

Urban Squeeze: Facing Cost-of-Living Challenges as Johor Civil Servants in Malaysia

Zalhafiz Hamzah^{1,2}, Muhammad Asyraf Abd Aziz^{1,3}, Mohamed Afiq Zubir^{1,4}, Mohd Fairus Surat^{1,5},
Mohd Fadzli Mohd Zaid^{1,6}, Zulkifli Muhammad^{1,7}, Faizah Mohd Fakhruddin⁸

¹ Faculty of Built Environment and Surveying, University Technology Malaysia, Johor, Malaysia

² Economic Planning Division, Johor State Secretary Office, Johor, Malaysia

³ Kluang District Office, Johor, Malaysia

⁴ The Johor Islamic Religious Department, Johor, Malaysia

⁵ Johor Housing Development Corporation, Johor, Malaysia

⁶ Kulai District Office, Johor, Malaysia

⁷ Johor Land and Mines Office, Johor, Malaysia

⁸ Faculty of Social Sciences and Humanities, University Technology Malaysia, Johor, Malaysia

DOI: <https://dx.doi.org/10.47772/IJRISS.2025.909000677>

Received: 20 September 2025; Accepted: 25 September 2025; Published: 25 October 2025

ABSTRACT

This study examines the multifaceted challenges posed by the rising cost-of-living among civil servants in Johor Bahru, Malaysia, a city characterized by rapid urbanization and strong cross-border economic influences. The primary objective is to explore how escalating expenses, within the context of fixed public sector salaries, affect civil servants' financial stability, social relationships, and psychological well-being. A qualitative approach and case study design were employed, utilizing semi-structured, in-depth interviews with six informants from diverse administrative backgrounds. Thematic analysis revealed four critical dimensions of challenges. First, economic challenges are manifested through rising food, utility, and travel costs, as well as the reliance on dual-income households. Second, political or governance challenges are pronounced in the manner of impracticality of government-assisted programs, middle-class marginalization in welfare distribution, and housing inaccessibility. Third, social challenges include reduced social activities and lifestyle changes. Finally, stress is found to be the vital psychological challenge faced by the informants. These findings extend the application of Relative Deprivation Theory by showing how middle-income civil servants, though not the poorest, experience heightened frustration due to exclusion from state assistance. Likewise, the Family Stress Model is reinforced as prolonged financial pressures manifest in strained family relationships and deteriorating well-being, highlighting the psychosocial costs of structural inflation. The study contributes to academic discourse and policy formulation by highlighting the lived realities of civil servants in high-cost urban environments. It further recommends targeted interventions such as inflation-adjusted allowances, housing subsidies, and structured support mechanisms, while suggesting that future research adopt quantitative approaches with larger samples to strengthen generalizability and policy relevance.

Keywords— cost of living, civil servants, Johor Bahru, inflation, financial strain

INTRODUCTION

The cost of living is a critical determinant of household well-being, encompassing essential needs such as housing, food, transportation, healthcare, and education. This issue has become increasingly pressing in the

strategic city of Johor Bahru, which serves as Malaysia's southern gateway. Its proximity to Singapore exposes the city to cross-border economic spillovers, while rapid urbanization and persistent global inflation further intensify household financial pressures. According to the Department of Statistics Malaysia (2024), Johor's inflation rate stood at 1.8% in July 2025 - above the national average of 1.2% with food prices rising between 2.4% and 2.6% and housing costs increasing by 2.3%. These rising expenses place immense strain on urban households, particularly civil servants who form the backbone of public administration at the federal, state, and local levels.

Although incremental salary adjustments of up to 15% were announced in late 2024, the median monthly wage in the formal sector (MYR3,045) remains insufficient to offset escalating living costs (Department of Statistics Malaysia, 2025). This widening gap between income and expenditure has eroded purchasing power, undermined financial stability, and intensified psychological stress. Such dynamics illustrate a form of urban inflation trap, where fixed incomes cannot keep pace with rising expenses. Against this backdrop, the present study examines how these dynamics affect civil servants in Johor Bahru, not only through financial strain but also by reshaping their social roles and psychological well-being. By doing so, the study provides critical insights for policymakers seeking to design targeted interventions. It enriches academic discourse on the intersection of urban inflation, public sector resilience, and household welfare.

Statement of The Problem

The escalating cost of living in Johor Bahru has emerged as a critical socio-economic challenge for civil servants, driven by stagnant real wages, rapid urban expansion, and structural reforms such as subsidy rationalization (Tan, 2025). Housing prices in prime areas such as Iskandar Puteri now exceed MYR500,000 for modest units. At the same time, rising food costs amid global supply chain disruptions force many public sector employees to deplete savings or rely on debt to sustain daily needs. Although initiatives such as cash transfers under Malaysia's 2025 Budget and recent minimum wage hikes provide temporary relief, they fail to resolve deeper structural imbalances, particularly for mid-level civil servants earning between MYR4,000 and MYR7,000 monthly (Strangio, 2025).

This widening gap between income and expenditure has far-reaching implications. In line with the Relative Deprivation Theory (Runciman, 1966), middle-income groups increasingly perceive unfair exclusion from government assistance targeted mainly at lower-income households, intensifying dissatisfaction and financial vulnerability. Likewise, consistent with the Family Stress Model (Conger et al., 1994), prolonged economic strain contributes to household conflict, deferred life decisions such as childbearing, and deteriorating mental health.

These interconnected dynamics underscore that the rising cost of living is not merely an economic issue but a multidimensional threat that undermines financial security, erodes social cohesion, and weakens the resilience of public service delivery in Johor Bahru, Malaysia. In this high-cost urban hub, civil servants play a pivotal role in sustaining governance and socio-economic stability.

Research Objective

The study aims to achieve the following objective:

To explore the challenges of increasing cost-of-living faced by civil servants in Johor Bahru, Malaysia.

Significance of the Research

This study underscores the multifaceted significance of rising living costs faced by civil servants in Johor Bahru, generating both direct benefits for individuals and wider societal gains. At the individual level, the study offers actionable insights that strengthen financial literacy, encourage prudent debt management, and empower employees to advocate for fair remuneration. These outcomes are critical for fostering resilience as civil servants navigate the persistent pressures of urban inflation.

For policymakers, the findings reveal structural gaps in Malaysia's remuneration system and provide evidence-based recommendations for reform, such as enhanced housing subsidies, inflation-indexed wage adjustments, and targeted assistance in high-cost states. These initiatives may go beyond welfare provisions; they represent long-term investments in human resources, ensuring that civil servants remain productive, motivated, and committed to efficient governance. With salary expenditures projected to reach MYR18 billion by 2026, such reforms may reinforce fairness in wage distribution and strengthen workforce retention in increasingly competitive urban environments.

From an academic perspective, this study enriches interdisciplinary debates across economics, sociology, and public administration by shedding light on urban–rural disparities and the human cost of development. It establishes a foundation for comparative research across Malaysian cities, policy simulations, and examinations of gig-economy transitions among civil servants. Beyond advancing theoretical models on wage–inflation dynamics in emerging economies, the study offers practical strategies to strengthen governance, promote social equity, and safeguard the sustainability of public service delivery.

LITERATURE REVIEW

Rising Food, Utility Cost, and Travel Costs

The rising cost of essentials such as food, utilities, and transportation has become a defining feature of urban life in Malaysia, with Johor Bahru among the most affected due to its unique cross-border economy and rapid urbanization. Zakaria et al. (2023) found that rural households in Johor exhibited negligible adjustments to mobility despite higher fuel prices, indicating resilience born out of necessity rather than adaptability. By contrast, Rohani and Pahazri (2018) observed that urban households in Johor Bahru reduced trip frequencies to mitigate petrol expenses, reflecting a more deliberate behavioral shift in urban contexts.

Moreover, the implications extend beyond mobility to broader consumption dynamics. Alias et al. (2021) demonstrated that inflationary pressures force households to reprioritize, substituting premium goods with lower-quality alternatives. This aligns with Keynesian consumption theory, which explains how stagnant wages erode purchasing power and constrain household demand. With Johor Bahru's inflation rate at 1.8% in July 2025, above the national average of 1.2% (Department of Statistics Malaysia, 2025) and food prices surging by over 2.5%, the economic burden on households, particularly civil servants with fixed salaries, is becoming increasingly severe.

Reliance on Dual-Income Households

Dual-income arrangements have emerged as a critical survival strategy in Malaysian urban households. Khor and Mohamad (2020) emphasized that while dual incomes offer financial cushioning, they also exact social costs, including reduced parent-child interaction, heightened stress, and work-family conflict. Similarly, Zaimah (2019) argued that financial well-being does not stem solely from higher income but from mediating factors such as prudent financial behavior, home ownership, and demographic characteristics. In Johor Bahru, these challenges are magnified as civil servants increasingly rely on spouses' income to sustain essential commitments such as housing, education, and transportation.

Furthermore, rising household debt compounds these pressures. Alias et al. (2021) reported that Malaysia's household debt-to-GDP ratio escalated to 87.5% in 2020, reflecting heavy dependence on credit to finance daily expenses. Consequently, while dual incomes may help households manage short-term commitments, they often undermine savings capacity and long-term resilience.

Impractical Government-Assisted Programs

Government assistance programs have long been central to Malaysia's policy arsenal for alleviating cost-of-living pressures. However, their efficacy remains contested. Khan et al. (2018) showed that a program called Bantuan Rakyat 1Malaysia (BR1M) alleviated short-term hardship but failed to deliver sustainable poverty reduction. Likewise, Mat et al. (2020) revealed that while over 90% of working-class households benefited from

schemes such as BR1M, satisfaction was only moderate, with recipients advocating for larger aid and stricter price controls.

Middle-Class Marginalization in Welfare Distribution

The marginalization of Malaysia's middle-class households has been extensively noted. Rodrigo (2016) argued that limited employment-based protections expose this group to financial precarity. Zamri and Baqutayan (2020) further documented how property prices, now exceeding MYR500,000 in areas like Iskandar Puteri, Malaysia, outpace wage growth, excluding many middle-class families from homeownership. Runciman's (1966) Relative

Deprivation Theory offers a valuable perspective, suggesting that perceptions of exclusion from government aid, particularly when this aid targets only working-class households, exacerbate frustration among middle-class civil servants in Johor Bahru. Moreover, this marginalization undermines both social trust and economic stability. Unlike working-class households, middle-class groups often receive negligible assistance despite shouldering significant tax contributions. For Johor Bahru's civil servants, the absence of targeted support amplifies financial strain, creating a sense of inequity within the very structures they serve.

Housing Inaccessibility

A paradox of demand and oversupply marks Malaysia's affordable housing sector. Ishak et al. (2019) observed that despite government-backed housing programs, units often remain unsold due to poor location, loan inaccessibility, or inadequate facilities. Similarly, Tobi et al. (2020) highlighted that developers disproportionately cater to middle- and high-income groups, producing a mismatch between available housing and actual demand. This mismatch is acutely felt in Johor Bahru, where affordable units remain unattainable for many civil servants despite an apparent oversupply.

Reduced Social Activities

The cost-of-living crisis has also reshaped patterns of social participation. Sulaiman et al. (2019) found that tax reforms such as Goods and Services Tax (GST) and Sales and Services Tax (SST) heightened financial pressures, limiting household engagement in community activities. Azizi et al. (2024) further demonstrated that financial stress contributes to deteriorating mental well-being and reduced community involvement. Sulaiman et al. (2024) highlighted widening income disparities, which disproportionately restrict the ability of lower- and middle-income families to sustain social interactions. They withdraw from social activities to conserve resources.

Lifestyle Changes

Households across Malaysia have significantly altered their lifestyles in response to rising costs. Ismail et al. (2023) reported that the working-class families reallocated spending, often prioritizing transportation and food while cutting leisure activities. Sulaiman et al. (2024) noted that while household incomes in some groups grew faster than inflation, widening inequality restricted adaptive capacity, leaving vulnerable groups exposed to persistent hardship. Rising costs compel families to forgo discretionary spending, delay investments such as education or property, and recalibrate daily consumption. While such changes ensure short-term survival, they simultaneously undermine long-term financial security and quality of life.

Stress

The psychological dimension of financial strain has gained increasing scholarly attention. Azizi et al. (2024) demonstrated that higher living costs, compounded by interest rate hikes, significantly increased parental stress levels. Hassan et al. (2019) similarly identified strong correlations between financial stress, financial behaviors, and overall well-being, while Lugova et al. (2021) reported alarmingly high rates of depression (24.2%), anxiety (36.3%), and stress (20.6%) among low-income groups in Kuala Lumpur. In addition, the Family Stress Model (Conger et al., 1994) provides a framework for understanding these patterns, emphasizing how prolonged financial pressures undermine family resilience and trigger conflict.

METHODOLOGY

Research Approach and Design

This study adopts a qualitative research approach, deemed most appropriate for exploring and analyzing the challenges faced by civil servants in Johor Bahru, Malaysia, in navigating the rising cost of living (Taylor et al., 2016). The qualitative lens enables researchers to delve deeply into subjective experiences, perceptions, and contextual realities, generating insights that purely quantitative measures might obscure. Through this approach, the study captures the economic, social, and psychological struggles of civil servants in the midst of Johor Bahru's urban inflationary pressures. This approach facilitated a detailed understanding of how informants

interpret financial strain, the meanings they attach to everyday budgeting dilemmas, and how these challenges shape both their professional commitment and personal well-being. By prioritizing informants' voices, the qualitative framework also revealed hidden patterns such as the tension between fixed public sector salaries and volatile living costs that are crucial for formulating targeted policy recommendations.

The study also adopts a case study design to provide a holistic account of the multifaceted issues encountered within Johor Bahru's socio-economic environment. According to Yin (2014), case studies are efficient for examining contemporary phenomena in real-life contexts, enabling a thorough exploration of the "how" and "why" behind specific challenges. Johor Bahru was selected as the bounded case due to its unique combination of government service structures, cross-border economic influences from Singapore, and regional inflationary drivers. This design enables the researchers to gain findings that accurately reflect the lived realities of both low-level and mid-level civil servants in the city.

Sample and Sampling Techniques

Sampling in qualitative research involves deliberately setting specific inclusion criteria to identify and select cases rich in information, thereby enhancing the effectiveness of limited study resources and maximizing the depth of insights obtained (Etikan et al., 2015; Palinkas et al., 2015). Purposive sampling, a cornerstone technique in qualitative inquiries, was employed here to intentionally select individuals who could provide the most relevant and detailed perspectives on the research problem.

Additionally, the criterion sampling technique was employed to expand the participant pool. This technique allowed the researchers to handpick informants based on predefined characteristics, such as the civil servants, years of service, income levels, and exposure to Johor Bahru, Malaysia's high-cost environment, ensuring that the sample aligned closely with the target population of low-level and mid-level civil servants facing acute financial pressures. By focusing on "information-rich" cases, purposive sampling optimized resource use, enabling a concentrated effort on those whose experiences could illuminate key themes like debt accumulation and work-life imbalance without diluting the analysis through irrelevant data. The final sample comprised six informants, determined and finalized using the data saturation principle, a hallmark of qualitative rigor (Taylor et al., 2016). Saturation occurs when additional data collection yields no new themes, sub-themes, or variations, signaling theoretical completeness. Interviews continued until this threshold was reached after the sixth informant, where recurring motifs stabilized without novel insights emerging.

Table I Demographic Profile of the Informants

Informants Demography	Siti	Akmal	Asman	Obet	Suhailizan	Azmi
Gender	Female	Male	Male	Male	Female	Male
Age	31	38	40	34	34	31
Ethnic Group	Malay	Malay	Malay	Malay	Malay	Malay

Religion	Islam	Islam	Islam	Islam	Islam	Islam
Marital Status	Married	Married	Married	Married	Married	Married
Number of Children	0	4	2	0	0	0
Education Level	Bachelor's degree	Bachelor's degree	Bachelor's degree	Bachelor's degree	Bachelor's degree	Bachelor's degree
Current Occupation	Clerk	Administration officer	Administration officer	Administration officer	Clerk	Assistant administration officer
Range of Income	MYR4,850 and below	MYR4,851 – MYR10,970	MYR4,851 – MYR10,970	MYR4,851– MYR10,970	MYR4,850 and below	MYR4,851 – MYR10,970

Table I presents the demographic profile of the six informants in this study, revealing diverse backgrounds in gender, age, ethnicity, religion, marital status, number of children, education level, occupation, and range of monthly income. The sample comprises four men (Akmal, Asman, Obet, and Azmi) and two women (Siti and Suhailizan), with ages ranging from 31 to 40 years. All informants are of Malay ethnicity and Muslim religion, reflecting a homogenous ethnic and religious background. Regarding marital status, all six informants are married, with Akmal having four children, Asman having two, and the remaining informants (Siti, Obet, Suhailizan, and Azmi) having no children. Educationally, all informants hold a bachelor's degree, indicating a consistent level of academic attainment. Professionally, they are engaged in administrative roles within the public sector, with Siti and Suhailizan serving as clerks, Akmal, Asman, and Obet as administration officers, and Azmi as an assistant administration officer. Their income levels vary, with Siti and Suhailizan falling within the MYR4,850 and below (working-class), and Akmal, Asman, Obet, and Azmi within the MYR4,851 to MYR10,970 (middle-class).

Data Collection Procedure

Informants were free to choose the location, date, and time of their interview sessions based on their availability. The interviews were held in relaxed settings to create an open and welcoming environment for discussion. Before each interview began, researchers shared an information sheet and consent form with informants to explain the study's purpose, goals, and scope clearly. This step also helped informants think of topics to discuss during the session. Informants were assured that all collected data would remain private, would be used only for academic purposes, and that they could leave the study at any time without issue.

The interview protocol focused on the challenges of the increasing cost of living for civil servants in Johor Bahru, Malaysia, using both closed-ended and open-ended questions. Closed-ended questions gathered demographic details, such as gender, age, hometown, current residence, ethnic group, religion, level of education, current occupation, years of service, and monthly income range. Open-ended questions were designed to collect detailed insights related to the study's goals, specifically the challenges of rising living costs for civil servants in Johor Bahru, Malaysia.

During the interviews, researchers used audio recorders to capture key details shared by informants, but only with their permission. All informants agreed to the recordings. Interviews were conducted in the informants' native languages, i.e., Bahasa Melayu, to make sharing easier and improve the quality of the data. Each interview lasted about 50 minutes on average.

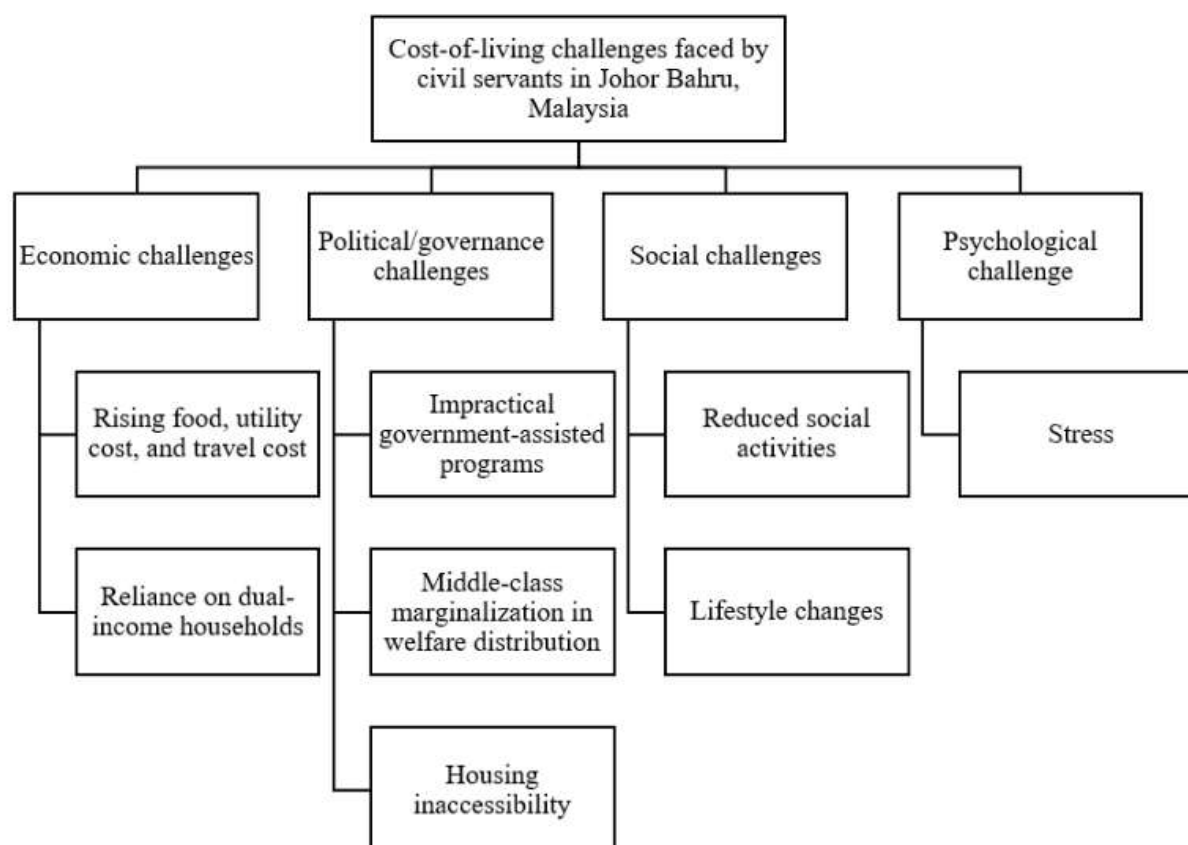
Data Analysis

After the completion of data collection, all raw audio recordings were transcribed verbatim into written form, producing transcripts from six informants. AI-assisted tools were subsequently employed to code the transcripts

systematically. To explore the research issues, thematic analysis was applied following Creswell's (2013) framework until distinct themes were identified. The coding process was instrumental in organizing and linking the themes, which allowed for more straightforward interpretation of the data and provided valuable insights into the informants' perspectives on the challenges of the rising cost of living faced by civil servants in Johor Bahru, Malaysia.

RESEARCH FINDINGS AND DISCUSSION

Fig. 1 Cost-of-living challenges faced by civil servants in Johor Bahru, Malaysia



Based on Figure 1, this study revealed four critical themes regarding the challenges of the increasing cost of living faced by civil servants in Johor Bahru, Malaysia. The four themes are economic, politics/governance, social and psychological. The sub-themes under economic challenges include rising food, utility, and travel costs, as well as reliance on dual-income households. Meanwhile, the sub-themes under politics/governance challenges include impractical government-assisted programs, marginalization of the middle class in welfare distribution, and housing inaccessibility. Further, the sub-themes for social challenges are reduced social activities and lifestyle changes. Finally, the sub-theme under psychological challenge is stress.

Economic Challenges

The escalating cost of living in Johor Bahru, Malaysia, presents vital economic challenges for civil servants, reshaping household financial strategies and resource allocation. Rising expenses for essentials such as housing, food, and transportation strain limited budgets, compelling civil servants to adapt through reduced discretionary spending and altered consumption patterns. The following sections will examine these economic pressures in detail, exploring their implications for financial stability and long-term economic resilience among civil servants.

Rising Food, Utility Cost, and Travel Cost

The escalating cost of living in Johor Bahru, Malaysia, has profoundly influenced household financial dynamics, compelling substantial adjustments in budgeting and consumption patterns. Informants report that grocery bills

and utility costs, such as electricity and water, have risen substantially, indicative of cost-push inflation, whereby essential goods consume an increasingly larger share of household budgets, thereby constraining discretionary expenditure. Additionally, surging petrol prices have amplified transportation costs, imposing a vital financial burden, particularly in urban areas like Johor Bahru, where heavy reliance on private vehicles exacerbates vulnerability to fuel price volatility. The lived experiences of affected informants poignantly illustrate these financial strains. Siti (pseudonym), a 31-year-old civil servant, articulated:

“The most affected are food and transportation costs, because those are daily necessities you cannot avoid. For food, prices for chicken, eggs, vegetables, and cooking oil have increased by 20 to 30% since 2020. For instance, mustard greens used to be MYR2, but now it is MYR3.50, and 10 kilograms of rice has increased from MYR5 to MYR10. Petrol is another issue. Even though my family only has one car and travels toll-free to work, our weekly costs have risen from MYR50 to MYR70 because Johor Bahru’s traffic is so congested that we use more fuel. Other costs like electricity are not too bad since the high-rise quarters are energy-efficient, but food really hits hard. When we have guests or during festivals like Eid, you feel it more because you need to buy extra. If you do not manage it well, your salary can vanish early within a month.”

Similarly, Azmi (pseudonym), another 31-year-old civil servant, shared:

“My transportation expenses have gone up considerably over the past year. I used to spend around MYR200 per month on petrol, which was manageable within my budget. However, with the recent increase in fuel prices and the longer commuting distance that I now travel for work, my monthly petrol cost has risen to about MYR300. This RM100 difference may look small at first glance. However, it actually puts significant additional pressure on my monthly budget, forcing me to cut down on other household expenses such as groceries and leisure activities. Over time, this situation creates financial stress and reduces my ability to save for emergencies or future needs.”

These accounts vividly illustrate the pervasive economic pressures confronting the informants, emphasising the urgent need for targeted policy interventions to alleviate the financial burdens induced by rising costs and to bolster household economic resilience.

Empirical research corroborates these findings, highlighting the heterogeneous impacts of rising costs on household behaviour. Zakaria et al. (2023) found that rural residents in Johor exhibited minimal changes in mobility patterns despite fuel price increases, suggesting limited adaptability in transportation practices. In contrast, Rohani and Pahazri (2018) observed that urban private vehicle users in Malaysian cities, including Johor Bahru, adapted by reducing trip frequency to mitigate higher petrol expenses, reflecting a more pronounced behavioural shift in urban contexts. The broader economic ramifications are evident in altered consumption patterns, with Alias et al. (2021) noting that Johor households face considerable challenges in balancing income and expenditure amid inflationary pressures. To cope, these households often resort to purchasing lower-quality goods and prioritising essential items, underscoring the significant socioeconomic consequences of rising costs.

Reliance on dual-income households

The escalating cost of living in Johor Bahru, Malaysia, has precipitated profound shifts in household financial dynamics, particularly underscoring the critical role of dual-income arrangements in sustaining economic stability. Informants consistently emphasised that a single income is no longer sufficient to meet the rising cost of living, with wives, traditionally viewed as supplementary earners, increasingly becoming primary contributors to household finances. Many highlighted that dual incomes are essential to cover monthly commitments, including housing payments, car loans, and children’s education costs. However, this reliance on dual incomes introduces additional pressures, compelling both spouses to prioritise employment at the expense of family time, thereby straining familial relationships and well-being. The lived experiences of dual-income households vividly illustrate these economic pressures. Asman, (pseudonym) a 40-year-old civil servant, said as follows:

“My wife’s income is a major support for our family finances. With her salary, we can cover many of the essential household expenses such as groceries, utilities, and school-related costs for our children. This dual-income arrangement certainly provides us with more stability compared to depending on a single income. However, the

rising cost of living means that even with both of us contributing, our financial situation does not always feel comfortable.”

Similarly, Azmi (pseudonym), a 31-year-old civil servant, shared:

“Thankfully, both my wife and I are employed, so our dual income helps us manage the household more effectively. I take responsibility for handling our finances, which includes monitoring monthly expenses, ensuring that bills are paid on time, and keeping track of our savings. However, whenever there are additional needs, we make it a point to sit down and discuss how to allocate the budget. This way, financial decisions are made jointly, and both of us feel involved in planning for our family’s well-being. Even so, we sometimes find that after meeting all commitments, there is little left for savings or leisure, which can be frustrating given the effort we both put into earning.”

The findings underscore the indispensable role of dual incomes in navigating the economic challenges posed by rising living costs in Johor Bahru, while also highlighting the resultant trade-offs in financial security. These observations are substantiated by empirical research on dual-income households in Malaysia. Despite the

financial advantages of dual-income structures, Zaimah (2019) argues that financial well-being is contingent upon factors such as age, monthly income, home ownership, and prudent financial behaviour, indicating that higher earnings do not inherently ensure economic security. In the context of Johor, Alias et al. (2021) underscore the critical importance of effective household financial management during economic crises, noting that Malaysia’s household debt-to-GDP ratio reached 87.5% by 2020, highlighting the necessity for strategic consumption patterns to mitigate financial vulnerabilities.

Political/Governance Challenges

The increasing cost of living in Johor Bahru poses notable political or governance challenges, influencing policy frameworks and public sector responses to support civil servants. Inadequate or misaligned government interventions, such as limited targeted subsidies or housing initiatives, exacerbate financial vulnerabilities for this group. The subsequent discussion will analyze these governance issues, focusing on the effectiveness of existing policies and the need for structural reforms to address the economic burdens faced by the informants.

Impractical government-assisted programs

The escalating cost of living in Johor Bahru, Malaysia, has intensified the reliance of households, particularly those in the working-class category, on temporary government relief programs such as Rahmah Sales, which provide subsidised essential goods to alleviate immediate financial burdens. Informants acknowledge the temporary respite offered by such initiatives, which mitigate the strain of rising expenses for necessities like food and utilities. However, these programs are widely regarded as short-term measures that fail to address the structural inflationary pressures driving the cost-of-living crisis. The limited scope, accessibility, and duration of these interventions leave families vulnerable to persistent economic challenges, as the rising costs of essential goods continue to erode household budgets. The impracticality of these programs is vividly captured in the experiences of affected individuals. Obet, (pseudonym) a 34-year-old civil servant, stated:

“They help but are insufficient. For instance, I attended a ‘Jualan Rahmah Madani’ program where subsidised items, like eggs, were reduced from MYR11 to MYR6, requiring a coupon. The long queues made it impractical, so I did not participate. Such programs should be more accessible, available year-round, and extended to rural areas, not just during campaigns or at specific stores.”

Similarly, Asman (pseudonym), a 40-year-old civil servant, remarked:

“The federal government has introduced initiatives like Jualan Rahmah and SARA assistance, but these are often one-off or seasonal measures. Basic goods remain expensive in the market. The government should provide subsidies for essential items and enforce stricter price controls to prevent retailers from arbitrarily raising prices.”

The findings emphasize the shortcomings of temporary assistance programs in addressing the persistent

economic pressures faced by Johor Bahru households. Past literature corroborates the limitations of such government assistance programs. For instance, Khan et al. (2018) evaluated the Bantuan Rakyat 1Malaysia (BR1M) program in rural Kedah, Malaysia, noting that despite its aim to alleviate the financial burden of a 29% increase in living costs between 2005 and 2015, the program required significant improvements to enhance its efficacy. Similarly, Mat et al. (2020) found that while 92.7% of Bottom 40% (working-class category) households benefited from assistance like BR1M, recipients reported only moderate satisfaction, advocating for increased aid amounts and stricter price controls on essential goods to address persistent economic pressures. These findings highlight the inadequacy of temporary relief measures in tackling the systemic issues of inflation and unregulated price increases.

Middle-class marginalization in welfare distribution

The rising cost of living in Johor Bahru, Malaysia, has amplified the financial vulnerabilities of middle-income households, who perceive a vital lack of targeted government assistance, exacerbating feelings of policy inequity and relative deprivation. Informants express frustration that most government aid, such as Sumbangan Tunai Rahmah, is predominantly directed toward the Bottom 40% (working-class) income group, leaving the middle-

income households feeling marginalised and excluded from essential support mechanisms. The experiences of M40 households vividly illustrate these challenges. Asman (pseudonym), a 40-year-old civil servant, shared as follows:

“Aid such as the ‘Sumbangan Tunai Rahmah’ helps temporarily, especially for low-income families. However, for the middle-income group like me, the impact is minimal. Major costs such as housing loans, education, and transportation are not significantly reduced. I think the government should expand schemes that genuinely target the middle-class, who are also burdened.”

Similarly, Obet (pseudonym), another 34-year-old civil servant, remarked:

“Programs like Sumbangan Tunai Rahmah help those who really need it, but for us, the middle-income group, we either do not qualify or get just a little, like MYR100 to MYR200 a year. To elaborate, this aid does not cover the rising costs of food, petrol, or groceries that increase annually. I think the government should either expand eligibility to benefit more people or create specific programs for high-cost cities like Johor Bahru. For example, my single friends struggle too, let alone those with big families.”

These accounts highlight the pervasive sense of marginalisation among middle-income households in Johor Bahru, emphasising the need for more inclusive and comprehensive policy interventions. This sentiment aligns with relative deprivation theory, as articulated by Runciman (1966), which posits that perceptions of unfair exclusion from resources relative to others can engender significant discontent among middle-class households, further compounding their economic challenges. Empirical research substantiates these concerns, highlighting systemic gaps in government support for Malaysia’s middle class. Rodrigo (2016) argues that middle-income households face increasing economic vulnerability due to inadequate employment-based social protection systems, which rely heavily on wage-derived welfare or market-based mechanisms that fail to provide sufficient financial security. Housing represents a critical challenge, as Zamri and Baqutayan (2020) notes that government assistance programs primarily target low-income groups, leaving the middle-income households reliant on the private housing market, where escalating prices outpace income growth, resulting in unaffordable housing and declining homeownership rates. These findings underscore the structural barriers impeding economic mobility for the middle-class group, reinforcing their sense of exclusion from state welfare initiatives.

Housing inaccessibility

The soaring cost of housing in Johor Bahru, Malaysia, poses remarkable challenges for informants, severely limiting their ability to achieve homeownership and maintain financial stability. Informants report that exorbitant house prices, with homes priced around MYR200,000 being nearly unattainable, coupled with high rental costs, consume a substantial portion of household income, leaving minimal resources for savings or long-term financial planning. While affordable housing schemes exist, their accessibility is hindered by high demand and stringent

loan conditions, compelling many households to prioritise housing payments over wealth accumulation. This situation exacerbates financial pressure, as homeownership remains a critical life goal for many. The lived experiences of affected individuals illustrate these housing challenges. Suhailizan, (pseudonym) a 34-year-old civil servant, stated:

“As someone who recently got married, I feel the difficulty of owning my own home. House prices are too high, making it almost impossible to find a house worth MYR200,000. Although the Johor government offers affordable housing schemes, the high demand makes it very difficult for people like me to obtain one. This creates financial pressure, as owning a house is a major life goal.

Likewise, Akmal (pseudonym), a 38-year-old civil servant, noted:

Affordable housing policies are good, but house prices in Johor Bahru remain high. Although I already own a house with MYR1,200 monthly payments, many colleagues struggle to buy homes due to strict loan conditions and market prices not matching salaries. Thus, living costs increase because many are forced to rent at high rates.

The findings align with previous literature, which highlights a persistent demand-supply imbalance in Johor’s affordable housing sector. Ishak et al. (2019) note that, despite government subsidy schemes targeting the working-class households, an oversupply in affordable housing persists due to factors such as elevated house prices, restrictive loan criteria, inadequate facilities, suboptimal social environments, and locational mismatches. Similarly, Tobi et al. (2020) argue that the housing supply is skewed toward landed property developments for middle- and high-income groups, while high-rise buildings, primarily allocated for low-income households, create locational disparities that fail to align with the needs of prospective buyers. These structural issues exacerbate the inaccessibility of affordable housing for households in Johor Bahru.

Social Challenges

The rising cost of living in Johor Bahru is transforming social dynamics for civil servants, affecting community engagement, social networks, and lifestyle choices. Financial pressures often lead to reduced participation in social activities and a reliance on informal support systems, reshaping traditional social structures. The following paragraphs will explore these social challenges in depth, highlighting their impact on social cohesion and collective well-being among civil servants.

Reduced social activities

The escalating cost of living in Johor Bahru, Malaysia, has significantly altered household behaviour, particularly by constraining social interactions among the informants. They describe notable reductions in social activities, including less frequent dining out with colleagues, fewer social gatherings, and simplified festive celebrations. The rising costs of essentials, driven by inflationary pressures, have prompted a shift toward home-based leisure activities, thereby limiting external social connections and diminishing opportunities for networking and community bonding. The experiences of affected individuals illustrate these social constraints. Asman, (pseudonym) a 40-year-old civil servant, stated:

“We rarely go out to eat with colleagues after work because of high food prices. Leisure activities are more often done at home with family. This has somewhat reduced social interactions with friends.”

Likewise, Azmi (pseudonym), a 31-year-old civil servant, noted:

“I do not host or attend social gatherings as often as before. Events like open houses and festive celebrations have become simpler and less frequent because of financial limitations.”

The findings align with a study by Sulaiman et al. (2019), which notes that the transition from the Sales and Service Tax (SST) to the Goods and Services Tax (GST) has exacerbated living costs, fostering negative perceptions among Malaysian households. Additionally, Azizi et al. (2024) demonstrate that rising costs, compounded by tax policy changes and higher interest rates, generate financial stress that adversely affects

mental health and overall well-being, further limiting resources for social engagement. Despite average household income growth outpacing inflation, Sulaiman et al. (2024) highlight widening income disparities, particularly impacting low-income households, which exacerbate social and economic vulnerabilities.

Lifestyle changes

The rising cost of living in Johor Bahru, Malaysia, has prompted substantial lifestyle adjustments among civil servants, particularly in managing escalating expenses for essential goods and services. Informants report major reductions in discretionary spending, such as holidays, dining out, and purchasing branded drinks, opting instead for cost-saving alternatives like bulk buying, home cooking, and lower-cost brands. This is reflected in the narratives of Siti (pseudonym), a 31-year-old civil servant, who stated as follows:

“Since 2020, food, drinks, and household grocery prices have gone up 20 to 30%. So, our family’s spending focuses more on essentials and less on luxuries. Before this, we could buy branded coffee or bottled drinks daily, but now we make our own teh tarik or orange juice at home. From our experience, household items like soap, tissue, and detergent have gotten pricier, so we buy in bulk or choose cheaper brands. We cook at home more, which cuts down on delivery services like GrabFood, even though it is tiring after work. My husband likes it, says home cooking’s tastier and saves money, but sometimes we miss eating out.”

Similarly, Obet (pseudonym), a 34-year-old civil servant, noted:

“We usually pool resources in our community. For example, in our apartment, we have a WhatsApp group, and sometimes we cook together at the surau. If we count everything in cash, it might cost around MYR3,000 to MYR4,000. However, when we split it into items, it is easier, for example, buying rice, meat, or vegetables. I usually buy things like spices or sugar, which do not cost much. So even if our contribution is small, at least we can still support these social activities.”

These findings are corroborated by past literature, such as Ismail et al. (2023), who note that the working-class households exhibit significant lifestyle changes, particularly through increased transportation expenditures, as spending on basic needs outpaces income growth, directly impacting the cost of living. Although Sulaiman et al. (2024) observe that average household income growth exceeds inflation rates, enabling some adaptation through adjusted spending patterns, they also highlight widening income disparities, particularly affecting low-income households, which underscores the need for greater income improvements to sustain financial stability. These studies collectively emphasise the socio-economic toll of rising costs and the adaptive strategies households employ to navigate financial constraints.

Psychological Challenges

The mounting cost of living in Johor Bahru, Malaysia, impacts the psychological well-being of the informants, contributing to increased stress. The subsequent sections will discuss this psychological challenge in detail, examining its effects on mental health outcomes and overall quality of life.

Stress

The escalating cost of living in Johor Bahru, Malaysia, has precipitated psychological challenges among the informants, manifesting as stress driven by the rapid increase in daily expenses, particularly groceries, outpacing income growth. Informants report that the unpredictability of future price hikes engenders constant worry and emotional exhaustion, reflecting the profound impact of inflationary pressures on mental well-being. These emotional responses underscore how financial strain, exacerbated by the rising costs of essential goods, compromises psychological health among the informants. About this, Siti (pseudonym), a 31-year-old civil servant, stated:

“It makes me moody or stressed sometimes. From my experience, when grocery bills spike, I feel like, ‘What is going up next?’

Likewise, Akmal (pseudonym), another civil servant, noted:

“I feel stressed when my expenses increase faster than my income. It can be emotionally exhausting.”

Empirical research substantiates these findings, highlighting the intricate relationship between financial stress and mental health in Malaysia. Azizi et al. (2024) demonstrate that rising living costs, driven by tax policy changes and increases in the Overnight Policy Rate (OPR), trigger significant financial stress that undermines the mental well-being of Malaysians, with higher costs for housing and essential goods identified as key contributors to psychological stress. Similarly, Hassan et al. (2019) found significant correlations between financial stress, financial behaviour, and financial well-being among 423 working adults, emphasising that the ability to cope with financial challenges is critical to maintaining mental health. Lugova et al. (2021) further report high prevalence rates of depression (24.2%), anxiety (36.3%), and stress (20.6%) among low-income communities in Kuala Lumpur, Malaysia, noting non-Malay ethnicity as an independent predictor of heightened mental health severity, suggesting that economic pressures disproportionately affect certain demographic groups. Overall, the findings not only reveal the tangible financial struggles of Johor Bahru’s civil servants but also demonstrate how these lived experiences substantiate and enrich theoretical frameworks. From the perspective of Relative Deprivation Theory, respondents’ narratives of exclusion from middle-class welfare capture the perception of inequity that undermines trust in state structures. Similarly, the Family Stress Model provides explanatory power for the accounts of household conflict, emotional exhaustion, and deferred life decisions, showing that economic strain cascades into broader psychological and relational domains. By embedding localised experiences into these theoretical models, the study advances scholarly understanding of how global inflationary pressures intersect with urban governance and household resilience in emerging economies.

CONCLUSION

Persistent high inflation in Johor Bahru, Malaysia, which consistently surpasses the national average, substantially undermines the financial stability of civil servants, whose fixed median incomes offer limited capacity to absorb the escalating costs of essential goods and housing. This study aimed to explore the multifaceted challenges faced by civil servants in this urban hub, identifying economic, political/governance, social, and psychological dimensions. Economically, rising costs for necessities and reliance on dual incomes highlight the strain on household budgets. Political and governance challenges reveal the impracticality of government-assisted programs, the marginalization of middle-income households, and housing inaccessibility, fostering a sense of policy inequity. Socially, reduced participation in social activities and lifestyle changes weakened social cohesion. Psychologically, the unpredictability of rising costs contributes to stress. These challenges not only weaken household stability but also threaten the resilience of public service delivery, as civil servants form the backbone of state administration. Ultimately, addressing these multidimensional challenges is not only essential for safeguarding the welfare of civil servants but also for ensuring the sustainability, equity, and resilience of Malaysia’s broader public governance system in an increasingly high-cost urban future.

LIMITATION

This qualitative study offers valuable insights into the challenges posed by rising living costs for civil servants in Johor Bahru, Malaysia, through in-depth interviews, providing rich contextual narratives grounded in lived experiences. However, several limitations should be acknowledged. First, the reliance on a small sample size and the focus on individual perspectives constrain the generalizability of findings to broader populations, particularly across diverse demographics such as varying ethnicities, service grades, or income levels. Second, the study does not investigate the long-term implications of inflation on work performance, job satisfaction, or mental health outcomes among civil servants, which may represent critical dimensions of cost-of-living pressures. To overcome these limitations, future research could employ a mixed-methods approach, combining qualitative narratives with large-scale quantitative surveys to capture the prevalence and intensity of these challenges across Malaysia’s civil service. Longitudinal studies would also be instrumental in examining how financial stressors evolve and their subsequent effects on household stability and public service delivery. Comparative analyses with other Malaysian urban centres such as Kuala Lumpur, Pulau Pinang, and Kuching could further illuminate regional variations in inflationary impacts. Finally, exploring the role of digital innovations such as e-assistance platforms, fintech solutions, and community resource-sharing applications represents a promising avenue to strengthen both economic resilience and social cohesion, an area not addressed

in this study. Future findings from broader and comparative studies could also provide policymakers with more substantial evidence for designing inclusive cost-of-living policies tailored to the diverse needs of Malaysia's civil servants, thereby enhancing both social equity and the long-term resilience of the public sector.

RECOMMENDATION

To effectively address the challenges posed by the escalating cost-of-living for civil servants in Johor Bahru, comprehensive and evidence-based policy interventions are required. Policymakers should prioritize the expansion of targeted subsidies for essential goods such as food, fuel, and utilities, extending coverage beyond the working-class category to also include the middle-income group, thereby ensuring inclusivity and year-round accessibility. Affordable housing programs tailored for civil servants should be strengthened by easing stringent loan requirements, improving locational suitability, and aligning supply with actual demand to facilitate sustainable homeownership. Moreover, the introduction of periodic wage adjustments indexed to regional cost-of-living indicators would provide a more equitable mechanism to mitigate financial strain and preserve purchasing power. These recommendations should also reflect the voices of respondents—for instance, ensuring that government programs avoid impractical barriers such as long queues or one-off seasonal subsidies, which informants highlighted as ineffective. Housing reforms should address the reality that many young civil servants feel priced out of the market despite “affordable housing” schemes. Similarly, support for dual-income households should include childcare subsidies and flexible work arrangements to reduce the family stress described by informants. By grounding reforms in lived experiences, policy interventions will be more responsive, practical, and trusted by the very groups they intend to support. At the community level, structured platforms such as policy dialogues, workshops, and collaborative forums involving civil servants, government agencies, and economic experts should be institutionalized to encourage knowledge-sharing, enhance financial literacy, and generate practical coping strategies. Collectively, these measures not only safeguard the economic and social well-being of civil servants but also reinforce the resilience and efficiency of Malaysia's public service system in navigating future urban cost-of-living pressures. Implementing these reforms would not only relieve the immediate financial pressures on civil servants but also set a benchmark for sustainable urban governance in Malaysia, ensuring that public service delivery remains adaptive, equitable, and future-ready.

REFERENCES

1. Alias, N., Sadique, R. B. M., Bakar, N. A., & Onasis, D. (2021). Household accounting: A case study of Johor. *Environment-Behavior Proceedings Journal*, 6(18), 257-261. <https://doi.org/10.21834/ebpj.v6i18.3081>
2. Azizi, M. A., Safri, S. M., & Salleh, M. S. M. (2024). From wallets to well-being: Unveiling the impact of escalating living costs on mental health among parents in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 14(11), 943-952. DOI:10.6007/IJARBS/v14-i11/21644
3. Conger, R. D., Ge, X., Elder Jr, G. H., Lorenz, F. O., & Simons, R. L. (1994). Economic stress, coercive family process, and developmental problems of adolescents. *Child development*, 65(2), 541-561.
4. Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches*. Third Edition. United States of America: SAGE Publications, Inc.
5. Department of Statistics Malaysia. (2024). *Micro, Small & Medium Enterprises (MSMEs) Performance 2023*. Retrieved from <https://www.dosm.gov.my/portal-main/release-content/micro-small--medium-enterprises-msmes-performance-2023>
6. Department of Statistics Malaysia. (2025). *Employee wages statistics (formal sector), fourth quarter 2024*. Retrieved from https://www.dosm.gov.my/site/downloadrelease?admin_view=&id=employee-wages-statistics-formal-sector-fourth-quarter-2024&lang
7. Etikan, I., Musa, S. A., & Alkassim, R. S. (2015). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1-4. <https://doi.org/10.11648/j.ajtas.20160501.11>
8. Hassan, N. M., Kassim, E. S., & Maon, S. N. (2019). Financial influences and mental health: An exploratory study. *International Journal of Academic Research in Business and Social Sciences*, 9(7), 398-409. <http://dx.doi.org/10.6007/IJARBS/v9-i7/6132>
9. Ishak, N. L., Yakub, A. A., & Achu, K. (2019). Buyers' perception on factors affecting affordable

- housing overhang in Johor, Malaysia. *International Journal of Real Estate Studies*, 13(2), 48-58.
10. Ismail, N. A., Daud, L., Mohd, S., Samat, N., & Ridzuan, A. R. (2023). Living style and cost of living: A cross-section analysis of B40 households in Malaysia. *Malaysian Journal of Consumer and Family Economics*, 31, 393-427. <https://doi.org/10.60016/majcafe.v31.15>
 11. Khan, S. J. M., Abdullah, N., Mat, S. H. C., Bakar, A. S. A., Ali, J., & Abdullah, H. (2018). The effectiveness of 1Malaysia people's aid program to the B40 group in the rising cost of living: An exploratory case study in rural district of Kedah. *The Journal of Social Sciences Research*, 958-964.
 12. Khor, P. G., & Mohamad, Z. S. (2020). The challenges experienced by adolescent and parents in dual-income family: A qualitative study. *Jurnal Sains Sosial*, 5(1), 100-111.
 13. Lugova, H., Andoy-Galvan, J. A., Patil, S. S., Wong, Y. H., Baloch, G. M., Suleiman, A., Nordin, R. & Chinna, K. (2021). Prevalence and associated factors of the severity of depression, anxiety and stress among low-income community-dwelling adults in Kuala Lumpur, Malaysia. *Community mental health journal*, 57(8), 1489- 1498. <https://doi.org/10.1007/s10597-020-00765-7>
 14. Mat, S. H. C., Fadzim, W. R., Harun, M., & Jamil, N. (2020). Spending behavior and coping strategies of the low-income group in Kedah, Malay. In *SHS Web of Conferences*, 86, 1-10. <https://doi.org/10.1051/shsconf/20208601035>
 15. Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *administration and policy in mental health and mental health services research*, 42, 533-544. <https://doi.org/10.1007/s10488-013-0528-y>
 16. Rodrigo, S. K. A. (2016). Working for welfare: Inequality and shared vulnerability among the Malaysian middle classes. *Malaysian Journal of Economic Studies*, 53(1), 9-31.
 17. Rohani, M. M., & Pahazri, N. (2018). Survey on how fluctuating petrol prices are affecting Malaysian large city dwellers in changing their trip patterns. In *IOP Conference Series: Earth and Environmental Science*, 140 (1), 1-7. doi:10.1088/1755-1315/140/1/012085
 18. Runciman, W. G. (1966). *Relative deprivation and social justice*. London: Routledge & Kegan Paul.
 19. Strangio, S. (2025, July 24). Malaysian PM unveils new measures to address rising cost of living. *The Diplomat*. Retrieved from <https://thediplomat.com/2025/07/malaysian-pm-unveils-new-measures-to-address-rising-cost-of-living/>
 20. Sulaiman, N. F. C., Rashid, N. K. A., Ridzuan, A. R., Samsudin, H., Saputra, J., Abidin, N. Z., Akhir, N. H. M., & Hussain, N. E. (2024). Analyzing the household income and consumption expenditure: Reality of rising cost of living in Malaysia in the 3rd International Conference on Business, Economics, and Sustainability Science, *KnE Social Sciences*, pages 539-551. DOI 10.18502/kss.v9i21.16760
 21. Sulaiman, N. F. C., Sanusi, N. A., & Muhamad, S. (2019). Survey dataset of Malaysian perception on rising cost of living. *Data in brief*, 28, 1-5. <https://doi.org/10.1016/j.dib.2019.104910>
 22. Tan, B. (2025, July 13). Johor booms, but at a price: MB pledges to tackle soaring living costs. *Malay Mail*. <https://www.malaymail.com/news/malaysia/2025/07/13/johor-booms-but-at-a-price-mb-pledges-to-tackle-soaring-living-costs/183802>
 23. Taylor, S. J., Bogdan, R., & DeVault, M. (2016). *Introduction to qualitative research methods: A guidebook and resource* (4th ed.). John Wiley & Sons Inc.
 24. Tobi, S. U. M., Jasimin, T. H., & Rani, W. N. M. W. M. (2020). Overview of affordable housing from supply and demand context in Malaysia. In *IOP Conference Series: Earth and Environmental Science*, 409, 1-8. doi:10.1088/1755-1315/409/1/012010
 25. Yin, R. K. (2014). *Case study research design and methods*. (5th ed.). Sage Publications Inc.
 26. Zaimah, R. (2019). The probability factor influences the level of financial well-being of workers in Malaysia. *Geografia*, 15(3), 122-135. <https://doi.org/10.17576/geo-2019-1503-09>
 27. Zakaria, H., Rohani, M. M., Rahimi, N. F. L., & Rahimi, N. I. R. (2023). The influence of fuel pricing on the mode of transportation of travellers in rural areas. In *IOP Conference Series: Earth and Environmental Science* (Vol. 1205, No. 1, p. 012063). doi:10.1088/1755-1315/1205/1/012063
 28. Zamri, A. M. & Baqutayan, S. M. (2020). Homeownership gaps among the middle-income group in Malaysia. *Journal of Science, Technology and Innovation Policy*, 6(2), 34-47.