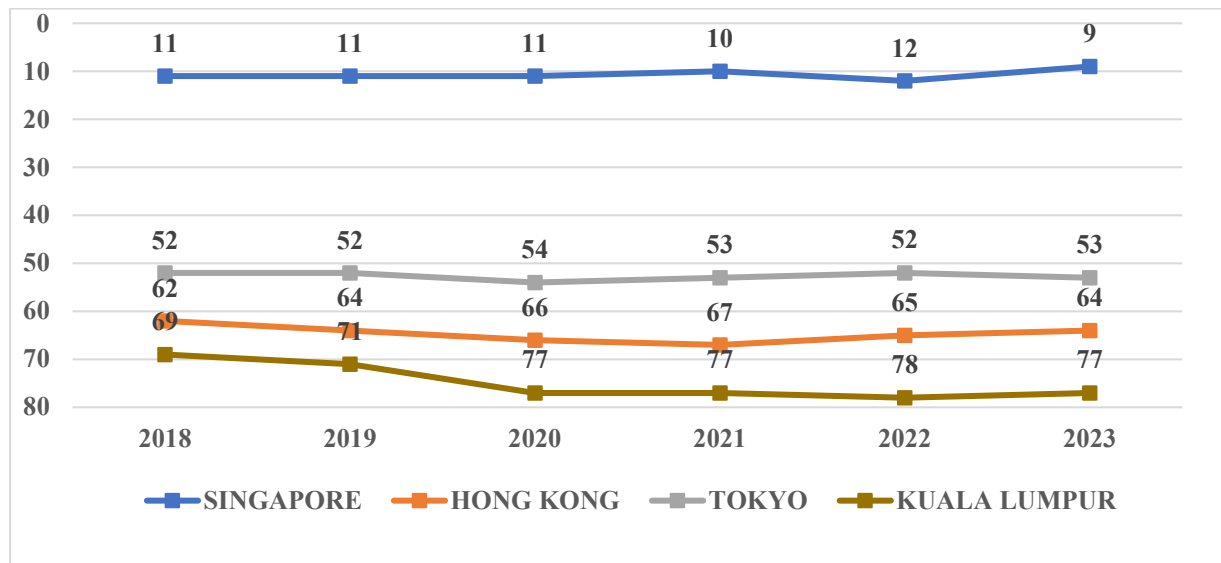
Category	Tokyo		Singapore		Hong Kong		Kuala Lumpur	
	2023	2019	2023	2019	2023	2019	2023	2019
Food & Non-alcoholic Beverages	12.70%	12.21%	7.29%	6.04%	8.91%	10.17%	24.40%	19.74%
Alcohol & Tobacco	2.16%	1.81%	1.76%	1.62%	0.59%	0.81%	1.70%	1.61%
Household Supplies & Domestic Help	3.42%	3.69%	3.98%	4.00%	5.18%	4.99%	4.36%	4.56%
Health	15.16%	13.42%	11.71%	9.38%	10.09%	8.34%	6.11%	5.26%
Housing Rents & Utilities	20.48%	20.36%	15.51%	14.77%	16.84%	15.62%	15.11%	13.52%
Clothing	2.44%	2.67%	2.58%	2.67%	4.18%	4.79%	2.70%	2.72%
Recreation	5.92%	5.90%	8.30%	10.43%	8.57%	10.29%	2.97%	5.90%
Transport	6.92%	8.06%	8.63%	13.16%	4.19%	6.64%	9.04%	11.89%
Education	5.84%	5.58%	9.12%	8.44%	7.00%	6.41%	7.70%	7.73%
Miscellaneous Goods and Services	24.96%	26.29%	31.12%	29.48%	34.44%	31.96%	25.92%	27.06%

Source: ACI analysis

Table 19 highlights the weights assigned to various consumption categories within the cost of living index, reflecting the relative importance of each category to consumers. A comparison between 2019 and 2023 shows that there are some notable shifts in weights among the cities analysed. Most cities except for Hong Kong registered an increase in the weight for food and non-alcoholic beverages, with Kuala Lumpur registering the largest increase. This may reflect higher food prices in these cities. Singapore being a major food importer is especially vulnerable to food price shocks. All cities registered strong growth in the weights of the health category, likely a result of strong healthcare demand in those cities where consumers in these cities purchased more healthcare products post-pandemic or that the ageing populations in these cities are driving healthcare demand. All cities registered a fall in the weights of transport category, possibly reflecting an increase in remote working post-pandemic and thereby leading to reduced spending on transportation. An improving public transport may be behind the fall in the weights of the transport category; consumers may switch to public transport to save time and fuel costs. Higher fuel prices post-pandemic may also discourage private transport by making it more costly to travel. Singapore experienced the largest fall in the weight of the transport category; possibly reflecting less commuting by private transportation because of evolving mobility preferences.

Shift in Purchasing Power Rankings Among Major Asian Cities

Figure 4: ACI's purchasing power rankings for ordinary residents (2018 – 2023)



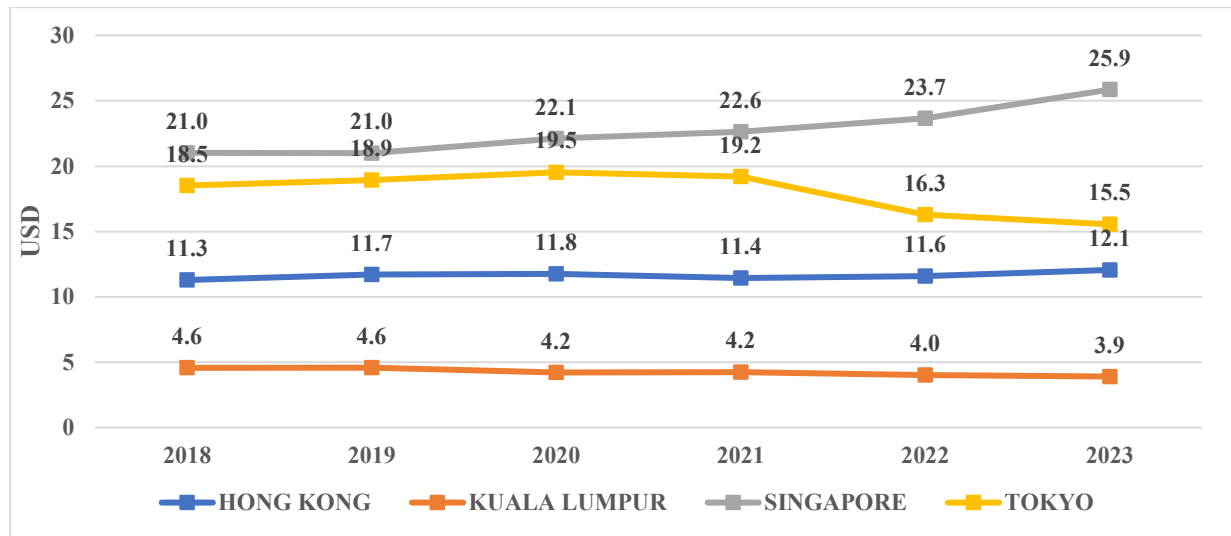
Source: ACI analysis

Figure 4 illustrates the rankings over the years for purchasing power among Asian cities, while Figure 5 focuses on the gross hourly wages of Asian cities. Singapore consistently leads as the Asian city with the highest purchasing power, ranking 9th globally in 2023, an improvement from its 11th position in 2018 and 2019. However, its ranking temporarily dipped in 2022, falling from 10th in 2021 to 12th. This decline coincided with a rise in its cost-of-living ranking from 53rd in 2021 to 49th in 2022, likely driven by inflationary pressures during that year. By 2023, Singapore's cost-of-living ranking stabilized at 49th, while its hourly wage registered strong growth in 2023. Strong wage growth in 2023 enabled Singapore to widen the gap with Tokyo in terms of purchasing power rankings.

Tokyo is ranked 53rd globally in 2023 and its rankings are relatively stable from 52nd to 53rd from 2018 to 2023. An observation in the post-pandemic years has revealed that Tokyo's rankings remained relatively stable, which stood at 53rd in 2021, 52nd in 2022, and reverting to 53rd in 2023. Hong Kong's purchasing power ranking has also been stable, with only slight fluctuations. It declined from 62nd in 2018 to 66th in 2020 before improving to 64th in 2023. Conversely, Kuala Lumpur's ranking is concerning as it shows worsening rankings from 69th in 2018 to 77th in 2023. The most significant drop in ranking occurs in 2020 when it dropped from 71st in 2019 to 77th in 2020. Its rankings then experienced a stagnation from 2021 to 2023.

The movements in purchasing power rankings are closely tied to wage levels. Singapore exhibits strong growth in hourly wages, growing from USD 23.70 per hour in 2022 to USD 25.90 per hour in 2023 - a 9.28% increase. Though Hong Kong's wages show an upward trend in recent years, it only experienced a very small increase over the years. Kuala Lumpur experienced a decline in wages in 2020, followed by stagnation thereafter. Tokyo suffered from significant wage reductions in 2022 and 2023, with hourly wage falling from USD 19.20 in 2021 to USD 16.30 in 2022, a 17.79% decrease. This decline continued in 2023, with a further 4.90% fall to USD 15.50. Despite the falling cost of living rankings, the consecutive wage declines have neutralised any potential improvements in Tokyo's purchasing power ranking.

Figure 5: ACI's Grossly Hourly Wage for ordinary residents (2018 – 2023)



Source: ACI analysis using ILO data

Discussion

Post-pandemic effects on Cost of Living

The findings provide insights into the complex cost-of-living dynamics across Asian cities, highlighting how consumption patterns, price trends, and economic shifts shape household spending behaviours and cost of living rankings. The disparity in cost-of-living rankings between expatriates and ordinary residents reflects differing consumption priorities. Expatriates, with higher spending high-end imported goods and international schooling, experience different cost pressures compared to ordinary residents, who are more affected by essential goods such as food and transport.

Price growth in key categories—food, transport, housing rents, and household supplies and services—reveals widespread inflationary pressures driven by post-pandemic supply-chain disruptions. Housing rent increases, common across urban centers, reflect heightened demand and constrained supply during economic recovery. Similarly, rising prices for domestic help and dry cleaning suggest escalating operational costs and wage pressures in service sectors.

Differing consumption weights also reveal behavioural shifts in response to price pressures. For ordinary residents, food occupies a larger share of spending, reflecting heightened sensitivity to rising prices. Reduced transport spending indicates broader trends, such as the impact of remote work and the prohibitive cost of car ownership, particularly in cities like Singapore with high Certificate of Entitlement (COE) prices.

Policymakers must address inflationary pressures with targeted interventions across key sectors. Stabilizing food prices through diversified imports and mitigating export bans is essential for easing the burden on households. Transport affordability can be improved by promoting public transport and exploring measures to reduce vehicle ownership costs. Housing affordability requires supply-side solutions to address constrained rental markets, particularly in recovering urban economies. Tailored policies that address these systemic challenges will

help mitigate the disproportionate impact of inflation on ordinary residents while ensuring sustainable economic recovery.

Purchasing Power Dynamics and Competitiveness

The results reveal key lessons about purchasing power dynamics in Asian cities. Singapore's ability to align wage growth with inflation highlights the importance of robust wage policies in maintaining competitiveness and resilience in global rankings. Kuala Lumpur faces challenges of wage stagnation and the need for structural reforms to enhance labour market competitiveness to encourage stronger wage growth to improve affordability. These findings collectively emphasize that purchasing power is shaped by a delicate balance of wage growth, cost-of-living adjustments, and external economic factors.

Besides promoting wage growth, policymakers need to have a better handle on the cost of living. The price analysis indicates that both supply-chain disruptions and macroeconomic factors, such as weaker currencies relative to others in the case of Japan and Malaysia, have contributed significantly to rising prices post-pandemic. Consequently, policymakers must manage exchange rate policies to maintain currency stability and prevent excessive depreciation. However, this requires a delicate balance, as an overly strong currency could reduce the competitiveness of exports, potentially hindering economic growth. Additionally, efforts to strengthen a currency often necessitate higher interest rates. Central banks must carefully navigate this trade-off to avoid undermining the post-pandemic economic recovery by imposing excessively high interest rates.

Conclusion

The COVID-19 pandemic has indelibly reshaped economic dynamics, with significant implications for the cost of living and purchasing power across major Asian cities. The post-pandemic economic landscape presents significant challenges for urban residents, as the cost of living has risen across cities due to inflationary pressures stemming from supply-chain disruptions. This study employs the ACI's cost of living and purchasing power indices to evaluate the impact of post-pandemic disruptions on cost of living and purchasing of four Asian cities. The most significant finding is that Tokyo experienced a fall in cost of living rankings while Singapore has experienced a rise in rankings. The purchasing power rankings on the other hand, identified Singapore as the only city analysed that experienced an upward movement of its purchasing power ranking. This shows that higher wage growth can offset these rising costs, enabling residents to maintain their purchasing power while still facing rising living costs. This underscores the critical role of wage dynamics in shaping the affordability of urban life in the post-pandemic period.

This study also investigates the post-pandemic impact at the prices and weights levels. Our analysis reveals that no city is immune to the inflationary effects of the pandemic, with increased prices observed across a range of essential goods and services. The shifting budgetary allocations of city residents—toward higher spending on food and reduced spending on transportation—suggest that rising food and fuel costs, coupled with behavioural changes like the adoption of remote work, are reshaping consumption patterns. These findings highlight the interplay between structural economic changes and individual decision-making in response to external shocks.

Based on the findings of this study, which highlight the post-pandemic disruptions' impact on cost of living, purchasing power, and consumption patterns in four Asian cities, several policy recommendations are proposed to enhance economic resilience and urban affordability. First, strengthening wage growth is imperative to sustain purchasing power amidst post-pandemic inflationary pressures. Singapore's experience highlights the mitigating role of wage growth in offsetting rising costs. To achieve sustainable wage growth, policies that enhance productivity through skills upgrading and technological adoption are critical. To address inflation in essential goods and services, governments should implement targeted measures, such as price stabilization policies for food and fuel, alongside social assistance programs for vulnerable households.

The observed shifts in spending patterns, particularly reduced transportation expenditure due to remote work, emphasize the need for sustainable urban mobility solutions. These include expanding public transportation infrastructure and fostering policies that support hybrid work arrangements. The rise in food costs further underscores the importance of bolstering food supply chain resilience through diversification of import sources, promotion of domestic production, and improvements in logistics to minimize inefficiencies.

Policymakers must also monitor evolving consumption trends, such as increased energy usage resulting from remote work, and adapt strategies to support affected industries. Additionally, strengthening inflation monitoring systems and improving coordination between fiscal and monetary policies will enable more proactive and effective responses to inflationary pressures. Collectively, these measures aim to address rising costs, protect purchasing power, and promote economic stability within a post-pandemic urban environment.

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