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# EXAMINING THE POST-COVID-19 COST OF LIVING SURGE IN TAWAU, SABAH, MALAYSIA

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## ABSTRACT

This study aims to identify the factors influencing the increase in consumers' cost of living in Tawau, Sabah, after the COVID-19 pandemic era. The study involved 300 respondents selected using simple random sampling techniques. Data were collected through an online questionnaire covering three independent variables: the increase in raw material prices, the excess demand for goods and services in the market, and the increase in production costs. Data analysis was conducted using Pearson correlation and multiple linear regression methods through SPSS version 25. The findings show that the most dominant factor identified is the increase in production costs, followed by the increase in raw material prices and the increase in demand and production of goods and services in the market. The $R^2$ value = .461, indicating that 46.1% of the variance in the increase in the cost of living can be explained by the combination of all independent variables. These findings accentuate the need for price control strategies, supply chain management, and more effective economic policies to reduce the burden of consumers' cost of living in the study area. This study provides important insights for public policy and contributes to the academic literature related to post-pandemic economic issues.

*KEYWORDS: COST OF LIVING, CONSUMER ECONOMICS, POST-PANDEMIC, PRODUCTION COST, PRICE CONTROL.*

## ABSTRAK

Kajian ini bertujuan untuk mengenal pasti faktor-faktor yang mempengaruhi peningkatan kos sara hidup pengguna di Tawau, Sabah selepas era pandemik COVID-19. Kajian ini melibatkan 300 responden yang dipilih menggunakan teknik persampelan rawak mudah. Data dikumpul melalui soal selidik dalam talian yang merangkumi tiga pemboleh ubah bebas iaitu kenaikan harga bahan mentah, lebihan permintaan barangan dan perkhidmatan di pasaran, serta peningkatan kos pengeluaran. Analisis data dilakukan menggunakan kaedah korelasi Pearson dan regresi linear berganda melalui SPSS versi 25. Hasil kajian menunjukkan bahawa faktor paling dominan yang dikenal pasti ialah peningkatan kos pengeluaran diikuti dengan kenaikan harga bahan mentah dan peningkatan permintaan serta pengeluaran barangan dan perkhidmatan di pasaran. Nilai $R^2$ = .461, menunjukkan

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sebanyak 46.1% varians dalam peningkatan kos sara hidup dapat diterangkan oleh gabungan semua pemboleh ubah bebas. Dapatan ini menekankan keperluan untuk strategi kawalan harga, pengurusan rantaian bekalan, dan dasar ekonomi yang lebih berkesan bagi mengurangkan beban kos sara hidup pengguna di kawasan kajian. Kajian ini memberikan pandangan penting untuk dasar awam serta menyumbang kepada literatur akademik berkaitan isu ekonomi pasca-pandemik.

*KATA KUNCI: KOS SARA HIDUP, EKONOMI PENGGUNA, PASCA-PANDEMIK, KOS PENGELUARAN, KAWALAN HARGA*

## 1. INTRODUCTION

The cost of living is the cost incurred by households to meet basic needs such as food, beverages, shelter, clothing, education, vehicles, and daily utility bills (Abdul Ghani, 2017). The increase in the cost of living puts pressure on the well-being and quality of life of households when basic needs cannot be met (Shahar *et al*., 2021). However, the cost of living varies according to location, economic status, household size, and lifestyle (Rahman *et al*., 2020). In the context of Tawau, Sabah, these general dynamics have been compounded in the aftermath of the COVID-19 pandemic. While state- and national-level data may not always isolate Tawau specifically, trends in Sabah and Malaysia overall help shed light on the underlying pressures facing Tawau households.

The recent post-pandemic period has seen significant shifts in Malaysia's cost-of-living landscape, with clear implications for consumers in Tawau, Sabah. National inflation has moderated, registering 1.4% year-on-year in March 2025, yet households continue to feel pressure due to rising prices in key categories such as housing, water, electricity, and food as reported by the Department of Statistics Malaysia (2024a). In Sabah, inflation stood at 1.2% in 2024, slightly below the national average of 1.8%, but still indicative of sustained increases in essential goods, according to reporting by Warta Oriental. Consumer Price Index trends further highlight that costs associated with Housing, Water, Electricity, Gas & Other Fuels, along with Food & Beverages, remain the primary contributors to household burden. Correspondingly, the latest Household Expenditure Survey shows that Malaysia's mean monthly household consumption expenditure increased to RM5,566 in 2024, up from RM5,150 in 2022, with spending heavily concentrated on necessities. For instance, households allocated 23.5% of their monthly budgets to housing and utilities, 17.0% to restaurant and accommodation services, 15.7% to food and beverages, and 11.0% to transport, based on data compiled by the Malay Mail (2024).

In Sabah, household characteristics further intensify vulnerability to rising living costs. The state recorded an average household size of 4.3 persons in 2022, with Tawau specifically averaging 5.0 persons per household, according to state-level reporting by the Ministry of Economy Malaysia (2023). Notably, 41.8% of Sabah households consist of five or more members, and 47.5% rely on a single income earner—both factors that reduce financial resilience when prices rise. Post-pandemic income pressures are evident as well, with urban absolute poverty climbing to 4.5%, and high levels of EPF withdrawals among low-income earners eroding long-term financial buffers, as highlighted by Daily Express Malaysia (2023). Although the state's Basic Expenditure of Decent Living level stands at RM1,080 per capita, based on the 2023 *Perbelanjaan Asas Kehidupan Wajar* (PAKW) report (Department of Statistics Malaysia, 2024b). This amount remains challenging for larger households facing simultaneous increases in food, utilities, and transportation costs. Collectively, these trends underscore the heightened cost-of-living pressures experienced by consumers in Tawau after the COVID-19 pandemic.

The increase in the cost of living becomes a challenge for consumers when there is an increase in the price of basic goods and services in the market. Price changes are influenced by the increase in production costs due to the increase in the price of raw materials such as oil, fuel, and transportation. The imbalance between demand and supply also affects the price of goods and services (Ali &Abdul-Rahman, 2020). The COVID-19 pandemic that began in late 2019 has had a major impact on the global economy. In Malaysia, the implementation of the Movement Control Order (MCO) on 18

March 2020 affected the economic sector as businesses were forced to close, including the tourism and manufacturing sectors (Ahmat *et al*., 2022). Disruptions in global supply chains and rising shipping costs have caused prices of essential goods to increase (Abdullah *et al*., 2020). After the pandemic, the recovery of supply chains has been slow, with logistics costs remaining high.

The post-pandemic cost of living crisis has become a worrying issue, especially in the Tawau district (Abdul Rahman, 2022). Supply chain disruptions, food inflation which rose to 6.8% in 2022 (Department of Statistics Malaysia, 2023a), and Tawau's remote location from the economic centre have increased logistics costs (Suruhanjaya Persaingan Malaysia, 2021). Other factors include rising raw material prices, volatile commodity prices, high transportation costs (Lim & Liow, 2021), and reliance on imports which has affected consumer purchasing power (Rahman *et al*., 2022). In addition, excess demand after the movement restrictions were eased also worsened the situation when market capacity could not accommodate the high demand.

Overall, these various factors affected price stability in Tawau and increased the cost of living for consumers. Therefore, the objective of this study is to analyse the factors that influenced the increase in the cost of living for consumers in Tawau after the COVID-19 pandemic era, by focusing on three aspects, namely the increase in raw material prices, excess demand for goods and services, and the increase in production costs. This study also aims to identify the most dominant factors in influencing the increase in the cost of living for consumers in the district.

## 2. LITERATURE REVIEW

*Supply and Demand Theory*

Supply and demand theory is a fundamental principle in economics that explains the process of determining the price and quantity of goods in the market through the interaction of consumers and producers (Mankiw &Taylor, 2020). Demand refers to the amount of goods that consumers need at a certain price, while supply is the amount of goods that producers provide at a certain price (Karl *et al*., 2020). Market equilibrium is achieved when there is a meeting point between demand and supply. After the Covid-19 pandemic, global and local markets have changed significantly. Consumers prioritise basic goods such as food, medicine and hygiene, while producers face supply chain disruptions, movement restrictions and increased logistics costs (Nicola *et al*., 2020). The Tawau area of Sabah, which relies heavily on imported goods, has experienced supply shortages and price increases due to excess demand over supply (Bank Negara Malaysia, 2023). The phenomenon of panic buying also occurs when consumers are concerned about their family's safety during the pandemic (Arafat *et al*., 2020). This situation has depressed the prices of basic goods and increased the cost of living in Tawau.

*Price Theory*

Price theory explains that prices are determined by the interaction between supply and demand (Baldwin, 2021). Prices increase if demand exceeds supply, and vice versa. Pricing is also influenced by production factors such as labour, capital, raw materials, and services. Companies need to assess costs, risks, and sunk costs in setting prices (Artameviah, 2020). After the COVID-19 pandemic, dynamic pricing strategies have become important due to market uncertainty. This theory helps companies adjust prices according to current inventory, competitiveness, and demand. It also explains the phenomenon of inflation, whether cost-push inflation (production costs increase) or demand-pull inflation (demand exceeds supply) (Mankiw, 2021). In Malaysia, inflation after the pandemic has been influenced by disruptions in the global supply chain, rising raw material prices, and currency weakness. In Tawau, import dependence on basic goods has further increased price pressures (Abdullah & Ali, 2020). The increase in the price of basic goods has affected the purchasing power, especially of low-income households (Kamaluddin *et al*., 2024).

*Increased Cost of Living*

The cost of living is the amount of basic expenses to support daily life such as food, housing, utilities, taxes and education (Mohd Noor *et al*., 2020). When household income is low compared with the

cost of living, the standard of living declines (Sabstu, 2014). The Covid-19 pandemic increased the incidence of absolute poverty from 5.6% in 2019 to 8.4% in 2020, before decreasing to 6.2% in 2022 (Department of Statistics Malaysia, 2023b).

The rising cost of living in Malaysia has disproportionately affected lower-income households, reduced their purchasing power and contributed to a decline in overall living standards as essential expenses such as food, housing, and energy consume a large share of their income. Research highlights a clear causal link showing that the cost of living strongly predicts standard of living, with increased essential spending forcing families to cut back on other critical needs—a "crowding-out effect" evident in reduced spending on food, transport, and non-essential goods. External shocks, including the Covid-19 pandemic and global supply chain disruptions, further intensified financial pressures and increased poverty rates, especially among vulnerable communities. In response, the 11th and 12th Malaysia Plans emphasise strengthening the "people economy" through strategies to raise income, enhance social protection, and control inflation. Under RMK-11, efforts focused on inclusiveness, affordable housing, improved human capital, and reducing inequality, while RMK-12 builds on this by promoting high-value employment, increasing the Compensation of Employees share of Gross Domestic Product (GDP), expanding healthcare and welfare systems, and implementing targeted subsidies and price controls through the Ministry of Domestic Trade and Costs of Living (KPDN) to ensure essential goods remain accessible and support is directed to those most in need.

The government focused on the issue of cost of living through the 11th and 12th RMs with measures to increase people's income, control inflation, increase job opportunities, and strengthen the social support system (Ministry of Economy, 2020). This strategy aims to reduce the pressure on people's lives and improve the well-being of society.

*Increased Raw Material Prices*

After the pandemic, the cost of raw materials increased due to disruptions in the global supply chain, labor shortages and high shipping costs (Ahmad & Zulkifli, 2023). Global inflation has also caused commodity prices to rise (BERNAMA, 2024). In Tawau, the prices of basic foods such as eggs, meat and cooking oil have increased (The Edge, 2024). Furthermore, the Institute for Food Agriculture Policy Studies (IKDPM) study found that the cost of imported raw materials has a major impact on food prices, especially vegetables and fruits. The increase in global commodity prices and supply chain disruptions led to significant cost-push inflationary pressures in Malaysia during 2022, which was documented as the primary driver behind the surge in domestic food prices (Bank Negara Malaysia, 2022).

*Excess Demand for Goods and Services in the Market*

Excess demand occurs when demand exceeds supply. After the pandemic, spending patterns changed with a surge in demand for basic goods (Haron & Zainuddin, 2023). This imbalance has led to price increases, inflation and affected consumer purchasing power.

Spending patterns changed after the pandemic due to a combination of economic, behavioural, and lifestyle shifts. Many households faced income uncertainty or job losses, forcing them to prioritise essential goods over discretionary items. Heightened health and safety concerns also increased demand for necessities such as food, cleaning supplies, and medical products. At the same time, global supply chain disruptions created shortages, prompting consumers to engage in precautionary or panic buying, which further intensified demand. Lockdowns reshaped daily life as more people stayed, worked, and cooked at home, increasing spending on groceries and household essentials while reducing expenditure on travel and entertainment. When restrictions were lifted, delayed or postponed purchases triggered a wave of pent-up demand. Together, these factors led to a structural shift in consumption behaviour, causing demand for basic goods to surge beyond supply and contributing to excess demand and rising prices in the market.

In Sabah alone, economic recovery has also been accompanied by the challenge of rising shipping and raw material costs (Sabah Housing & Urban Development Authority, 2025). Although cooperatives have tried to stabilize prices, these efforts have only partially reduced the impact of inflation (Parlimen Malaysia, 2024). In Tawau, the increase in Indonesian migrants has also increased competition for scarce resources, thus increasing the cost of living (Juda, 2021). Consequently, the combined pressure of limited market intervention and growing population demand has strained local supply systems, leading to higher prices for food, housing, and basic services. This situation disproportionately impacts lower-income households, who already spend a large share of their income on essential goods. As affordability worsens, families are forced to adjust their consumption patterns, often reducing nutrition quality, delaying healthcare, and compromising overall well-being. In the long run, persistent pressure on local resources without adequate policy intervention—such as enhancing supply-chain efficiency, expanding affordable housing, or strengthening social safety nets—can further deepen socioeconomic inequalities and undermine Tawau's community resilience and economic stability.

*Increased Cost of Production*

The increase in the cost of living is directly linked to the volatility of global energy markets, particularly the rising prices of crude oil and natural gas, intensified by the government's policy of subsidy rationalization. Malaysia is implementing a phased rationalization of fuel subsidies, which increases the risk of inflation (Rafizi, 2021). The reliance on imported materials has significantly increased production costs in Malaysia, a finding consistently reported across various economic analyses, particularly those addressing the post-pandemic period and its impact on the cost of living (FMM Business Conditions Survey, 2023). This cost escalation is further compounded by increased non-fuel related operational expenses for logistics, such as vehicle spare parts, which are subsequently passed on to consumers. These rising prices accelerate food price inflation, which disproportionately affects the lower-income B40 and M40 households as a higher percentage of their income is spent on essential items, thereby diminishing their purchasing power and heightening the risk of them falling into urban poverty (Department of Statistics Malaysia, 2022).

Sabah's economy is beginning to recover with GDP growth of 3.7% in 2022, but the increase in production costs in the agricultural and industrial sectors continues to pressure the prices of basic goods (Sabah Budget, 2024).

*The Most Dominant Factors Affecting the Cost of Living*

The two dominant factors are the increase in the cost of raw materials and excess market demand. The increase in the price of crude oil as a major input has resulted in increased production costs and soaring prices of goods (Rodzi, 2022; Tee, 2021). At the same time, the surge in demand without sufficient supply support has also pushed up prices (Wahab, 2024). Both factors have a direct impact on consumers, causing them to face financial pressure, reduced purchasing power, and a decline in quality of life (Mohd Aqmin *et al*., 2018).

*Conceptual Framework*

The conceptual framework of a study is an important tool in research because it can help describe the relationships between the variables being studied. Based on Figure 1, the independent variables consist of three factors of increasing cost of living, namely, increasing prices of raw materials, excess demand for goods and services in the market and increasing production costs. There is one dependent variable, namely increasing cost of living, which is used in this study.

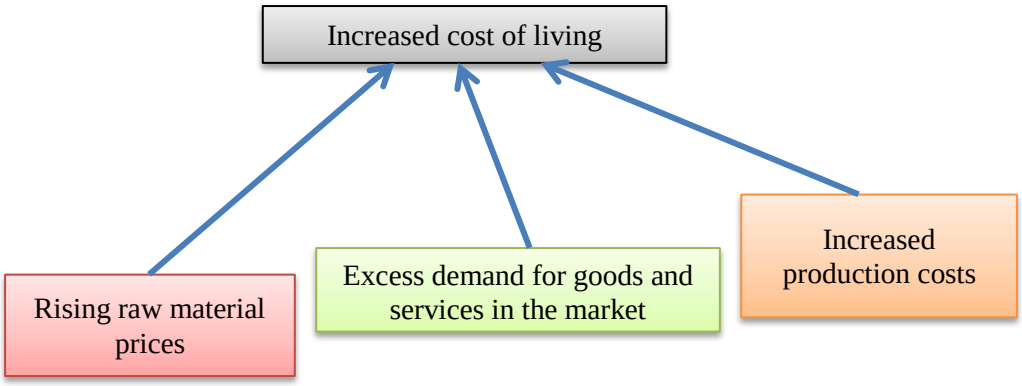


**FIGURE 1: CONCEPTUAL FRAMEWORK**
Source: Figure by Authors

## 3. METHODOLOGY

*Research Design*
This study uses quantitative research methods based on the positivism paradigm that combines deductive approaches and empirical observations (Bryman, 2016). This assumes that reality is objective, measurable, and independent of human perception. Under this paradigm, knowledge is generated through systematic observation, measurement, and the use of scientific methods to test hypotheses. Positivism highlights empirical evidence, numerical data, and causal relationships, allowing researchers to make generalizable conclusions about social phenomena. Consistent with this approach, the study combines deductive reasoning, where theories guide the development of hypotheses, with empirical observations collected through structured instruments to verify or refute those hypotheses.

The study design focuses on collecting, interpreting and analysing data to answer questions related to factors that contribute to the increase in the cost of living of consumers in Tawau, Sabah after the COVID-19 pandemic, namely the increase in raw material prices, excess demand for goods and increased production costs. Data were collected through an online questionnaire using Google Form distributed to selected respondents. Descriptive analysis was used to describe the demographic background of the respondents, while Pearson correlation analysis was carried out to assess the relationship between the independent variables and the dependent variables. Next, multiple linear regression analysis was used to identify the most dominant factors influencing the increase in the cost of living. All analyses were conducted using SPSS version 25 software.

*Population and Subjects*
The study was conducted in Tawau, Sabah, an important district in the economic and agricultural sectors and is known as an international trade hub due to its strategic location near Indonesia and the Philippines. The study was conducted in Tawau, Sabah, an important district in the economic and agricultural sectors and known as an international trade hub due to its strategic location near Indonesia and the Philippines. Tawau has a population of 372,462 people as of 2023 (Department of Statistics Malaysia, 2023), comprising a diverse mix of ethnic groups including Malay, Chinese, and indigenous communities, alongside a significant number of foreign migrants, particularly from Indonesia and the Philippines. This population diversity contributes to a vibrant local economy but also intensifies demand for housing, food, and public services, which can influence household spending patterns and the overall cost of living in the district.

The district is a major producer of palm oil and cocoa, but the COVID-19 pandemic has put significant pressure on the supply chain and economic activities (Ismail & Rahim, 2019; Hashim *et al*., 2021). The study population includes Tawau residents aged 25 years and above from various occupational, racial and religious backgrounds. For the study, a total of 300 respondents were selected using the simple random sampling method to ensure that everyone has an equal chance of

being selected, thus reducing bias (Kumar, 2019). These respondents were distributed evenly across six villages in one mukim, with 50 people from each village.

*Questionnaire Survey*

The primary instrument used in this study was a questionnaire, which was adopted and adapted from previous empirical research on inflationary pressures, cost-of-living determinants, and post-pandemic consumer experiences. Items related to raw material price increases were adapted from existing cost-push inflation frameworks and Malaysian household cost studies (Shahar *et al.*, 2021; Wong & Ming, 2022). Measures for excess demand were adopted from established instruments examining demand-pull inflation and consumer spending behaviours in post-COVID-19 recovery (Ali & Abdullah, 2022; Narayan *et al.*, 2021). Items assessing rising production costs were adapted from studies investigating increases in operating, transportation and labour costs and their effects on consumer prices (Roslan & Karim, 2022; Lee & Othman, 2020). Section E items involving dominance ranking were adapted from consumer decision frameworks and factor-priority methods (Idris & Rahman, 2021). Minor adjustments were made to ensure contextual suitability for consumers in Tawau, Sabah. All items in Sections B to E used a five-point Likert scale (1 = strongly disagree to 5 = strongly agree).

*Data Analysis*

SPSS Version 25 was employed to analyse the data in this study because it provides enhanced statistical capabilities, improved data management, and clearer visual output that support robust and accurate quantitative analysis. The use of SPSS Version 25 is well established in contemporary research, with methodological sources such as Pallant (2020) and Field (2018) detailing its analytical strengths. This offers upgraded procedures for regression, ANOVA, and categorical data analysis, along with an intuitive interface that facilitates efficient interpretation and reporting of results.

The data obtained are processed through descriptive statistics to describe the basic characteristics of the respondents and the distribution of data including minimum, maximum, average, percentage and standard deviation. The next analysis uses multiple linear regression to determine the extent to which the independent variables, namely rising raw material prices, excess demand and rising production costs, can explain the variance in the dependent variable, namely the cost of living. The $R^2$ coefficient is used to measure the strength of the regression model in explaining changes in the cost of living. This method was chosen because it is suitable for assessing the effects of multiple factors simultaneously on a single dependent variable.

## 4. FINDINGS AND DISCUSSION

*Reliability Coefficient*

Table 1 shows the reliability coefficients for each scale used in the pre-test data collection (N=30) and actual data collection (N=300). For the pre-test, the Cronbach's alpha value for the variable of increasing production costs was 0.888, indicating a very high level of internal reliability. The variable of increasing raw material prices reached a value of 0.765, which reflects high internal reliability. Meanwhile, the variable of increasing cost of living obtained a value of 0.735, indicating satisfactory reliability. For the variable of excess demand for goods and services in the market, a value of 0.716 was recorded, which although good, still indicates that there is room for improvement. Overall, despite the limited pre-test sample size, the measurement instruments used proved to be capable of producing consistent and relevant results, thus confirming the accuracy and reliability of this study.

For the actual data collection with a total of 300 respondents, it was found that the variable of increasing production costs continued to record the highest Cronbach's alpha value of 0.830, which indicates very good reliability. The variable of increasing raw material prices obtained a value of 0.749, indicating high reliability in assessing changes in raw material costs. For the variable of increasing cost of living, a value of 0.730 indicates satisfactory reliability, while the excess demand for goods and services in the market recorded a value of .748, which although slightly lower, is still within the range of good reliability. Overall, the results of the analysis with a sample of N=300

further strengthen the reliability of the measurement instrument used, further confirming that the findings of this study are consistent and reliable even in the context of a larger sample size.

**TABLE 1: RELIABILITY COEFFICIENT**

| Variables | Cronbach's alpha | | No. of Items |
|---|---|---|---|
| | Pre (N=30) | Actual (N=300) | |
| Increasing raw material prices | .765 | .749 | 5 |
| Excess demand for goods and services in the market | .716 | .748 | 5 |
| Increasing production costs | .888 | .830 | 5 |
| Increasing cost of living | .735 | .730 | 5 |

Source: Table by Authors

*Respondents Demographic Profile*

Table 2 details the demographic information of the respondents which includes gender, age, ethnicity, type of employment, household income and monthly expenses which include utility bills, food and beverages, vehicles, housing, education, clothing, and savings.

Out of a total of 300 respondents, 57% were male while 43% were female. In terms of ethnicity, less than half respondents were Bugis (35%), followed by Bajau (16.7%), Suluk (13.3%), Sungai (11%), Iban (9.3%), Toraja (5%), Chinese (3.3%), Malay (4%), others (2.3%), while there were no respondents from Indian ethnicity.

Based on the type of employment, almost half of the respondents (48.7%) worked in the private sector, followed by self-employed (28.3%) and the government sector (23.0%). In terms of household income, the highest category was recorded in the range of RM1,600 to RM2,500, which was 51.3%. Next, 22.3% were in the range of RM2,600 to RM3,500, followed by RM1,000 to RM1,500 (12.7%), RM3,600 to RM4,500 (4.3%), RM4,600 to RM5,000 (3.7%), RM6,000 and above (2.7%), RM5,000 to RM5,500 (2.0%) and less than RM1,000 (1%).

In addition, analysis of monthly expenditure showed that the largest expense was on utility bills with an average of 25.20%. Food and beverage expenses recorded an average of 23.20%, followed by vehicles (14.64%), housing (12.61%), education (9.40%), clothing (4.70%) and savings (10.34%). Overall, the respondents' spending patterns reflected their priorities towards basic needs such as utilities, food, housing and vehicles, in addition to allocations for education, clothing and savings.

**TABLE 2: RESPONDENTS DEMOGRAPHIC PROFILE (N = 300)**

| Item | Category | n | % |
|---|---|---|---|
| Gender | Male | 171 | 57.0 |
| | Female | 129 | 43.0 |
| Age | 25 – 35 years | 176 | 58.7 |
| | 36 – 45 years | 89 | 29.7 |
| | 46 years and above | 35 | 11.7 |
| Ethnicity | Bugis | 105 | 35.0 |
| | Iban | 26 | 9.3 |
| | Sungai | 33 | 11.0 |
| | Toraja | 15 | 5.0 |
| | Chinese | 10 | 3.3 |
| | Bajau | 50 | 16.7 |
| | Indian | 0 | 0.0 |
| | Suluk | 40 | 13.3 |
| | Malay | 12 | 4.0 |

| | | | |
|---|---|---|---|
| | Others | 7 | 2.3 |
| Occupation | Government Sector | 69 | 23.0 |
| | Private Sector | 146 | 48.7 |
| | Self-employed | 85 | 28.3 |
| Household Income (MYR) | Less than 1000 | 3 | 1.0 |
| | 1000 –1500 | 38 | 12.7 |
| | 1600 –2500 | 154 | 51.3 |
| | 2600 –3500 | 67 | 22.3 |
| | 3600 –4500 | 13 | 4.3 |
| | 4600 –5000 | 11 | 3.7 |
| | 5000 –5500 | 6 | 2.0 |
| | 5501 and above | 8 | 2.7 |
| Monthly Expenditure (MYR) | Utilities Bill | 461.05 | 25.20 |
| | Food & Beverages | 423.67 | 23.20 |
| | Transportation | 267.80 | 14.64 |
| | Housing | 230.80 | 12.61 |
| | Education | 171.40 | 9.40 |
| | Clothing | 85.70 | 4.70 |
| | Savings | 182.90 | 10.34 |

Source: Table by Authors

*Increase in Raw Material Prices*

Based on Table 3, the mean scale analysis shows that the statements "I am aware of the increase in raw material costs lately" and "The increase in raw material costs has caused my cost of living to rise" obtained the highest mean of 4.70 (Std. Dev = 0.651). This finding illustrates that consumers in Tawau, Sabah, after the Covid-19 pandemic significantly realized the increase in raw material costs and felt its impact on the cost of living.

On the other hand, the statement with the lowest mean was "I had to look for cheaper raw material alternatives to reduce costs" with a value of 4.27. This shows that although consumers are aware of the increase in raw material prices in the market, they are less inclined to look for cheaper alternatives. This result can be attributed to other factors considered by consumers when making purchasing decisions, such as quality, needs and comfort.

Overall, the mean average value was 4.50 with a standard deviation of 0.860. This result shows that there is a clear relationship between the increase in raw material prices and the increase in consumer cost of living. This finding is in line with a study by Abdul Wahab *et al*. (2021), which explained that the increase in the cost of living in Malaysia is due to the imbalance between household income growth and the increase in the price of raw materials, thus reducing consumer purchasing power. Furthermore, Cheong and Hassan (2022) emphasised that changes in the price of raw materials, especially oil and food items, increase the burden on households, especially among the B40 group, and are even more challenging for those living in urban areas.

In summary, the increase in the price of raw materials is a major factor contributing to the increase in the cost of living of consumers in Tawau, Sabah. This assessment is based on calculating the mean score compared to the set scale levels, which are low (1.00–2.33), medium (2.34–3.67) and high (3.68–5.00). Therefore, the mean score that is in the high range proves that the issue of increasing raw material prices is significant to consumer well-being.

**TABLE 3: FREQUENCY DISTRIBUTION OF RAW MATERIAL PRICE INCREASES**

| Statement | Mean | Std. Dev |
|---|---|---|
| I am aware of the increase in raw material costs lately. | 4.70 | 0.702 |
| The increase in raw material costs has caused my cost of living to rise. | 4.70 | 0.651 |
| I must reduce daily expenses due to the increase in raw material costs. | 4.47 | 0.860 |
| I must look for cheaper raw material alternatives to reduce costs. | 4.27 | 1.112 |
| The increase in raw material costs has reduced my purchasing power. | 4.38 | 0.979 |
| Overall mean and standard deviation | 4.50 | 0.860 |

Source: Table by Authors

*Excess Demand for Goods and Services in The Market*

Based on Table 4, the statement "I am willing to pay more to obtain the goods and services I need" recorded the highest mean score (M = 4.47), suggesting that consumers are inclined to pay a premium to secure goods and services amid excess demand in the market. Conversely, the lowest mean was observed for the statement "The quantity of goods and services I obtain in the market is small" (M = 4.37), indicating a perceived shortage in supply, albeit not substantially significant compared to other items. Moreover, the overall mean (M = 4.40, Std. Dev = 0.537) further demonstrates a correlation between excess demand in the market and the rising cost of living among consumers in Tawau, Sabah, during the post-COVID-19 period. These findings are consistent with Norashidah (2020), who highlighted that heightened demand without a corresponding increase in supply contributes to inflationary pressures, thereby exacerbating the cost of living.

**TABLE 4: FREQUENCY DISTRIBUTION OF EXCESS DEMAND FOR GOODS AND SERVICES IN THE MARKET**

| Statement | Mean | Std. Dev |
|---|---|---|
| I believe that the increase in demand for goods and services causes prices to rise. | 4.40 | .498 |
| I am willing to pay more to obtain the goods and services I need | 4.47 | .507 |
| have to seek alternatives because the goods or services I want are not available. | 4.40 | 0.498 |
| The quantity of goods and services I obtain in the market is small. | 4.37 | 0.619 |
| I face difficulties in obtaining the goods and services I need because the stock offered is limited. | 4.40 | 0.563 |
| Overall mean and standard deviation | 4.40 | 0.537 |

Source: Table by Authors

*Increased Production Costs*

Based on Table 5, the statement with the highest mean is "I have found that the increase in the price of goods has changed my monthly spending plan" with a mean value of 4.50 (Std. Dev = 0.777). This finding shows that consumers most strongly agree that the price increase due to the increase in production costs directly affects their monthly spending plans, indicating this is the most immediate impact felt. Meanwhile, the statements with the lowest mean are "I feel that the increase in production costs puts pressure on my finances" and "I must change my lifestyle due to the increase in the price of goods and services", each recording a mean of 4.27 (Std. Dev = 0.944). This shows that changes or increases in the price of goods and services in the market do not immediately affect consumer spending patterns, indicating that consumers do feel financial strain and have made lifestyle changes, but this effect is agreed upon less strongly than the impact on spending plans. Overall, the average mean of 4.36 with a standard deviation of 0.923 shows that there is a relationship between the increase in production costs and the increase in the cost of living of consumers in Tawau, Sabah after the COVID-19 pandemic era. This study also supports previous findings by Razman (2023), which stated that the increase in production costs was influenced by global factors during the COVID-19 pandemic and subsequently contributed to the increase in the cost of living in Malaysia.

**TABLE 5: FREQUENCY DISTRIBUTION OF PRODUCTION COSTS**

| Statement | Mean | Std. Dev |
|---|---|---|
| I have found that the price of goods has been increasing lately due to the increase in production costs | 4.33 | 1.028 |
| I have found that the increase in the price of goods has changed my monthly spending plan | 4.50 | .777 |
| I feel that the increase in the cost of production has put a strain on my finances | 4.27 | 1.048 |
| I must change my lifestyle due to the increase in the price of goods and services | 4.27 | .944 |
| I am more careful in planning my monthly budget due to the increase in the price of goods and services | 4.43 | .817 |
| Overall mean and standard deviation | 4.36 | 9.23 |

Source: Table by Authors

*Increase in the Cost of Living*

Based on Table 6, the highest mean statement "The high cost of living burdens low-income consumers" at 4.77 (Std. Dev = 0.504), shows that consumers in Tawau Sabah admit that low-income groups are more burdened by the increase in the cost of living. The statements with the lowest mean are "The high cost of living encourages consumers to adopt a debt attitude" and "Increasing cost of living makes consumers unable to practice saving practices," respectively at a mean of 4.20 (Std. Dev = 0.976). This shows that although the increase in the cost of living affects the tendency to borrow and save, the effect is stressful as in the issue of the burden of the cost of living on low-income groups. The overall mean and standard deviation are 4.42 and 0.827, respectively. This study is in line with the study highlighted by the Organisation for Economic Cooperation and Development (Organisation for Economic Co-operation and Development, 2022) which states that the COVID-19 pandemic has caused high costs of living, especially for low-income families.

**TABLE 6: FREQUENCY DISTRIBUTION OF THE INCREASE IN THE COST OF LIVING**

| Statement | Mean | Std. Dev |
|---|---|---|
| The increase in the price of grocery items causes household expenses to increase | 4.33 | 1.093 |
| The increase in the cost of living puts pressure on consumers | 4.60 | .675 |
| The high cost of living burdens low-income consumers | 4.77 | .504 |
| The high cost of living encourages consumers to adopt a debt attitude | 4.20 | .887 |
| Increasing cost of living makes consumers unable to practice saving practices | 4.20 | .976 |
| Overall mean and standard deviation | 4.42 | .827 |

Source: Table by Authors

*Multiple Linear Regression Analysis*

Based on Table 7, the ANOVA results show that there is a statistically significant relationship between the factors tested and the increase in the cost of living of consumers in Tawau, Sabah after the COVID-19 pandemic era [$F = 84.192$, $p = 0.001$]. Overall, the regression model is strong with an $R^2$ value of 0.461, which explains that 46.1% of the variation in the increase in the cost of living can be explained by this model. The adjusted $R^2$ value is 0.456, confirming that 45.6% of the variation in the dependent variable can be attributed to the independent variables, namely the increase in raw material prices, excess demand for goods and services in the market and the increase in production costs. Therefore, these findings prove that the model built can provide reliable predictions of the factors that influence the cost of living of consumers in Tawau, Sabah after the COVID-19 pandemic era.

Multiple regression analysis was conducted to determine the relationship between the independent variables (increase in raw material prices, excess demand for goods and services in the market, and increase in production costs) and the dependent variable (increase in the cost of living). Referring to

the regression data, the results of the study showed that the effect was statistically significant because the p value < 0.05, which is p = 0.000. The increase in raw material prices was found to be positively significant in influencing the increase in the cost of living with a β value = 0.223, t = 4.435, and p = 0.000. This occurs when the cost of raw materials increases, which in turn prompts manufacturers to increase the price of the final product (Krugman & Wells, 2020). This finding also supports Blanchard's (2021) study which states that high raw material costs have a major impact on various sectors, especially the manufacturing sector in an economy that relies on imports.

In addition, the variable of excess demand for goods and services in the market also showed a statistically significant relationship, but the effect was weak (β = 0.079, t = 1.577, p = 0.000). As argued by Mankiw (2021), when market demand exceeds supply, this situation leads to demand-driven inflation.

For the variable of increasing production costs, the results of the analysis showed a strong positive relationship (β = 0.490, t = 8.733, p = 0.000). This finding is in line with the study by Tan and Wong (2023), which found that economic pressure is caused by increasing production costs in the service industry. This proves that increasing production costs have a significant impact on consumers, especially since most consumers rely on the service industry to meet their basic needs.

Overall, the results of the study show that all independent variables contribute significantly to the increase in the cost of living of consumers in Tawau, Sabah. Among the factors tested, the increase in production costs was the most dominant, followed by the increase in raw material prices, while the excess demand for goods and services in the market had the smallest effect. Therefore, the alternative hypothesis (H1) is supported, namely that dominant factors such as the increase in raw material prices, excess demand for goods and services, and the increase in production costs have a significant influence on the cost of living of consumers in Tawau, Sabah after the COVID-19 pandemic era.

**TABLE 12: THE MOST DOMINANT FACTOR INFLUENCING THE INCREASE IN THE COST OF LIVING**

| Independent Variables | Unstandardized coefficient | | Standardized coefficient | t | Sig(p) |
|---|---|---|---|---|---|
| | β | Std.error | Beta | | |
| (Constant) | 5.511 | 1.121 | | 4.916 | .000 |
| Increase in raw material prices | .225 | .051 | .223 | 4.435 | .000 |
| Excess demand for goods and services in the market | .072 | .046 | .079 | 1.577 | .000 |
| Increase in production costs | .449 | .051 | .490 | 8.733 | .000 |

Note: $R^2$ =0.461, Adjusted $R^2$ = 0.456, F = 84.192, p < 0.000

Source: Table by Authors

## 5. CONCLUSION AND POLICY IMPLICATIONS

This study investigated the factors influencing the rising cost of living among consumers in Tawau, Sabah, in the post-COVID-19 era. Based on survey data from 300 respondents and analyses using descriptive statistics, Pearson correlation, and multiple regression, the findings reveal that increases in raw material prices, excess demand for goods and services, and higher production costs significantly affect consumers' cost of living. The overall regression model was robust ($R^2$=0.461), with production costs emerging as the most dominant factor, followed by raw material prices, while excess demand contributed the least. These results are consistent with prior studies (Krugman & Wells, 2020; Blanchard, 2021; Tan & Wong, 2023), affirming that global and domestic cost pressures shape consumer welfare in import-dependent and service-oriented economies.

From a policy perspective, the findings highlight the urgent need for comprehensive and long-term strategies to mitigate the impact of rising costs on households, particularly in rural areas. Government interventions such as subsidies on essential goods, tax relief, and incentives for producers (e.g., subsidies for raw materials, energy, and logistics) can ease cost pressures. At the same time, strengthening social safety nets—such as financial literacy programs—can help households better manage their expenditures and maintain wellbeing.

The study also underscores the role of the private sector in alleviating consumer burdens by offering affordable products, ensuring competitive pricing, and engaging in corporate social responsibility (CSR) initiatives. Collaboration between government, private actors, and local communities is essential to stabilizing prices, ensuring access to affordable goods, and promoting sustainable consumption.

Theoretically, the findings reinforce demand-supply and price theory by showing how imbalances in raw material costs and production expenses influence both consumer demand patterns and market supply structures. Practically, the evidence provides valuable insights for policymakers, producers, and consumer advocacy groups in formulating adaptive strategies to safeguard household welfare.

Future research could expand on the current study by exploring additional factors that may influence the cost of living, such as household income variability, access to digital markets, and changing consumption behaviours in response to climate change and technological adoption. Longitudinal studies could also track how these factors evolve over time, particularly in response to government policies, global supply chain disruptions, or economic shocks, providing a more dynamic understanding of household expenditure patterns. Comparative studies between urban and rural districts in Sabah, or between different Malaysian states, could further illuminate regional disparities and the effectiveness of targeted interventions.

Additionally, future studies could employ mixed methods approaches, combining quantitative surveys with qualitative interviews or focus groups; to capture the lived experiences of consumers and the strategies households adopt to cope with rising costs. Research could also examine the role of informal economic activities, migrant labour, and cross-border trade in shaping local price structures. Such studies would offer nuanced insights into the complex interactions between market forces, policy measures, and household welfare, thereby informing more effective, evidence-based strategies for mitigating the impact of rising costs on consumers.

In conclusion, this study contributes to a deeper understanding of post-pandemic cost-of-living dynamics in Sabah, offering a foundation for future research and policy formulation to address consumer challenges across Malaysia.

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