

## Effect of economic recession on the food purchasing behaviour of people of Karachi

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### Abstract

Economic recessions, extending beyond macro indicators, profoundly impact individual consumers and their food-purchasing behaviour. This study examines how people in Karachi, Pakistan, purchase food and how the recession has affected that activity. Data from 384(100) participants were gathered using the cross-sectional study method in a survey. The sample size was calculated, keeping the confidence level at 95%, with a 5% margin of error. Results highlight significant shifts in purchasing behaviour, with many respondents opting for more economical food choices and reducing spending on non-essential items. Crucially, household size and income level emerged as predictors of these changes. The findings carry implications for legislators and stakeholders, providing insights into food consumption dynamics during economic uncertainty. The study emphasizes the need for targeted policies to navigate the intricate web of individual and familial dietary choices amid economic downturns.

**Keywords:** Economic recession, Food insecurity, Humans, Uncertainty.

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### Introduction

The country is facing a massive economic recession, which translates into multiple problems, mainly the phenomenon of high inflation. Recession has a damaging effect on the lives of the masses. Pakistan is facing the worst crisis in history: hyper food inflation. Food inflation, currently at 48.07%, is at an all-time high; thus, the cost of living has increased.<sup>1</sup> This means that a commoner's health is affected as he cannot afford adequate food for his family. The economic recession has wreaked havoc in people's daily lives, and there is no end. The economic downturn has a significant impact on people's food purchasing habits. Unstable governmental policies and rising inflation pose substantial challenges for people who compromise on

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essential aspects of their daily lives. The current economic conditions in Pakistan are low growth, high inflation and unemployment, declining investment, significant deficits in the budget, and a deteriorating external debt position. Pakistan's inflation rate accelerated to 36.4% in April 2023 from 35.4% in March.<sup>1</sup> It was the highest reading since December 1973.<sup>1</sup> Available studies indicate that consequences of economic crisis, such as unemployment, increased workload or work reorganization, and reduced staff and wages, may constitute important stressful factors with a negative impact on people's mental health<sup>2</sup>. How people's priorities have altered due to economic recession and changes in the buying habits of consumers have been noted previously.<sup>3, 4</sup> In the past, research projects have included information on how the economic downturn has affected older people's quality of life and general well-being.<sup>5</sup> Studies are centred on how the economic crisis has affected the healthcare system and its impact on providing health services.<sup>6</sup> A similar aligning study was conducted in the USA, where adjusting measures were observed due to inflation.<sup>7</sup> Studies have been conducted to investigate the impact of agriculture in Pakistan on economic growth as well,<sup>8</sup> but they haven't explicitly assessed changes in people's food purchasing habits. The economic recession in Pakistan has negatively affected most sectors. Studies examining how attitudes regarding food purchases have altered due to Pakistan's economic hardship are insufficient. How the recession impacts residents' food-buying habits in Karachi has yet to receive adequate attention. By analysing how people's food-buying habits relate to the present recession, our research aims to fill this knowledge gap. The study's objectives include evaluating food purchasing behaviour and detecting any changes that may have affected it. Another crucial goal is to assess the relationship between economic recession and food purchasing behaviour.

### Materials / Methods and Results

This was a descriptive cross-sectional study that was conducted through a self-administered questionnaire both in English and Urdu. The data was collected through an online questionnaire from January to March 2023. The study participants were contacted in their neighbourhoods, local grocery shops, and major supermarkets in Karachi, where

they were asked to fill out the questionnaire after billing at the point of sale. The questionnaire was also dispatched to residents living in residential societies in Karachi. The CDC Epi-info (version 7.1)<sup>9</sup> sample size calculator was used to determine the sample size, with a 95% confidence level and a 5% margin of error. The value that maximizes the sample size, 50%, is used for a fixed sample value. Therefore, 384 was the sample size determined using a 50% prevalence. A non-probability, convenient sampling technique was used. The online questionnaire was only to be filled out by the residents (who had verbally confirmed their residence in Karachi) who provided financial support to the family and those who cooked the food and made decisions about food purchases; hence, these individuals met the inclusion criteria. The respondents who met the exclusion criteria were mentally incapacitated individuals. The Ethical Review Committee of Bahria University of Medical and Dental College approved the study. The questionnaire was circulated in January 2023. However, it was mentioned that the questions asked were all about food purchasing behaviour during inflation. The questionnaire was developed based on a literature search pertinent to the study's objectives.<sup>10</sup> Pre-testing was done with a small group who sent the online tool to ensure the questions were relevant. Improvements were made based on the feedback. Economic recession is a period marked by negative or weak growth in a country's gross domestic product (GDP), accompanied by a documented rise in the unemployment rate and low purchasing power parity (PPP) or GDP per capita. The effects of the economic recession were noted when people began to consider reducing the number of items such as meat and rice and the number of meals per day. Tests of significance were set at  $< 0.05$ . Standard tests of association and regression analysis were used for the final analysis.

Table 1 demonstrates that married individuals comprise most of the population, 295(77.2%) and 321(81.5%). 175(45.6%) of the study population had a monthly income ranging from Rs50,001 to Rs100,000. According to statistics, most people 186(48.2%) spend between Rs5,001 and 20,000 on groceries, while 135(35.3%) spent between Rs20,001 and 40,000. Many people, 169(43.7%), only shop for food once a month, and most 186(48.2%) prefer to get groceries from local vendors. (Table 2) The influence of socio-demographic characteristics on individuals affected by inflation was observed. A chi-square test of independence was performed to evaluate the correlation between gender, marital status, and monthly income with inflation. The p-value, less than 0.05, indicates a significant correlation between these variables, rejecting the null hypothesis and proving that these socio-demographics significantly impact those affected by inflation. The test

results show that 277(84.7%) out of the 327 respondents affected by inflation are females. The findings indicate that married people make up a significant portion of the population impacted by inflation. Of the 327 individuals, 64(19.5%) were unmarried, and 263(80.4%) were married. While inflation significantly impacted those with various monthly income levels, those with monthly incomes between Rs50,001 and Rs100,000 were the most affected. One hundred and seventy (52%) of the 327 affected people had an income between Rs50,001 and Rs100,000. Nonetheless, 25 (7.6%) of 327 people who made over Rs300,000 were impacted. This suggests that monthly revenue and inflation are significantly correlated. It was also observed that a considerable number of people also considered switching to public transport. A total of 245(64%) participants were highly affected, 133(34.7%) were moderately affected, 5(1.3%) were mildly affected, and in total 378(98.7%) participants experienced recession.

Recession score, i.e., the independent variable, and food purchasing behaviour, i.e., the dependent variable, were evaluated with one another. A test of linear regression was applied for this purpose, which revealed the following results:

The R-value for the association between recession score and individuals who reduced their quantity of food items was 0.551, indicating a moderate correlation. (30.4%) The recession can explain the decrease in food items, as shown in (Table 3). Other variables that reflect food purchasing

**Table-1:** Socio-demographic characteristics and food purchasing behaviour of study population (n=384)

Sociodemographic Characteristic	Variable	n(%)
Gender	Female	321 (81.5)
	Male	65 (16.7)
Marital status	Married	295 (77.2)
	Single	89 (22.8)
Monthly income	Rs15,000-50,000	76 (19.8)
	Rs50,001-100,000	175 (45.6)
	Rs100,001- 300,000	83 (21.6)
	Above Rs300,000	50 (13.0)
<b>Food purchasing behaviour</b>		
Monthly amount spent on grocery shopping	<5,000	6 (1.6)
	5,001-20,000	186 (48.2)
	20,001-40,000	135 (35.3)
	>40,000	157 (14.9)
Frequency of purchasing	Once a month	169 (43.7)
	Twice a month	69 (18.1)
	Weekly	134 (35.1)
	Daily	12 (3.1)
Source of grocery shopping	Supermarket	172 (45)
	Local vendor	186 (48.2)
	Online	0 (0)
	Utility stores	22 (5.8)
	Any other	4 (1)

**Table-2:** Association of inflation with gender, marital status, and monthly income. (Chi-square test)

Characteristic		Inflation		p-value
		Not affected n(%)	Affected n(%)	
Gender	Male	15 (3.91)	50 (13.02)	0.041
	Female	42 (10.93)	277 (72.14)	
Marital status	Married	34 (8.9)	263 (68.5)	0.001
	Single	23 (5.9)	64 (16.7)	
Monthly income	Rs15,000-50,000	6 (1.6)	70 (18.2)	0.000
	Rs50,001-100,000	5 (1.3)	170 (44.3)	
	Rs100,001-300,000	21 (5.5)	62 (16.1)	
	Above Rs300,000	25 (6.5)	25 (6.5)	

**Table-3:** Shows linear regression analysis of relationships between Recession score and Reduction in number of items

Variables	r-value	r-square	Std Error of the estimate
Reduction in the number of items	0.551	0.304	0.231
Recession score			0.013

behaviour did not demonstrate a significant correlation with the recession when linear regression was used.

## Discussion

This study sought to recognize the impact of the economic recession on food purchasing behaviour and acknowledge the effect of the economic recession on food purchasing behaviour among individuals living in Karachi, Pakistan. A vast majority of take-a-look participants, behaviour, 378 (98.7%), experienced a few types of destructive reactions due to the economic recession, with 247 (64.4%) being particularly affected and 133 (34.7%) being moderately affected, imparting sufficient proof of its impact on the food buying behaviour of the population. Similar results were observed in the investigation carried out in Brazil, where there has been an evident decline in food security.<sup>11</sup> The study sample primarily comprised 311 females (81.5%), reflecting societal norms where women rely heavily on financial support from fathers or husbands; consequently, fathers'/husbands' reliance comprised 257 (67.5%) of Karachi's overall percentage of dependents. Generally, dependence on husbands or fathers is more prevalent globally. Socio-demographic characteristics associated with younger adults from upper-middle socio-economic status may have contributed to an accentuated impact of the recession on food purchasing behaviour the recession on food purchasing behaviour within Karachi. The recession greatly impacted people earning between 5,000 and 20,000 who belong to the middle class. Primarily, people relied on monthly salaries and had ownership of their houses. Regarding purchasing habits, local vendors were the most preferred choice, with 186 (48.2%) of people shopping from them and 169 (43.7%) shopping for

groceries only once a month. The economic recession affected several aspects of food purchasing behaviour, including monthly grocery spending, sources of grocery shopping, and frequency of purchases. A large proportion of the study participants reduced spending on groceries after experiencing an economic recession, reflecting similar findings in other studies highlighting its effects on household expenditure patterns involving essential items like food. This observation aligns with results from different studies showing the implications of economic recession on these aspects.<sup>12</sup> Recession-era grocery shopping patterns suggest that participants may have sought more affordable options or relied on family and friends for food supplies during difficult economic times. This aligns with previous research showing how individuals adjust their strategies during hardship to reduce expenses. This evidence perfectly fits previous findings of how people adapt their food-sourcing approach to hardship situations. This was seen in Nigeria during a recession in 2021.<sup>13</sup> Several ethical restrictions, such as the fact that some participants were reluctant to reveal their income and source, were among the study's limitations. Moreover, selection bias occurred in the study since individuals were not randomly chosen because this was a non-probability sampling. A small proportion of the study results may have been negatively impacted by an uncontrolled variable, such as a rise in the number of persons living in a household, which may have affected a family's food purchasing behaviour in addition to the recession and served as the confounding variable.

## Conclusion

This research highlights the significant effects of economic recession on food purchasing behaviours among individuals in Karachi, Pakistan. Recessionary effects were witnessed in monthly grocery spending, grocery shopping sources, and purchase frequency—all critical indicators for food security for vulnerable populations. Future research should seek effective strategies that mitigate adverse economic downturn effects and preserve food security among affected communities.

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**AUTHORS' CONTRIBUTIONS:**

**IHT:** Conception and design.

**FAS** and **HAS:** Collection, assembly of data, drafting and Statical section.

**FAS, HAS, MABIQ, AA** and **AAK:** Analysis, interpretation of data and Critical revision.

**IHT, FA S** and **AAS:** Final approval.