THE EFFECT OF INCREASING FOOD PRICES ON CONSUMPTION BEHAVIOR OF URBAN CONSUMERS DURING THE ECONOMIC CRISIS PERIOD

V. Vasantha[1], J.J. Nitharsan[2] & S. Kemapirakash [3]

Department of Economics, Faculty of Commerce and Management, Eastern University Sri Lanka[1,2,3]

Abstract

The aim of this research is to explore how increasing food prices affect consumption behavior in urban areas, particularly in the wake of a severe economic crisis. The study also delves into examining the disparities in food consumption expenditures, consumption patterns, and shifts in food habits across various income groups during two distinct periods: the period prior to the economic crisis and the subsequent period during the crisis. The research methodology relies on primary data collected through structured questionnaires, employing the Simple Random Sampling technique to select a representative sample of 150 households from the Batticaloa Urban area. The collected data is subjected to a comprehensive analysis utilizing descriptive statistics and the analysis of Likert scales. Additionally, One-Way Analysis of Variance (ANOVA) is employed to identify the differences among the family headed job with respect to monthly food expenditure. The research utilized SPSS software to generate and analyze the obtained data. The reliability of the measurement instrument was evaluated using Cronbach's alpha coefficient. The effect of increasing food prices on the consumer behavior of urban consumers is tested through consumption priorities, consumption quantity, food purchasing, meal planning, home cooking, premium brands, selective consumption, food waste, consumption priorities, nutritional changes and coping mechanisms. The results revealed distinct patterns of responses, indicating varying degrees of influence on consumption behavior. The monthly food expenditure range rapidly increased during the crisis period compared to pre-crisis. Average monthly food expenditure of households during the crisis increased from Rs. 38,800 to Rs. 54,866.67. Among the different income group, middle income group is identified as most spending group on food consumption in both before and during economics crisis. The Cronbach's alpha coefficient of 0.680 suggested a moderate level of internal consistency among the measurement items. The research findings are anticipated to provide valuable insights into the strategies adopted by urban consumers to navigate the challenges posed by escalating food prices amidst an economic crisis. The research findings highlight how escalating food prices during economic crises prompt urban households to adapt consumption behaviors by prioritizing staple foods, reducing non-essential purchases, and favoring bulk buying. Increased home cooking and selective consumption emerged as coping strategies to mitigate the higher burden of the food consumption expenditure. These insights have broader implications for policymakers, researchers, and practitioners concerned with addressing the intricate connections between food pricing, consumer behavior, and economic instability.

Keywords: Food price increase, Consumption behavior, Economic crisis, Batticaloa Urban Area

Introduction

All the economic crises have many same features, but all the economic crises are different from others (Madani, 2009). According to the results of latest researches in this field, during the economic crisis, people do not spend much money as they did before; they only buy certain goods; they do not spend money on luxuries; they purchase according to the prices and certain advantages. Due to higher food prices in the market, the consumption quantities of major food items decrease and at the same time expenditure increases which lead to erosion of household's saving.

The recently soaring food prices in Sri Lanka have become major concerns among policy makers. The Sri Lankan economy encountered its most onerous year in its post-independence history in 2022, as a result of the worst economic crisis. A food crisis in Sri Lanka looms as the island nation faces its worst economic disaster in decades. With food price inflation higher than 90%, even staples like rice have become almost unaffordable for many Sri Lankans. Around 30% of Sri Lankans are coping with food insecurity, and one out of four are skipping meals regularly. 78 per cent of households had reduced their overall food consumption since March 2022. Households in which income had stopped (92 per cent) or reduced (81 per cent) were more likely to report reductions in food consumption. Estate sector households (87 per cent) were more likely to report reductions in food consumptions than urban households (73 per cent) and rural households (79 per cent). Over 80 per cent of households reduced consumption of food groups with essential nutrients such as fruits and vegetables (79 per cent), dairy products (84 per cent) and meat/fish and egg products (82 per cent). 98 per cent of households who reduced food consumption indicated increased costs as the primary reasons for the reduction (UNICEF, 2022).

The decline in agriculture production caused by the limited availability and high prices of inputs, and interruptions to the distribution network due to fuel shortages led the prices of domestically produced food items to increase substantially. Meanwhile, the increase in global commodity prices, high freight charges and most notably, the sharp depreciation of the Sri Lanka rupee contributed to considerable upshifts in the prices of both imported Food and Non-food items exerting significant upward pressure on the general price level (CBSL, 2022). The higher food prices can significantly change the consumer decision making and their consumption patterns. Thus, examining the changes in consumer behavior, identifying the reasons for those changes, and formulating effective policies to overcome the consumers' difficulties would significantly assist to mitigate the negative impacts of the crisis on the market equilibrium. Consumers are not immune from the effects of high global food prices.

High food prices might inevitably erode the Sri Lankan household's purchasing power, especially low-income households reducing equity and efficiency standards (World Bank, 2008). In particular, high costs of food may curtail household spending for other essential goods and services, such as health care. Thus, it is important to investigate how consumers react and adjust to high food prices and evaluate the speculation of consumers to the future food markets. Under this background, this paper investigate how urban households in Batticaloa urban era are coped with higher food prices depending on a survey for selected group of households.

The review of literature showed that the impact of economic crisis on food purchasing behavior has not been fully explored yet. The literature suggests that crisis-hit consumers change their purchasing behavior one way or another but there is no certainty about how consumers response to increasing food prices as a result of economic crisis. Furthermore, it is important to identify the impact of increasing food prices on various income group of people in urban area, such as, lower income, middle income and higher income people. Thus, the principle aim of this research is set as to explore the effect of the increasing food prices on food purchasing behavior in Batticaloa urban area. Accordingly, objectives are set:

Main Objective:

1. To find the effects of increasing food prices on the consumption behavior of urban consumers during economic crisis period.

Specific Objectives:

1. To identify differences among the family headed job with respect to monthly food expenditure.
2. To identify, the income group which have high average food consumption expenditure

To identify the specific effect that all consumers are predominantly facing in response to increasing food prices during an economic crisis.

Literature Review

Consumer behavior can be defined as the selection, purchase, and consumption of goods and services that satisfy human needs and wants (Al-Hashimi & AlDhari, 2019). Consumer's buying behavior depends on factors such as demographics, earning and sociocultural factors (Drakopoulos 2008, Kar, 2010). Consumer behavior is also defined as a combination of consumer's buying behavior and awareness coupled with external factors and motivators which results in a change (Kar, 2010). Consumer buying behavior is being a collection of decision-making processes, which are determined by some internal and external factors. However, the most dominant factor is recognized to be the external economic instability that Indian consumers experience. The depressing effects of the financial crisis have hit the overall consumers purchasing behavior affecting both planned and unplanned buying behavior (Sharma & Sonwalkar, 2013).

Waterlander et al. (2019) conducted a study to find the effect of randomly assigned food price variations on consumer purchasing, where sets of prices emulated commonly discussed food tax and subsidy policies, including a subsidy on fruit and vegetables, a sweetened beverage tax, and taxes on foods according to sugar, sodium, and saturated fat content was found the effects of five different policy options (Sweetened beverage tax, saturated fat tax, sugar tax, salt tax, and fruit and vegetable subsidy) on total household food purchases and on specific nutrient or product purchases. In this study, three policies showed significant positive effects on total healthy purchases the sugar tax, salt tax, and saturated fat tax—but there were important substitution effects of all policies to other foods and nutrients. These results mainly suggest that a combination of policies might yield the best results, accompanied by monitoring and (Probable) regulation of food industry reformulation in response to the taxes to prevent unintended harm and maximize healthiness of processed foods. In general, they observed stronger effects for higher taxes or subsidies compared with lower taxes or subsidies.

The recent study conducted in Sri Lankan context found that the panic buying condition during the pandemic. This study identified seven (07) key changes in consumer purchasing in terms of purchasing quantity, mode of purchase, less price sensitivity, shopper, purchasing time, purchasing location, and choice of brand. Further, the study revealed twelve (12) major reasons for such panic buying conditions and classified them into four major themes: Fear of Fear, Protective behavior, social influence and, Social Trust (Nawarathne & Galdolage, 2022). According to the previous study, panic buying can be explained as a response to both environmental stimuli and reflective thinking. Specifically, perceived susceptibility and perceived severity of a pandemic event as well as social influence and social norm can stimulate consumers' perceptions of scarcity and affective response, which in turn leads to the impulsive decision of panic buying; meanwhile, a rational reflection which is operationalised by perceived lack of control also influences panic buying. Furthermore, the perceived lack of control positively moderates the effect of affective response on panic buying (Li et al., 2021).

The buying patterns of consumer mainly change during hard and stressful times such as economic crisis (Nistorescu & Puiu, 2009). Consumers change their consumption in response to changes in the economy in the world around them. This occurs due to a change in the levels of their perception of risk. Economic crisis especially, financial crisis affects the consumers in economically and psychologically. People become more money minded. They do not want to spend more money on premium products anymore, even if they still could afford to do so. They buy necessities only, switch to cheaper brands and have a more rational view on promotion. They compare different products and select based on price compromising quality (Nistorescu & Puiu, 2009).

Récky et al. (2023) identified food design and food packaging are less important factors in food purchasing decisions during a crisis and younger consumers least avoid the Internet when buying food. This study found that, fast-moving foods were least frequently purchased via online, while specific foods, especially tobacco products, were the most frequently purchased via online. This study just partially proved the hypothesis that demographic

characteristics (age, gender, place of residence) have a significant influence when buying food via the Internet in times of crisis, as the results proved differences in the frequency of purchase of individual commodities in the crisis, namely vegetables, bakery products and fruits, meat and meat related products, confectionery and vegetable oils which were depending on the age of the respondents. In the case of the commodity fish and fish products, these were striking in terms of gender and place of residence, and in the case of milk and dairy products, in terms of all three investigated demographic indicators, i.e., age, gender and place of residence.

Yousif & Al-Kahtani (2013) identified consumption quantities of major food commodities decrease due to high prices and at the same time expenditure increases, which lead to erosion of some of the consumers' savings. The perception of consumers for price increase in the future is also registered which reflects the lower consumer confidence in the food markets. The respondents iterate the absence of the role of the government to control the food market that may reduce the impact of higher food prices. Further, the food consumption patterns of Saudi society have been influenced by changes over the last 30 years due to economic growth and the increase on oil revenues. Saudi consumers are vulnerable to the changes of global food prices. The Saudi low-income households are more at risk of high food prices, thus reducing equity and efficiency standards. Furthermore, Saudi females living in Riyadh are turning more and more to fast food and the reason of this transition found that the taste of fast food was excellent and the price of fast food was acceptable.

The driving force behind consumption was the desire of individuals to increase their social condition through possession of material goods, which confirmed middle-class membership in the earlier periods. But consumerism evidenced unable to make people happier, because it was not raising the welfare in other ways than the psychological ones. Excessive consumption has created so called "paradox of happiness", which is that once a basic level is provided, happiness does not increase with income above this limit (Drakopoulos, 2008). Baker et al. (2020) found that consumers from the United States have increased their spending on food items during the pandemic for the purpose to store food as essential food and nutrition intake is the most vital aspect. During the pandemic, the majority of the consumers stockpile necessary food items to reduce outside shopping practice to mitigate the risk of exposure to the infection (Cranfield, 2020).

Uthayanga et al. (2021) stated that COVID-19 pandemic has significantly influenced to create uncertainties on the goods and services market and the labour market. The food price increase, scarcity of food, and supply chain interruptions are the major uncertainties that arisen in the goods and services market whilst the income shocks is the key uncertainty in the labour market. The study found further; above uncertainties have substantially influenced the changes in food consumption behavior even though a significant difference was not observed in the aggregate food consumption expenditure during the restrictions. Study further highlights the necessity of practicing responsible consumption behavior neglecting panic demand as well. As the consumers in Western Province, Sri Lanka are shifting towards technology inherited E-commerce based buying behavior.

According to Başev (2014) economic crisis influenced on changes in consumer shopping habit and their spending habits but it does not involve total abandonment of usual shopping habits. Change occurs in product preference and consumer confidence to some extent. However, consumers tend to pursue their choices which develop over time and become their nature in shopping habits. Majority of consumers do not reduce buying red meat due to economic crisis or buy less poultry meat; do not prefer fast-food retailers if they need to eat out; do not prefer ready meals over cooking because of its lower cost; still try to eat a balanced diet; still look for the quality; still consider environmental effects of food production but started to dine in rather than eating out; switched from finest or luxury ranges to economy range in food; look for promotions and prefer to shop at larger hypermarkets. Further this study found that significant number of consumers are indecisive whether price has the highest priority over quality; whether to change cheaper brands/retailers in their food purchases; whether to switch from organic

food to non-organic food; whether started to buy food in smaller products and whether they started to avoid buying unnecessary products such as sweets, snacks, pastry, etc.

Changes in global food prices will lead to a greater effect on food consumption especially in lower income countries and in poorer households within countries (Green et al., 2013). The previous study stated that the households with low levels of assets have been particularly adversely affected by the food price shock, households headed by a casual worker have been vulnerable to the food price shock, Being the point of view of the urban poor, socio-economic group, consumption is oriented towards food items for which price increases have been particularly high, and employment is often unstable because individuals have low skills. Hence, the urban poor population appears to have been very adversely affected by the food price shocks. The effect of the food price shock is perceived to be more severe if there are many children in the household. Because the study further found that no relationship between the number of children and food consumption, this suggests there are other effects on the welfare of households with many children that make life more difficult in general (Alem et al., 2011).

Canadian study suggested that demand-side factors will drive most of the changes in food markets. In this respect, income/expenditure, the opportunity cost of time, and longer planning horizons will account for the lion's share of these demand-side drivers (Cranfield, 2020). Study related to consumer buying behavior has explored that during the pandemic consumer behavior has changed, for those who have felt more comfortable with the newly adopted habits during the Pandemic because of the perceived usefulness and have a tendency to continue this new habit during the post pandemic or new Normal. During the Pandemic, consumers have a habit of only buying or consuming goods that are needed that are not desirable such as complementary goods or goods to channel hobbies, choose local market products or local brands that have been identified to get certainty of availability, ease and guaranteed quality, and using digital technology platform in its shopping activities (Maryati, 2020).

Consumer behavior regarding COVID 19 on food market has shown significance changes on stockpiling essential household items and food products (in anticipation of movement restrictions and supply shortages) due to a feeling of insecurity and the perceived scarcity effect. Concurrent with the pandemic, there were some worldwide trends have emerged—home cooking has been motivated or followed, leading to an increase in the demand for staple foodstuffs, and purchases from local, small sellers and online food shopping have been accorded preferential treatment. Despite price instability and concern about future household incomes, a significant number of consumers have shifted to buying healthier, more sustainable food. Moreover, food wastage also shows notable decrease in volume (Borsellino et al., 2020).

There are many studies were conducted related to consumer behavior with respect on various aspects. However, very limited studies were involved with regard the effect of high price increases on consumer behavior of consumers in Sri Lanka. We have identified few gaps in the previous researches which are the most relevant to our study. This study tried to fill those research gaps. One of the studies related to this research focus only the western part of the Sri Lanka and adopted qualitative methodological approach to explore the research outcomes. Further that particular study mainly focused Covid-19 pandemic period. Therefore, the current study examines the effects of high food price on consumer behavior in the Eastern part of Sri Lanka and mainly used quantitative approach to explore the research outcome.

Conceptual Framework

This study tries to identify how increasing food prices influence on food consumption behavior in Batticaloa city area. Based on that, the study developed the conceptual framework as follows:
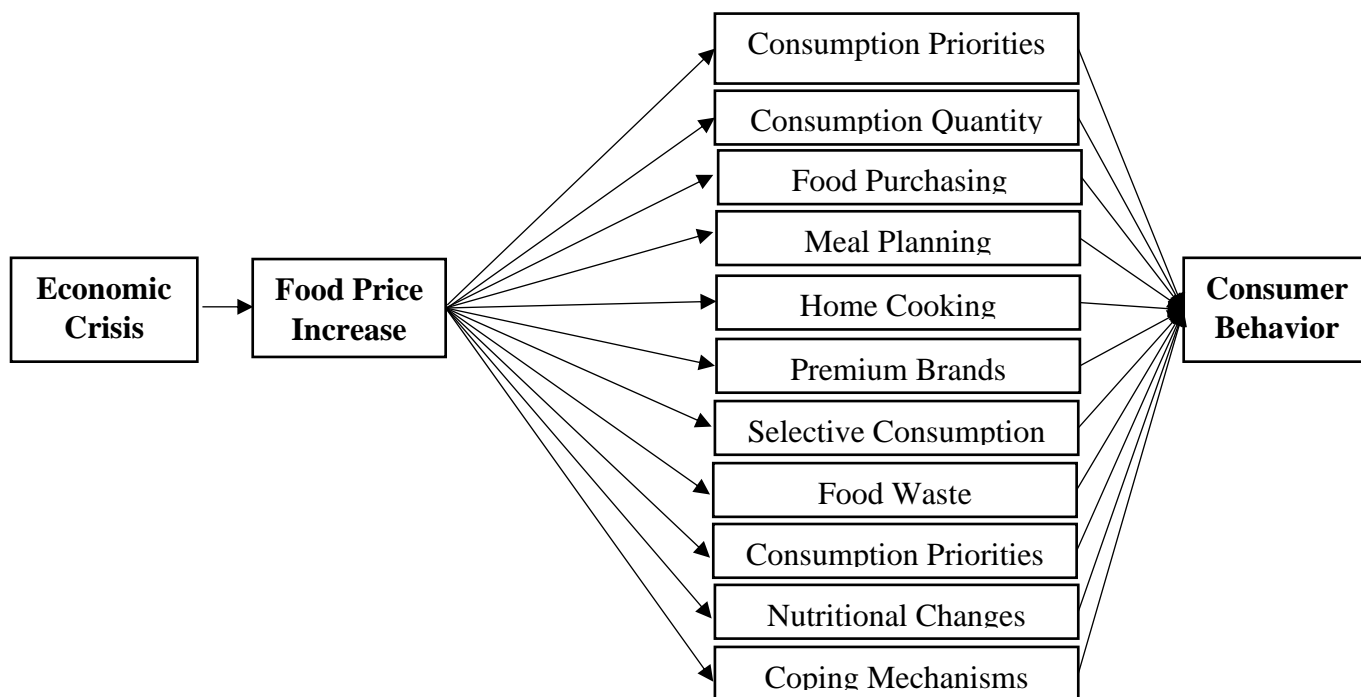
Figure 1.1: Conceptual Framework

Source: Author Computed

The above conceptual framework was developed based on the relevant theories and previous studies (Nawarathne & Galdolage, 2022; Alem et al., 2011)

Methodology

The study area and data collection

This study was conducted in the Batticaloa urban area during the month of July 2023. The primary aim of the research was to examine the effect of rising food prices on the consumption behavior of urban households in the context of an economic crisis. The study utilized a structured questionnaire as the primary data collection instrument. 150 households were selected as the study sample using a random sampling method, ensuring a diverse representation of the urban population.

Data Analysis

Descriptive Analysis

Descriptive statistics were employed to analyze and summarize the collected data. Frequency distributions and percentages were used to present the distribution of household types, family-headed job sectors, household income levels, family sizes, and various other characteristics. Mean values and standard deviations were calculated to provide insights into the central tendencies and variations in the data.

One-Way ANOVA

The One-Way Analysis of Variance (ANOVA) was utilized to assess whether there were statistically significant differences in both pre-crisis and during-crisis monthly food expenditure among different family-headed job

types. The null hypotheses were formulated to explore whether there were any variations in food expenditure based on the employment sector of the family head.

Likert Scale

The collecting opinions of consumers regarding the impact of economic crisis on their food consumption behavior are analyzed using descriptive statistics and the analysis of Likert scales. In ranking, it was asked respondents to rank items in order of importance. In Likert scales, it was asked respondents to indicate their agreement or disagreement with a five-point Likert scale option.

Table 1.1: Likert Scale

Scale point	Result
1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

Source: Author Computed

This technique allows comparison of opinions of different groups (Veal, 2006). By employing these techniques, it is believed that whole picture in changing food consumption behavior of consumer could be obtained. The level of effect measured based on below scale.

$1.0 \leq \bar{x} < 2.5$ – Low level of impact

$2.5 \leq \bar{x} < 3.5$ – Medium level of impact

$3.5 \leq \bar{x} \leq 5.0$ – High level of impact

Reliability Analysis

To ensure the reliability of the collected data, Cronbach's alpha coefficient was computed. This analysis aimed to assess the internal consistency of the survey items used to measure the effects of increasing food prices on consumption behavior. The Cronbach's alpha coefficient helps in determining whether the items are measuring the same underlying construct consistently.

Ethical Considerations

The research adhered to ethical standards throughout the data collection process. Informed consent was obtained from all participants, ensuring their voluntary participation and confidentiality. The survey instrument and research objectives were clearly explained to the respondents, and they were provided with an opportunity to ask questions before participating.

Limitations

The study has some limitations. First, the research is confined to a specific geographic location and time period, potentially limiting the generalizability of findings to broader contexts. The use of Likert scales could lead to subjective interpretation variations. Furthermore, the sample size, while appropriate for the chosen methods, might limit the precision of the results. Despite these limitations, the study provides valuable insights into the effects of escalating food prices on urban consumption behaviors during economic crises.

Results And Discussion

The outcome of the analysis pointed out the effect of food prices on the consumption behaviors of urban consumers during a period of economic crisis. Through a detailed analysis of various aspects of consumption behavior of consumers, we try to attain our study objectives.

5.1 Descriptive Statistics

Table 1.2: Type of the household

Household	Frequency	Percent
Single Person Household	3	2.0
Nuclear Family	141	94.0
Extended Family	6	4.0
Total	150	100.0

Source: Author Computed

Out of the 150 urban households studied, the majority (94.0%) are nuclear families, which consist of parents and dependent children living together. Extended families, where multiple generations or relatives live together, make up a smaller proportion (4.0%) of the households. Single-person households, where only one person resides, are the least common, accounting for just 2.0% of the total households. This breakdown provides an understanding of the prevalent household structures within the surveyed urban area.

Table 1.3: Type of family headed

Sector	Frequency	Percent
Government Sector	71	47.3
Private Sector	62	41.3
Self Employed	17	11.3
Total	150	100.0

Source: Author Computed

In Table 1.3, the distribution of household types based on the employment status of the family head is outlined, providing insight into the occupational landscape within the surveyed urban households. The largest share, constituting 47.3% of the households, is led by family heads who are employed in the Government Sector. This suggests a substantial presence of individuals working in various government roles. Concurrently, the Private Sector represents a significant segment as well, accounting for 41.3% of households. This highlights the prevalence of family heads engaged in private industry employment. Further, the Self-Employed category encompasses 11.3% of households, indicating that a portion of family heads operate their own businesses.

The respondents are classified into income groups, taking into accounts the living standards of Sri Lanka, according to the following criteria: those with income less than Rs. 50,000 per month are classified in the lower

income group; and those with income range Rs. 50,000 to Rs.75,000 per month are classified in the middle-income group; and those with income higher than Rs. 75,000 are classified in the higher income group.

Table 1.4: Household's head income

Income Level	Frequency	Percent
Below Rs. 50000	36	24.0
Rs. 50000 – 75000	108	72.0
Above Rs. 75000	6	4.0
Total	150	100.0

Source: Author Computed

The distribution of household monthly income levels, as presented in Table 1.4, offers valuable insights into the income dynamics among the surveyed urban households. A quarter of the households, amounting to 24.0%, have a monthly income Below Rs. 50,000. This suggests a significant portion of the surveyed population falls within a lower income bracket. The majority of households, constituting 72.0%, have a monthly income falling in the range of Rs. 50,000 – 75,000. This category encompasses the widest segment, indicating a diverse distribution of income levels. A smaller proportion, 4.0% of the households, fall into the category of Above 75,000. This group represents households with comparatively higher income levels.

Table 1.5: Family members

Members	Frequency	Percent
1	3	2.0
2	13	8.7
3	30	20.0
4	55	36.7
>5	49	32.7
Total	150	100.0

Source: Author Computed

The breakdown of household sizes, as outlined in Table 1.5, provides insights into the composition of the surveyed urban households. A small portion, comprising 2.0% of the households, consist of 1 member. This suggests that a minor fraction of the surveyed population lives in single-member households. The category with 2 members accounts for 8.7% of the households, signifying that a notable but still relatively small segment of households consists of two members. Moving up, 3 member households represent 20.0%, indicating a considerable proportion within the sample. The most prevalent household size, 4 members, encompasses 36.7% of households, showcasing a substantial presence of medium-sized families. Finally, households with more than five members, accounting for 32.7%, indicate a significant portion of larger families within the surveyed population.
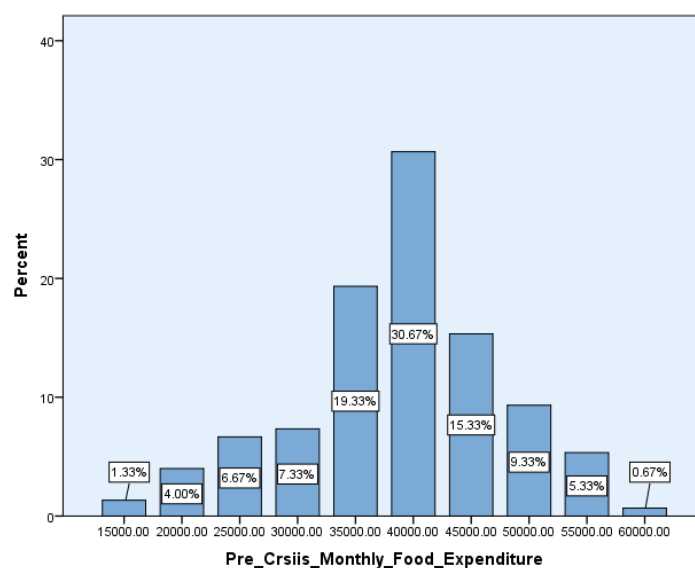
Figure 1.2: Pre crisis Monthly food Expenditure

Source: Author Computed

The data presented in the figure 1.2 reflects the distribution of pre-crisis monthly household food expenditure level. The majority of households' food expenditure fall within the range of Rs. 35000.00 to 40000.00, accounting for 50%. The distribution follows a varied pattern, with some households falling in lower food expenditure brackets, and others in higher ones. Notably, 1.3% of households spent around Rs.15,000.00 for their food consumption, while 0.7% of household spent around Rs. 60,000 per month. These food expenditure variations provide insights into the diverse economic landscape of the surveyed urban households.
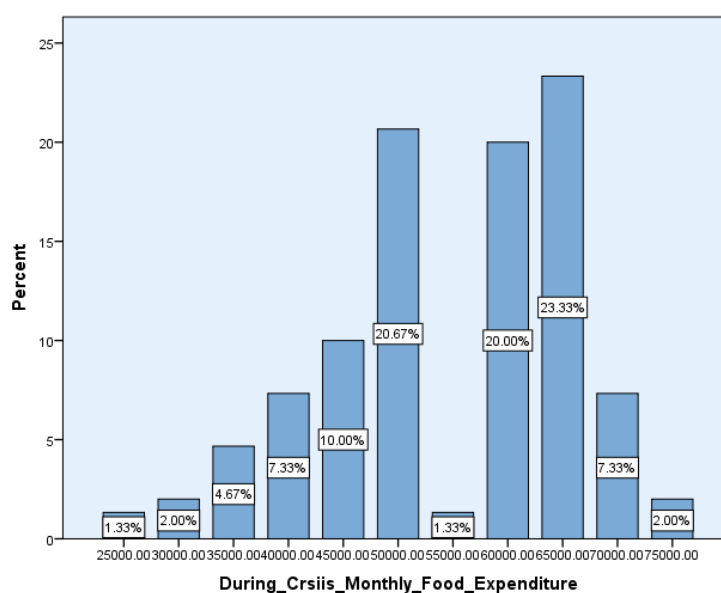

Figure 1.3: During crisis Month food Expenditure

Source: Author Computed

The above figure 1.3 outlines the distribution of monthly food expenditure levels within the surveyed households during the economic crisis. The data reveals diverse food expenditure ranges among the households. The majority of the households in urban areas spend around Rs. 65,000.00 for food their monthly food consumption during economic crisis which accounts for 23.3%. Meanwhile, 1.33% of households spent around Rs.25,000.00 for their food consumption, while 2.0% of household spent around Rs. 75,000 per month.

Table 1.6: Descriptive Statistics

Income Level	N	Minimum	Maximum	Mean	Std. Deviation
Pre-Crisis-Monthly Food Expenditure	150	15000.00	60000.00	38800.0000	8855.28697
During Crisis Monthly Food Expenditure	150	25000.00	75000.00	54866.6667	11336.03074

Source: Author Computed

The descriptive statistics in table 1.6 clearly shows a comprehensive understanding of the monthly food expenditure patterns of the surveyed households, both before and during the crisis period. In the case of Pre Crisis-Monthly Food Expenditure, the data indicates a range from a minimum expenditure of Rs. 15,000.00 to a maximum of Rs. 60,000.00. On average, households spent approximately Rs. 38,800.0000 units of currency per month for food consumption before the crisis. The standard deviation, at 8855.28697, reflects the extent of variation around this mean expenditure. It suggests that households had diverse spending levels, which deviate from the average significantly.

Contrary, the monthly food expenditure range rapidly increased during the crisis period, with a minimum of 25000.00 and a maximum of 75000.00. On average, households spent approximately 54866.6667 units of currency per month on food during the crisis. The standard deviation of 11336.03074 indicates a wider dispersion of expenditure values around the mean, showcasing the increased variability in spending habits during the crisis period.

These statistics collectively provide insights into how households food expenditure changed during the crisis, with average spending rising and a broader range of expenditure values observed. The standard deviations highlight the varying degrees of deviation from the mean expenditure, indicating the diverse responses among the surveyed households.

One Way ANOVA

The ANOVA table was constructed to identify the significant difference among the family-headed job types with respect to pre-crisis and during crisis monthly food expenditure.

Pre-crisis

The one-way ANOVA analysis conducted at a significance level of 0.05 aimed to determine if there were significant differences in pre-crisis monthly food expenditure among different family-headed job types. The research hypotheses were developed as follows:

Null Hypothesis (Ho): There is no difference among the family-headed job types with respect to pre-crisis monthly food expenditure.

Alternative Hypothesis (H1): There is a difference among the family-headed job types with respect to pre-crisis monthly food expenditure.

Table 1.7: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	701685811.262	2	350842905.631	4.696	.011
Within Groups	10982314188.738	147	74709620.332		
Total	11684000000.000	149			

Source: Author Computed

Table 1.8: Duncan Test

Family Head Job	N	Subset for alpha = 0.05	
		1	2
Self Employed	17	32941.1765	
Government Sector	71		39014.0845
Private Sector	62		40161.2903
Sig.		1.000	.587

Source: Author Computed

The significance level (Sig.) of 0.011 for the F-statistic of 4.696 indicates that, overall, there is a statistically significant difference in pre-crisis monthly food expenditure among the family-headed job types at the 0.05 significance level. This leads to rejecting the null hypothesis in favor of the alternative hypothesis.

However, when specifically comparing the mean values, the post hoc analysis using the Duncan's test reveals that there is a significant difference in pre-crisis monthly food expenditure between Self Employed households and Government Sector households (p-value > 0.05). There is a significant difference in pre-crisis monthly food expenditure between Self Employed households and Private Sector households (p-value > 0.05). There is no significant difference in pre-crisis monthly food expenditure between Government Sector households and Private Sector households (p-value = 0.587).

During Crisis

The one-way ANOVA analysis conducted at a significance level of 0.05 aimed to investigate if there were significant differences in during-crisis monthly food expenditure among different family-headed job types. The research hypotheses were as follows:

Null Hypothesis (Ho): There is no difference among the family-headed job types with respect to during-crisis monthly food expenditure.

Alternative Hypothesis (H1): There is a difference among the family-headed job types with respect to during-crisis monthly food expenditure.

Table 1.9: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1248623188.212	2	624311594.106	5.127	.007
Within Groups	17898710145.121	147	121759932.960		
Total	19147333333.333	149			

Source: Author Computed

Table 1.10: Duncan Test

Family Head Job	N	Subset for alpha = 0.05	
		1	2
Self Employed	17	47058.8235	
Government Sector	71		55140.8451
Private Sector	62		56693.5484
Sig.		1.000	.564

Source: Author Computed

The significance level (Sig.) of 0.007 for the F-statistic of 5.127 indicates that, overall, there is a statistically significant difference in during-crisis monthly food expenditure among the family-headed job types at the 0.05 significance level. This leads to rejecting the null hypothesis in favor of the alternative hypothesis.

The output of Duncan's test, there is a significant difference in during-crisis monthly food expenditure between Self Employed households and Government Sector households (p-value > 0.05). There is a significant difference in during-crisis monthly food expenditure between Self Employed households and Private Sector households (p-value > 0.05). There is no significant difference in during-crisis monthly food expenditure between Government Sector households and Private Sector households (p-value = 0.564).

Comparing pre-crisis and during-crisis mean incomes for various family-headed job types, we observe notable percentage increases. For Self Employed households, the mean income experienced a substantial rise of approximately 43%, increasing from an average of 32941.1765 units to 47058.8235 units during the crisis. Similarly, in the Government Sector, the mean income exhibited an increase of around 41%, growing from an average of 39014.0845 units to 55140.8451 units during the crisis. Within Private Sector households, the mean income saw a rise of roughly 41% as well, climbing from an average of 40161.2903 units to 56693.5484 units during the crisis.

These findings highlight a consistent upward trend in mean incomes across all three family-headed job types during the crisis period. Such significant increases in mean incomes indicate the potential for enhanced financial stability and improved purchasing power for households across different employment sectors.

Based on above the results, Middle income group is identified as most spending group on food consumption in both before and during economics crisis.

In order to attain our second specific objective, the following table 1.11 was developed.

Table 1.11: Status of Average Expenditure on Food Consumption

Likert Scale

Income Group	Average Expenditure in Pre-crisis	Average Expenditure in During crisis
Below Rs. 50,000	37083.33333	52916.66667
Rs. 50,000 – 75,000	**39537.03704**	**55694.44444**
Above Rs. 75,000	35833.33333	51666.66667

Table 1.11: Item Statistics

	Mean	Mean for Every Effect	Std. Deviation	N
SP1	3.4133		1.18823	150
SP2	3.3333	3.51553333	1.27267	150
SP3	3.8		0.92686	150
QP1	3.9		0.80893	150
QP2	3.42	3.65333333	1.17164	150
QP3	3.64		1.2	150
BP1	3.8467		0.90292	150
BP2	3.86	3.75113333	0.79453	150
BP3	3.5467		1.12677	150
AP1	3.6		1.18151	150
AP2	3.8267	3.7578	0.92502	150
AP3	3.8467		0.84135	150
HC1	3.9933		0.69992	150
HC2	4.1333	4.0711	0.97393	150
HC3	4.0867		0.74127	150
PB1	3.9867		0.81912	150
PB2	3.9067	3.96003333	0.9148	150
PB3	3.9867		0.86689	150
SC1	4.02		0.78978	150
SC2	4.0933	4.07553333	0.78018	150
SC3	4.1133		0.76445	150
FW1	4.1733		0.73042	150
FW2	4.0267	4.02223333	0.85095	150
FW3	3.8667		1.04056	150
NC1	3.8933		0.89852	150
NC2	3.7	3.79553333	0.89555	150
NC3	3.7933		0.88459	150
CM1	3.4933		1.05389	150
CM2	3.4	3.54666667	1.00335	150
CM3	3.7467		0.86067	150

Source: Author Computed

The effect of increasing food prices on the consumption behavior of urban consumers during an economic crisis period is evident through various observed effects. In terms of the Shift in Priorities (SP), respondents exhibited a

moderate overall agreement (Mean: 3.5155) as they navigated the crisis by prioritizing staple foods, reducing non-essential item consumption, and resorting to bulk purchases for economic advantages. Similarly, the Changes in Quantity Purchased (QP) factor garnered a moderate overall agreement (Mean: 3.6533) as respondents adapted to higher prices by altering their food purchasing behaviors, embracing smaller portions, and displaying greater caution when purchasing perishable goods.

Moreover, the preference for Bulk Purchases (BP) showed a similar trend of moderate overall agreement (Mean: 3.7511), indicating that participants leaned towards buying staple foods in larger quantities, reflecting an intention to economize through lower unit prices. This commitment to budgeting was further echoed in the Altered Meal Planning (AP) category, with a moderate overall agreement (Mean: 3.7578) where individuals simplified their meal planning strategies to include cost-effective options with fewer ingredients, fostering meals that stretched across multiple days.

However, the economic crisis has pushed consumers towards more pronounced behavioral shifts. Increased Home Cooking (HC) exhibited a strong overall agreement (Mean: 4.0711), signaling that respondent significantly embraced home cooking as an alternative to dining out due to its perceived cost-effectiveness. Similarly, the Selective Consumption (SC) category garnered a strong overall agreement (Mean: 4.0755), highlighting how participants have become discerning about their food choices, giving priority to items with higher nutritional value.

The intention to mitigate wastage is evident in the Efforts to Reduce Food Waste (FW) factor, where respondents showed a strong overall agreement (Mean: 4.0222), indicating proactive steps taken to minimize food waste by creatively using leftovers and repurposing them into new dishes. The Nutritional Changes (NC) factor displayed a moderate overall agreement (Mean: 3.7955), reflecting a balanced approach where respondents have made changes in their diet to accommodate more affordable options while still ensuring basic nutritional needs are met.

Lastly, as a coping mechanism, Coping Mechanisms (CM) emerged as the factor with the lowest overall agreement (Mean: 3.5467), suggesting that although individuals did turn to food to manage stress and anxiety during the crisis, the extent of this coping strategy was relatively moderate. In summary, this study illustrates that the effects of increasing food prices during an economic crisis are reflected in various shifts in consumption behaviors, ranging from moderate to high, as consumers adapt to challenging economic conditions while making conscious decisions to manage their budgets and nutrition.

Table 1.12: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.680	.665	30

Source: Author Computed

The Cronbach's alpha coefficient, a measure of internal consistency, was calculated to assess the reliability of the items employed in this study to gauge the effects of rising food prices on consumption behavior. With a computed value of 0.680, this coefficient reflects the degree of interrelatedness among the items. This result indicates a moderate level of internal consistency within the set of items, suggesting that they are reasonably coherent in measuring the same underlying construct. While the coefficient of 0.680 is deemed acceptable for research endeavors, particularly in exploratory studies, it also suggests room for potential improvement in terms of

enhancing the consistency of responses across these items. In essence, the calculated Cronbach's alpha coefficient of 0.680 highlights the moderate degree of internal consistency among the measurement items concerning the effects of increasing food prices on consumption behavior.

Conclusion

The research findings highlight how escalating food prices during economic crises prompt urban households to adapt consumption behaviors by prioritizing staple foods, reducing non-essential purchases, and favoring bulk buying. Increased home cooking and selective consumption emerged as coping strategies.

Recommendation

Based on the findings of this study, several potential solutions and recommendations can be offered to address the challenges posed by increasing food prices on consumption behavior during an economic crisis. These suggestions aim to assist consumers in adapting to the changing circumstances and mitigating the adverse effects on their daily lives:

Financial Literacy and Budgeting Workshops: Providing consumers, especially those from lower income groups, with financial literacy education and budgeting workshops can empower them to make informed decisions about their spending habits. This could include guidance on creating effective household budgets, identifying essential and non-essential expenses, and managing resources efficiently.

Promoting Local and Seasonal Foods: Encouraging the consumption of locally produced and seasonal foods can help reduce dependence on imported items and stabilize prices. Government initiatives and community campaigns could promote the benefits of supporting local agriculture and highlight the availability of affordable, nutritious options.

Public Distribution Systems: Implementing or strengthening public distribution systems that offer essential food items at subsidized rates to vulnerable populations can alleviate the impact of high food prices on low-income households. These systems can ensure access to basic necessities during times of economic crisis.

Community Gardens and Urban Farming: Promoting community gardens and urban farming initiatives can empower communities to grow their own food, thereby reducing reliance on expensive market purchases. Such efforts can also foster a sense of community and shared resources.

Nutritional Education Programs: Launching educational campaigns that emphasize the importance of balanced nutrition and showcase cost-effective ways to achieve it can empower individuals to make healthier food choices without significantly increasing their expenses.

Cooking Skills Development: Providing cooking workshops and resources that focus on economical yet nutritious meal preparation can help consumers maximize the value of their purchased ingredients and reduce food waste.

Government Subsidies and Support: Governments can consider temporary subsidies on essential food items to ease the burden on consumers during economic crises. Additionally, targeted financial support programs for vulnerable populations can help them maintain their food security.

Food Waste Reduction Initiatives: Raising awareness about food waste reduction strategies can assist households in making the most of their purchased food items and reducing overall expenditure. Creative ideas for repurposing leftovers and minimizing wastage could be shared through various channels.

Collaboration with Retailers and Producers: Collaboration between retailers, producers, and government agencies can lead to the creation of special pricing schemes, discounts, or promotions on essential food items, benefiting consumers while ensuring sustainability for producers.

Emergency Food Reserves: Establishing emergency food reserves at the community or national level can act as a safety net during times of crisis. These reserves can provide immediate relief to households facing sudden food shortages due to price fluctuations.

Continuous Monitoring and Analysis: Regularly monitoring food price trends, consumption behavior, and consumer sentiment can help policymakers make informed decisions and adapt interventions based on changing circumstances.

The identified solutions and recommendations seek to empower consumers, particularly those facing economic challenges, to navigate the complexities of increasing food prices during times of crisis. By implementing a combination of strategies that focus on education, support, and community engagement, stakeholders can contribute to the resilience and well-being of urban consumers facing economic adversity.

Policy implications suggest enhancing financial literacy, tailored support for different employment sectors, and promoting resilient consumption practices. This study contributes empirical insights to the literature. Future research could explore cultural influences on crisis-related consumption and evaluate the efficacy of intervention strategies. Overall, the study underscores the importance of proactive policies and consumer support to alleviate the impacts of surging food prices during economic turmoil.

Reference

Alem, Yonas & Soderbom, Mans. (2011). Household-Level Consumption in Urban Ethiopia: The Effects of a Large Food Price Shock. World Development - WORLD DEVELOP. 40. 10.1016/j.worlddev.2011.04.020.

Al-Hashimi, M., & AlDhari, S. (2019). Factors influencing consumer behavior of women within the SPA & beauty sector: A case in the Kingdom of Bahrain. Journal of Business & Retail Management Research, 13. doi:10.24052/JBRMR/V13IS04/ART-27

Baker, S.; Meyer, S.; Pagel, M.; Yannelis, C. (2020) How Does Household Spending Respond to an Epidemic? Consumption during the 2020 COVID19 Pandemic. NBER Working Papers 26949, National Bureau of Economic Research, Inc. 2020. Available online: https://ideas.repec.org/p/nbr/nberwo/26949.

Başev, S.E. (2014). Effect of economic crisis on food consumption behaviour of British Consumers, International Journal of Education and Research Vol. 2 No. 10 October 2014.

Borsellino, V., Kaliji, S. A., & Schimmenti, E. (2020). COVID-19 Drives Consumer Behaviour and Agro-Food Markets towards Healthier and More Sustainable Patterns. Sustainability, 12(20), 8366. MDPI AG. Retrieved from http://dx.doi.org/10.3390/su12208366

Cranfield, J.A.L. (2020), Framing consumer food demand responses in a viral pandemic. Canadian Journal of Agricultural Economics, 68, 151–156.

Cranfield, J.A.L. (2020), Framing consumer food demand responses in a viral pandemic. Canadian Journal of Agricultural Economics, 68, 151–156.

Drakopoulos, S. (2008), "The paradox of happiness: towards an alternative explanation", Journal of Happiness Studies, Volume 9, No. 2, pp.303-315

Green R, Cornelsen L, Dangour A D, Turner R, Shankar B, Mazzocchi M et al.(2013). The effect of rising food prices on food consumption: systematic review with meta-regression BMJ 2013; 346 :f3703 doi:10.1136/bmj.f3703

Kar, M. (2010), Consumer behavior over the last 25 years, Oxirm Research Themes, Oxford Institute of Retail Management, The Retail Digest, pp. 46- 53

Li, X., Zhou, Y., Wong, Y. D., Wang, X., & Yuen, K. F. (2021). What influences panic buying behaviour? A model based on dual-system theory and stimulus-organism-response framework. International Journal of Disaster Risk Reduction, 64, 102484.

Maryati , T. (2020). Consumer Behavior Changes Post Pandemic Covid-19. International Journal of Halal Research, 2(2), 84-89. https://doi.org/10.18517/ijhr.2.2.84-89.2020

Nawarathne N.D.D. and Galdolage B.S. (2022). Do people change their buying behavior during crises? Insights from the COVID-19 pandemic in Sri Lanka, Asian Journal of Marketing Management (AJMM) 2022, Vol (01), Issue (01), 01-21

Nistorescu, T. and Silvia, P. (2009), "Marketing strategies used in crisis - case study", MPRA Paper 17743, University Library of Munich, Germany.

Récky, R. Kádeková, R. Tkáč, F. Košičiarová, I . (2023) Changes in consumer behaviour in the food market in a crisis. Food industry Slovak Journal of Food Sciences, Vol. 17, 2023, p. 664-676, https://doi.org/10.5219/190.

Sharma, V., & Sonwalkar, J. (2013). Does Consumer Buying Behavior Change during Economic Crisis? InInternational Journal of Economics & Business Administration (Vol.1, pp. 33-48). International StrategicManagement Association, E.U. https://ijeba.com/journal/9

Udayanga,T., Dhanukshaan,S., Murugadas, K. (2021). Impact of Covid-19 on Food Consumption Patterns in the Urban Areas in the Western Province Of Sri Lanka, EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal, Volume: 7 | Issue: 1 |January 2021|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor: 7.032||ISI Value: 1.188

Waterlander, W. E. et al. (2019). The effect of food price changes on consumer purchases: A randomised experiment. Lancet Public Health4, e394–e405

Yousif E, Al-Kahtani S (2013) Effects of high food prices on consumption pattern of Saudi consumers: A case study of Al Riyadh city. J Saud Soc Agri Sci 13: 169-173