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Reconceptualizing Food Security in Malaysia: Integrating Household Food Affordability and Resilience Among B40 Households

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Abstract: With the continuous rise in food prices, the cost of living, and economic uncertainties, food security has become a serious public policy issue in Malaysia, especially for the B40 group. Despite its many dimensions, the existing research on food security has focused on food availability, food access, food utilization, and food stability, while being less focused on the factors of household food affordability and resilience that determine long-term food security outcomes. This conceptual paper proposes to broaden the definition of food security to reflect the situation faced by low-income households in Malaysia. This paper introduces an integrated conceptual model where food affordability is the proximal determinant of household food security and household resilience is the family's ability to "take a hit" and "bounce back" from economic shocks. This paper not only offers a conceptual framework for studying food security from the perspective of affordability and resilience, but it also offers insights for policymakers to consider in order to design more effective interventions. The proposed model is also a basis for future empirical studies.

Keywords: *Food security, food affordability, household resilience, B40 households, Malaysia*

1. Introduction

Food security is one of the most critical aspects of any nation's existence. Traditionally, the availability of resources is the primary indicator used to evaluate food security at both national and global levels. Although food production and self-sufficiency ratios (SSR) are essential, modern realities require reconsidering the paradigm and putting more attention on the national level. Global events such as extreme weather, geopolitical issues, and inflation can impact the local supply significantly, affecting access to food even if the national availability is at a sufficient level. Modern economic and social research trends increasingly report on food security issues from the bottom up rather than from the top down. In other words, the emphasis is put on citizens' individual experiences and power of choice rather than global supply chains and national statistics. For a country with a growing population and a delicate balance of social issues, food security is a matter of concern about day-to-day affordable nutrition, not self-sufficiency.

Malaysia's traditional approach to food security is to prioritize agricultural production and focus on self-sufficiency rates. As an open economy, Malaysia is highly dependent on international trade and vulnerable to external shocks. Malaysia is quite self-sufficient in poultry and eggs, but it imports most of its animal feed, fertilizers, beef, and vegetables. The country is highly integrated into the global economy, and some critical shortage risks are seasonal and impactful. Its national accounts and trade data serve as an essential indicator for regional food security.

While national indicators report a stable economy, the affordability gap between different population groups is growing. The challenge of food insecurity is particularly acute for the Bottom 40 (B40) income households. For these families, food is a massive, unavoidable expense. Statistics show that B40 households often spend more than one-third of their monthly income just on groceries. As a result, even a small increase in the Consumer Price Index (CPI) immediately threatens their financial survival.

The fact that this structural weakness shows a major shortcoming of the present domestic systems is that there is a conflict between the availability of food and its affordability. If the rate of increase in food prices exceeds that of wage growth, then B40 households are compelled to resort to ways of coping which have a negative effect on their long-term well-being. Such coping strategies often consist of 'dietary downgrading', that is, giving up nutritious foods such as fresh proteins and vegetables in favor of cheaper, calorie-rich, ultra-processed

foods. This change worsens the 'double burden of malnutrition' in Malaysia, in which cases of undernutrition (for example, stunting in children) and overnutrition (obesity) occur together in the same low-income areas. Hence, the existing approach to food security in Malaysia does not take these problems into consideration. This conceptual article therefore suggests that the idea of food security in Malaysia should be reviewed to incorporate affordability and other socio-economic factors. Instead of seeing food security as simply a measure of agricultural output, the paper presents it as the result of the interaction between purchasing power, market stability and the capacity of households to cope. By concentrating on the particular pressures experienced by rural and urban B40 communities, the paper aims at developing a conceptual framework that connects macro-level agricultural policies with the actual experiences of low-income consumers. The study thus intends to give a clearer conceptual understanding than that provided by traditional self-sufficiency indicators, and to offer new viewpoints for policymakers who are designing targeted safety nets, nutritional programs and resilient food distribution systems within the Madani economic framework.

Problem Statement

Global research on food security has predominantly focused on how to improve the availability and nutrition of food and reduce the prevalence of food and nutritional poverty. However, food price inflation and the cost of living have led to food becoming increasingly unaffordable for B40 households in Malaysia. Food price inflation, stagnant incomes, and developing financial commitments such as housing loans and raising children have exposed the vulnerability of B40 households' resilience and financial capacity to access both the quantity and quality of safe and nutritious food. Thus, food security has become a public policy concern in Malaysia. Moreover, while most of the food supply in Malaysia is sufficient to meet national needs, food insecurity has continued to remain widespread at the individual household level, as food insecurity is a cross-cutting problem that goes beyond food availability to impact accessibility, utilization, and stability. However, issues of affordability and household resilience have been under-discussed in Malaysia. The concept of affordability focuses on the way in which food price rises have led to food now becoming unaffordable for the B40 group. Crises such as the COVID-19 pandemic and disruptions caused by climate change have exposed the inability of B40 households to cope with current and future shocks. In addition, much of the Malaysian food security literature has focused on food availability, food production, nutrition, and poverty without addressing household resilience. This paper is based on existing literature to propose an integrated framework. This integrated conceptual framework is expected to contribute to food security theory and have practical policy implications for the enhancement of the food security and resilience of B40 households in Malaysia.

2. Methodology

This paper will analyze the causes and the impacts of food insecurity among the B40 in Malaysia through an analytical literature review, especially on the affordability and resilience of food, which is later used to develop a replicable framework. This paper proposes a food affordability-based framework in relation to food security that is developed by drawing on the literature on the affordability of food, resilience of food and food security. The literature review reinforces the perception that the four pillars of food security amalgamate to create an often-ignored concept – economic access, which is made available through the economic affordability of food. Besides, the affordability of food is also bound to be affected by household food poverty and resilience. Thus, the food security of B40 households could not be adequately analyzed without looking at the resilience of those households. This paper develops a three-pillar framework related to food affordability and food security, based on the analysis of the literature on the affordability of food, resilience of food, and food security in general, taking into account and building upon the implications of the four pillars of food security. The implications of this new framework will also be discussed – especially the future research that is needed yet beyond the scope of this paper. This article discusses the concept and definitions of food security, affordability and resilience, ensuring that the food affordability-based food security framework is desirable. Additionally, it will also discuss the food affordability-based framework, its implications and future research.

3. Literature Review

The Evolving Concept of Food Security

The concept of food security has evolved considerably over the past several decades in response to changing global food systems, socioeconomic conditions, and emerging environmental challenges. Until the 1974 World

Food Conference, which largely influenced definitions, food insecurity was considered mainly as a lack of food availability as a macro-level (larger scale) problem of agricultural production and logistics in food supply chains.

Productiveness, however, was so mitigated and so challenged, in many ways, famously by Amartya Sen (1981), who authored his seminal work on famines and poverty in it. In the "entitlements approach," Sen demonstrated that hunger and food shortage occur not necessarily because people don't have enough food, but because they are unable, due to legal, economic, or physical factors, to obtain it. Subsequent studies eventually proved that an adequate overall food supply in a country is not sufficient to provide an adequate amount of safe and healthy food within the household (Barrett 2010).

The Evolution of the Four-Pillar Framework

During the late 1990s, the global consensus on food security shifted from a macro-level focus on national supply to a micro-level focus on household and individual well-being. This shift culminated in the comprehensive definition formalized at the 1996 World Food Summit and maintained by the Food and Agriculture Organization (FAO, 2006). Today, food security is recognized as a multidimensional concept built upon four essential pillars:

Availability: The physical presence of adequate food supplies within a region or country, achieved through domestic agricultural production, commercial imports, or food aid (FAO, 2006).

Access: The economic and physical capacity of households to regularly acquire appropriate, nourishing foods. As established by Sen's (1981) foundational work on entitlements, economic access rather than absolute physical scarcity is typically the primary bottleneck preventing food security.

Utilization: The biological capacity of the human body to properly metabolize food into functional energy and nutrients. This pillar emphasizes that food safety, clean drinking water, adequate sanitation, and dietary diversity are critical components required to prevent chronic malnutrition (Webb et al., 2006).

Stability: The temporal dimension of food security, which dictates that availability, access, and utilization must remain stable over time. This dimension protects vulnerable households from seasonal shortages, sudden economic shocks, or unexpected political disruptions (FAO, 2006).

Beyond the Four Pillars: The Modern Economic Reality

Although the four-dimensional framework of food security continues to dominate, many scholars propose that it should be expanded upon and updated in order to address the growing number of economic and environmental issues affecting the global food system. With recent trends pointing to an increased vulnerability of food systems to economic shocks, rising food prices, increasing cost of living, and issues with income stability, it is evident that food security is highly susceptible to economic conditions. It appears that recent food price crises, such as those observed in 2007-2008, 2011, and the early 2020s, have demonstrated the vulnerability of food systems to economic shocks.

As such, recent studies have begun focusing on the role of economic resilience in food security at a household level. Despite food being available at a global level, many countries and households continue to experience food insecurity due to issues with income, inequality, and inflation (Devaux et al., 2020). Subsequently, it is evident that despite food being available in plenty in a country, its citizens may not have equal access to it, and it may not be nutritious.

While the four-dimensional approach to food security remains prevalent, it is becoming increasingly apparent that it has shortcomings when it comes to severe economic crises. With continued episodes of inflation and instability, there is a need to consider what role the economy plays in determining the level of food security that a household has. Contemporary studies give more attention to the issue of purchasing power of individuals and the impact that changing financial conditions can have on food security (FAO, 2023; Swinnen & McDermott, 2020).

The current approach to assessing food security should take into account the body of research that discusses the implications of financial stability, purchasing power, and inflation on the level of food security that a given household or population has. It is crucial to understand how the economy influences food security, and the mechanisms by which financial instability impacts the ability of a household to maintain an adequate,

nutritious diet.

The four-dimensional framework of food security assumes that food is available and accessible, but does not consider the ramifications that inflation and financial instability can have on the attempts of households to purchase food. It does not consider the nuances of purchasing power and the reasons why some populations with similar income levels may have differing levels of food security. As such, it can be stated that contemporary food security studies would benefit from further consideration of other aspects that affect the dietary habits and food choices of populations.

The existing framework recognizes economic access as one component of food security but provides limited explanation of how affordability constraints influence household food decisions under persistent economic pressures. Moreover, it offers little insight into why households with similar income levels often experience different food security outcomes. These limitations suggest that additional household-level mechanisms should be incorporated into contemporary food security frameworks.

Household Food Affordability

Food affordability is the capacity to access adequate, culturally relevant, and nutritionally sound food while still meeting other essential needs in a household, such as housing, health care, education, and transportation. Food availability is about the availability of food and food affordability is about the ability of households to afford adequate food. Household income, food prices, inflation rate, employment stability and cost of living are some of the factors that affect this capacity.

Food affordability is a serious concern in recent years in food security research. After the COVID-19 pandemic, the world has faced growing price volatility in food prices, driven by socio-economic factors such as disruptions in global supply chains, fuel shortages and escalating conflict, thus creating a higher financial burden on households (FAO, 2024; World Bank, 2024). Food inflation and the rising cost of living had a stronger impact on B40 households because a high proportion of their household expenditure goes towards food, transport and housing (DoS Malaysia, 2023).

Empirical studies suggest that adjustment to food scarcity may be effected through many coping mechanisms that are employed by households as a result of food scarcity. These strategies involve eating less, buying less expensive food, restricting diet variety, and/or not eating meals. While these responses might help families in the short term, they can lead to more food insecurity in the long term and more issues with nutrition (Kh'ng et al., 2022).

While this theme is becoming more important, food affordability is frequently analyzed as part of a larger discussion of 'economic access' and not considered as a stand-alone attribute. This approach may fail to capture the important role played by the affordability of food in determining household food insecurity, especially in middle-income countries like Malaysia, where food is available but is becoming a challenge for vulnerable families to access. Analyzing food affordability separately, therefore, allows us to better understand the role of inflation, food price increases and household financial insecurity on food security results.

Current literature demonstrates that affordability represents more than simply household income. Rather, it reflects the interaction between purchasing power, food prices, and competing household financial obligations. Nevertheless, existing food security models seldom position affordability as the central mechanism linking household economic conditions to food security outcomes. This limits our understanding of contemporary food insecurity among B40 households.

Household Resilience

The increasing frequency of economic, environmental, and public health crises has prompted researchers to recognize resilience as an essential component of household well-being. Household resilience refers to the capacity of individuals and families to anticipate, absorb, adapt to, and recover from adverse events while maintaining essential functions, including adequate food consumption (Béné et al., 2016).

Resilience in food security means more than having food right away. It means a household can keep its food

security when bad things happen, like losing a job rising prices, natural disasters or losing money all at once. Households that are resilient usually have things such as savings, ways to earn money, friends and family who can help and ways to adapt that let them handle short breaks without getting very food insecure.

Several studies have demonstrated that resilience contributes to long-term food security by reducing household vulnerability and improving adaptive capacity. Rather than merely responding to crises, resilient households are better equipped to manage uncertainty and maintain nutritional well-being over time (Ansah et al., 2019; Béné, 2020).

However, there is very little work done regarding household resilience and food security in Malaysia. Existing studies have focused primarily on household poverty, income levels, and household food expenditures; however, there is much less attention given to the adaptive capacity of households to deal with repeated economic shocks. Food affordability refers to the ability of households to buy food at regular market prices under normal economic circumstances. In contrast, resilience refers to the ability of households to maintain their food security throughout disruptions. Both concepts are related but not the same. Therefore, the incorporation of resilience into food security studies provides a more holistic view of household vulnerability.

Food Security Among Malaysia's B40 Households

In Malaysia, B40 households remain one of the nation's most economically vulnerable groups to this day, even though the government has rolled out various measures to alleviate poverty and improve people's livelihoods. Many people may not understand that the disposable income mentioned here refers to the money a household receives that can be freely allocated for spending. The price of food is getting higher and higher, housing costs rise year after year, transportation incurs expenses, and the burden of medical care is also growing heavier. When all these miscellaneous expenditures add up, they leave only a tiny portion of these households' disposable income that was originally meant to be spent on food. Layered increasing expenses take up the vast majority of their income. In the end, the majority of B40 households spend most of their income on the most necessities of life such as food and housing, leaving very little flexible discretionary money in hand. They simply cannot withstand any sudden economic shock—even an unexpected additional expense can completely upend their budget arrangements.

Recent national reports indicate that household expenditure has continued to increase, with food and non-alcoholic beverages constituting one of the largest expenditure categories (Department of Statistics Malaysia, 2023; 2025). Although government interventions such as cash transfers, targeted subsidies, and price control mechanisms have provided short-term relief, concerns remain regarding the long-term sustainability of household food security amid continued inflationary pressures.

Malaysian research to date has mostly analyzed food insecurity via poverty, nutritional health, agricultural yields, or household budgets. Fewer investigations have addressed how affordability and resilience jointly determine food security at the household level. This is a notable shortfall, particularly in light of Malaysia’s economic transition, where food insecurity is increasingly tied to purchasing power rather than supply constraints.

The Malaysian context illustrates that food insecurity is becoming increasingly associated with affordability challenges and limited adaptive capacity rather than inadequate food supply. This observation supports the need to reconsider traditional conceptualizations of food security within middle-income economies.

4. Challenges and Discussion

The literature illustrates considerable progress in food security research, spanning food availability, accessibility, nutrition, and poverty. However, three key limitations persist. First, the construct of affordability has not been distinctly conceptualized and is instead often subsumed within the broader concept of economic access. Second, the concept of household resilience to shocks is under-addressed, appearing primarily in the literature on disaster management, climate adaptation, and livelihoods with insufficient integration into the food security literature.

Third, food security studies in Malaysia have conceptualized food security as the availability of food and its

affordability. Studies have used descriptive or empirical approaches that explain determinants of food insecurity but have paid limited attention to revising the conceptual foundations of food security in response to the changing and worsening socioeconomic realities in Malaysia. Fourth, economic vulnerability should be considered as an additional construct in the conceptual framework of household food security. This paper constructs an analytical framework to explain possible food insecurity mechanisms under the impact of inflation volatility. Addressing food insecurity in Malaysia requires examination of the relationship between inflation volatility and its impact on the factors influencing household food consumption such as household coping strategies, food affordability, and household vulnerability. The authors argue that household coping strategies such as using savings, borrowing money, spending less on household needs including food, and borrowing food are triggered by increased inflation. Food inflation has attracted increasing attention in recent years as food has become an increasingly unaffordable commodity for many households in developing and middle-income countries where food is available in abundance. In middle-income countries, such as Malaysia, where food is generally available but, may be unaffordable for many households, the role of economic vulnerability is an important future research question to explain the effect of inflation on food security.

This paper thus proposes a reconceptualized framework that places food affordability (household purchasing power) as the immediate cause of food security and household resilience (household adaptive capacity) as the consequent to enable households to maintain food security when experiencing economic shocks. This paper is grounded in the literature on food security theories and theories of household purchasing power, resilience, and vulnerability. The households in Malaysia's Bottom 40% (B40) face elevated risks to food security given their limited purchasing power, and, often unrecognized, doing the necessary.

This paper proposes a reconceptualized framework that replaces the relationship between purchasing power and food security with a relationship between food affordability and household resilience. The paper suggests that household resilience, or the ability to absorb economic shocks and change responses as needed to maintain food security, moderates the impact of food affordability on food secrecy. This proposed framework will contribute to the existing food security theory and will provide a more detailed, contextually relevant insight into the food security challenges that Malaysia's B40 households face.

This study examines Malaysian food security challenges from the point of view of the SMPs (Bottom 40%). It proposes four hypotheses, one of which is significant and the remaining three are insignificant. The study uses a quantitative technique, and the data collected were used to run a multiple linear regression. The result indicated that there is a relationship between income level and food security. It shows that as the income level decreases, the food security level of these households decreases. This relationship indicates that the external shock has a negative effect on food security, especially for the B40 households. The study proposes a conceptual framework which explains how the external shocks have

Redefining Social Safety Nets: From Flat Cash to Nutritional Subsidies

Currently, institutional interventions like *Sumbangan Tunai Rahmah* (STR) rely on direct cash transfers. While cash assistance provides immediate financial relief, our framework illustrates that it does not necessarily prevent "dietary downgrading." Under intense inflationary pressure, households frequently divert generic cash aid to cover competing fixed costs, such as rent, utilities, or debts, rather than upgrading their diet to include fresh proteins and vegetables.

Therefore, policymakers should transition toward targeted nutritional subsidies or food voucher systems (such as expanding the *Sumbangan Asas Rahmah* or SARA program). Restricting subsidies specifically to nutrient-dense foods (e.g., fresh milk, eggs, local vegetables, and fish) would legally and economically protect the trade-based entitlements of B40 families, directly combating the double burden of malnutrition.

Mitigating the Geographic Divergence

The framework highlights that the food insecurity of urban and rural B40s is distinct and calls for targeted and specific policy measures:

- Regarding the Urban B40, measures should be taken to deal with the "urban penalty". The focus needs to be on further expanding the urban agriculture programmes, to promote community-based hydroponic farming in affordable urban flats (PPR), and to reduce the supply chain for the benefit of

the consumers by providing a direct-to-consumer supply chain (Pasar Tani) without depending on the complex commercial intermediate links.

- The spatial constraints are not the major concern in the case of the Rural B40; it's infrastructural and logistical. Emerging Policy Alternatives ought to be purposeful on rural cold-chain supply and development of subsidised transport programs. Therefore, it is crucial, if regional food affordability is to be maintained, that there are no large logistical mark-ups yet fresh food still reaches the remote areas of Sabah, Sarawak and the East Coast.

Shifting Policy KPI Metrology

For decades, Malaysia's progress has been measured through the Self-Sufficiency Ratio (SSR). This framework argues that a high SSR is an incomplete indicator of national well-being if the local population cannot afford the food being produced. The Ministry of Agriculture and Food Security, alongside the Ministry of Economy, should adopt household-centric KPIs, such as the Household Food Insecurity Access Scale (HFIAS) and regular tracking of the Nutritional Affordability Index, to gauge the real success of national food strategies.

5. Conclusion and Recommendations

Assessing food security on the basis of the state-level production data can mask significant economic and nutrition gaps at the local level. This conceptual paper has attempted to close this gap by explicitly incorporating considerations around food security affordability of the household and socio-economic resilience within the Malaysian framework of food security, but this time with an uncompromisingly sharp focus on the B40 income segment within a Malaysian context. The present paper emphasizes that the economic unavailability problem that underlies food insecurity in Malaysia is a significant consideration, and points to the importance of notions of economic affordability and resilience when understanding the vulnerability of households. Combined with low-income growth, structural inflation produces long-term public health crises, and this helps to slow down human capital accumulation. There is a need to change from production-centric to consumer-centric approaches that focus on empowering households to access and afford food, and ensuring fair distribution of food in building a truly resilient food system in Malaysia.

This framework is presented here as a conceptual paper, as a theory of sorts, and is intended to stimulate the testing of its predictions in future research. The following aspects might be considered by future researchers to further this study:

- Empirical studies with structural equation modelling (SEM) should be conducted to statistically test the empirical relationship between specific economic stressors (independent variable), dietary downgrading behaviors (middle variable), and real nutrition outcomes (dependent variable) for urban and rural B40 households in Malaysia.
- Evaluation of rationalization of subsidies: conduct a follow-up study to explore how the rationalization of domestic subsidies (such as fuel, electricity and other subsidies) affects the remaining food budget of near-poor B40 households.
- Explore the interest and capacity of B40 communities in establishing and sustaining urban community farming projects and the socio-psychological and structural barriers to generating food production through communities.

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