Inflation, Subjective Well-being and Aspirations: Evidence from Rural Households in Bangladesh

Team Member:

Binayak Sen

S M Zahedul Islam Chowdhury

Rizwana Islam

Annual BIDS Conference on Development (ABCD) 2024

Background

➤ Subjective well-being (SWB) is defined as a 'good mental status, encompassing all the various positive and negative evaluations people make about their lives, along with their emotional reactions to experiences (OECD, 2013).

➤ Researchers in this emerging field of economics advocate for the use of self-reported measures of well-being to analyze and assess the impact of various pertinent variables.

➤ Inflation in Bangladesh has reached alarming levels, becoming a major topic of public discussion and economic concern. It directly affects the purchasing power of income and wealth, meaning the money available at the start of the year will buy fewer goods and services by the end of the year.

➤ Consumers are particularly affected by inflation, as rising prices for everyday items such as food and others reduce their purchasing power.

➤ Inflation is negatively correlated with well-being, as price increases often lead to negative emotions. These feelings of dissatisfaction can significantly affect an individual's financial satisfaction and other life issues, which in turn contributes to broader dissatisfaction with overall life quality. So, our study aims to explore the effects of this increased inflation on the food consumption patterns and perceived well-being of rural populations.

Literature Review

Author(s)	Issue
Alem and Kohlin (2013)	They utilized an ordered probit regression and demonstrated that households negatively affected by a food price shock experienced a significant reduction in subjective well-being, even amidst rapid economic growth. The main takeaway from this expanding body of research is that citizens' well-being cannot be fully captured by economic measures like income or GDP alone
Easterlin (1974, 1995)	SWB is positively influenced by income but negatively influenced by relative income. As a result, there has been a growing reliance on self-reported SWB indicators, which have proven to be reliable measures of well-being.
Graham and Pettinato 2001; Alesina et al. 2004; Di Tella et al. 2001, 2003; Wolfers 2003	Since inflation affects all respondents in a country, previous studies have explored its impact on subjective well-being using cross-country or long panel data. These studies consistently show that inflation has a robust negative impact on citizens' SWB.
Alem and Soderbom (2012)	They examined the effect of food price inflation on the consumption of urban Ethiopian households through rigorous econometric analysis. To ensure the robustness of their findings, they also included households' subjective responses regarding the impact of the shock.
Kulkarni et al. (2023)	Suggested that significant income disparities within a village or small town are linked to the gap between aspiration and achievement, which breeds resentment and frustration, negatively affecting subjective well-being.
Ravallion (2014)	Suggests that different individuals likely have varying perceptions of what it means to be "rich" or "poor" or "satisfied" with their lives, leading them to interpret survey questions on subjective welfare differently.
Other studies on subjective well-being conducted in developing countries include Ravallion and Lokshin (2002) on Russia; Kingdon and Knight (2006), Bookwalter and Dalenberg (2004, 2009) on South Africa; Graham and Pettinato (2001, 2002) on Peru and Russia; Appleton and Song (2008), Smyth and Qian (2008), Knight and Gunatilaka (2010) on urban China; Knight et al. (2009) on rural China; Alem and Martinsson (2011) on urban Ethiopia; and Litchfield et al. (2012) on Albania.	

Data

For collecting data for the present study in order to analyze subjective well-being, we conducted household survey with a sample size of 3887 rural households. The study area encompassed rural areas from all 64 districts of the country. For verification and confirmation, from each of the 64 districts, one upazila was randomly selected and from that upazila, we then selected one union and subsequently, one village was randomly selected from each of these unions. Hence the 64-village data of the present study comprises of 64 villages from 64 districts of the country.

Perception based Impact of Inflation on Rural HH's Well-being

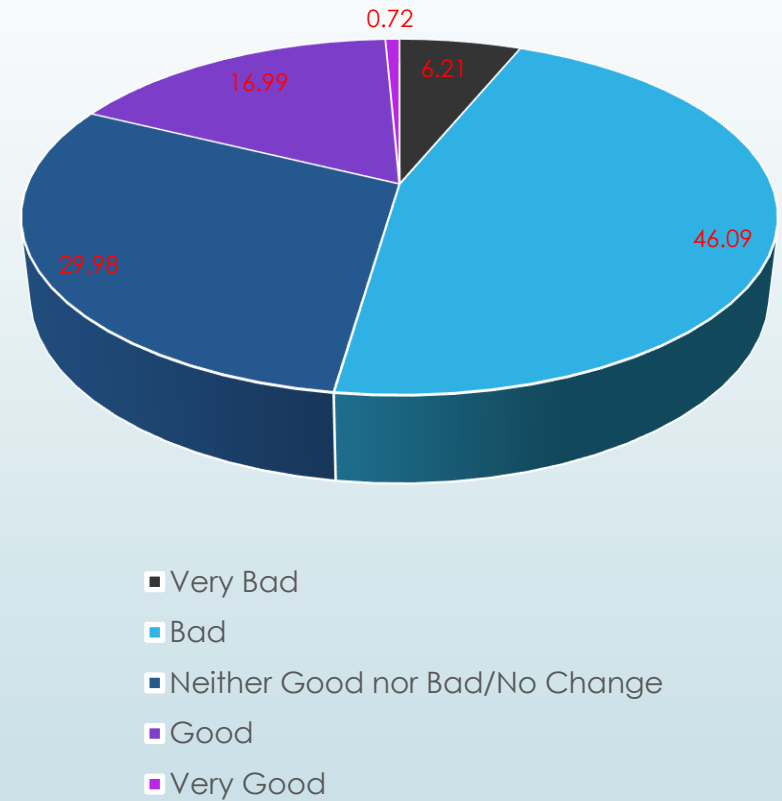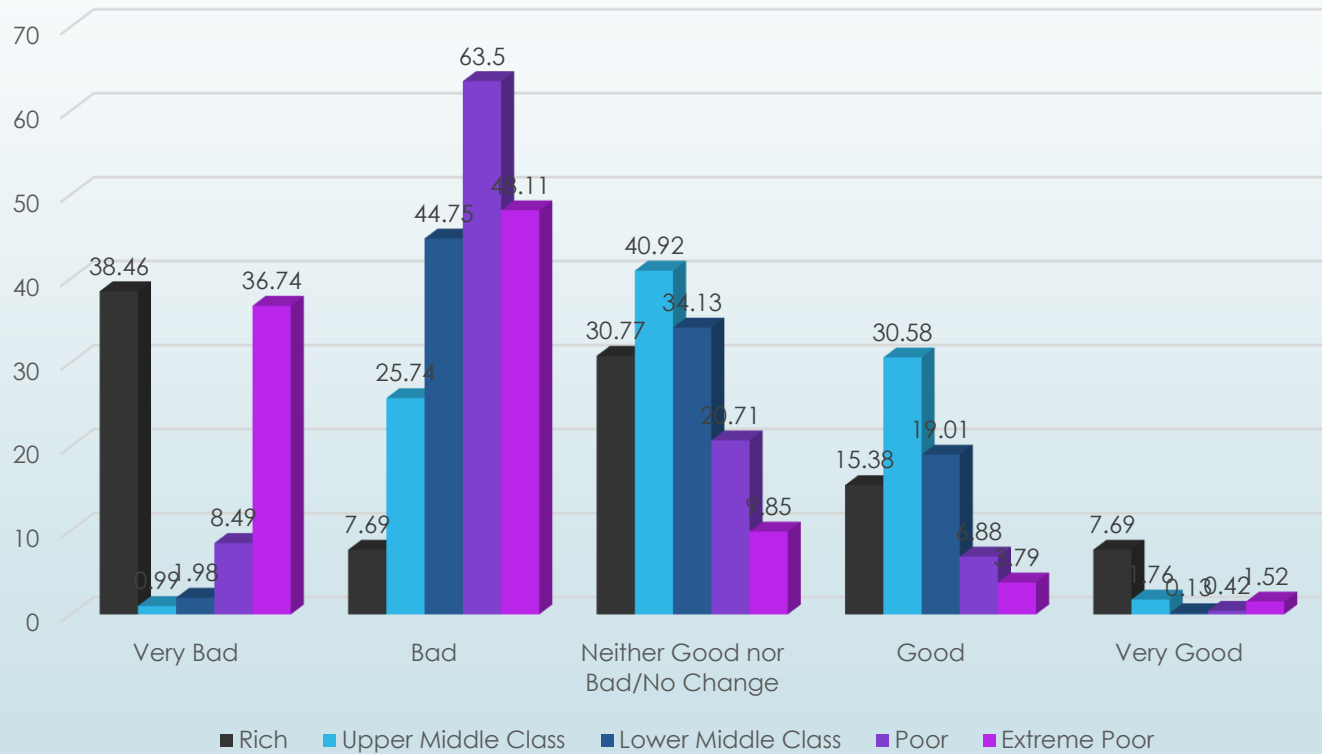## Figure 1: Financial Situation due to Recent Inflation (%)

Figure 2: Current Financial Situation Compared to 1 Year Ago (%)

Bar chart categories: Very good, Good, No change, Bad, Very bad

Very good: Rich 46.15, Upper Middle Class 2.87, Lower Middle Class 0.13, Poor 0.51, Extreme Poor 0

Good: Rich 7.69, Upper Middle Class 49.83, Lower Middle Class 31.53, Poor 14.86, Extreme Poor 4.18

No change: Rich 15.38, Upper Middle Class 29.88, Lower Middle Class 36.88, Poor 32.94, Extreme Poor 35.74

Bad: Rich 23.08, Upper Middle Class 17.31, Lower Middle Class 28.82, Poor 44.48, Extreme Poor 36.5

Very bad: Rich 7.69, Upper Middle Class 0.11, Lower Middle Class 2.45, Poor 7.22, Extreme Poor 23.57

Bar legend: Rich, Upper Middle Class, Lower Middle Class, Poor, Extreme Poor

Pie chart: Very good 1.11, Good 28.81, No change 33.89, Bad 31.39, Very bad 4.8

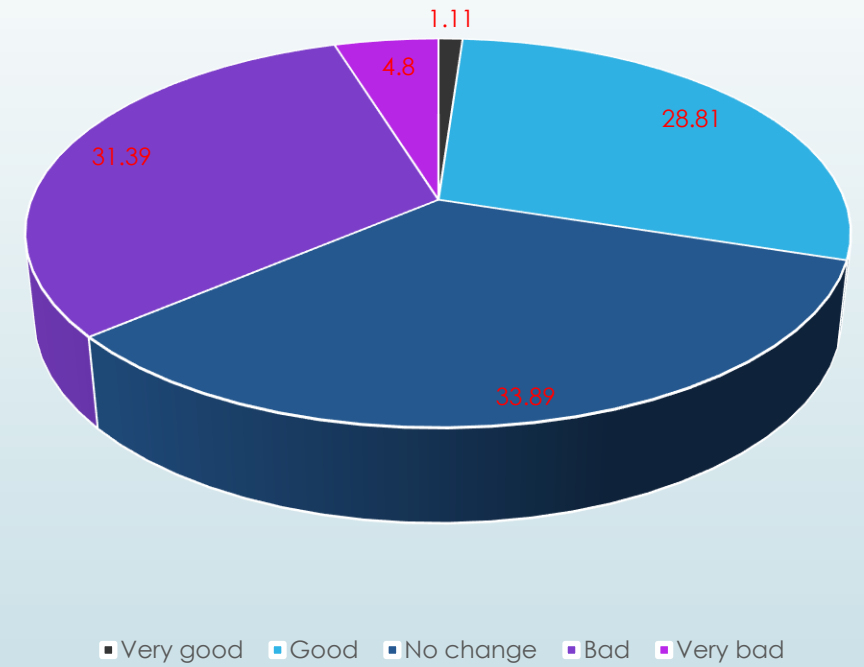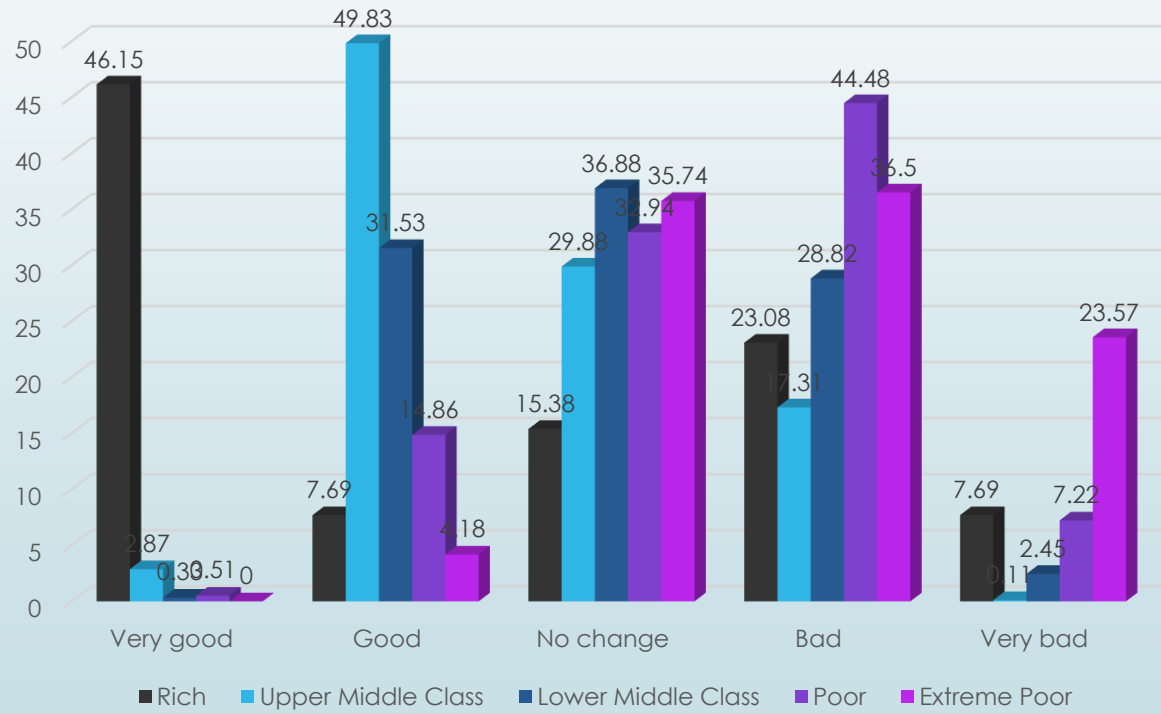Pie legend: Very good, Good, No change, Bad, Very bad

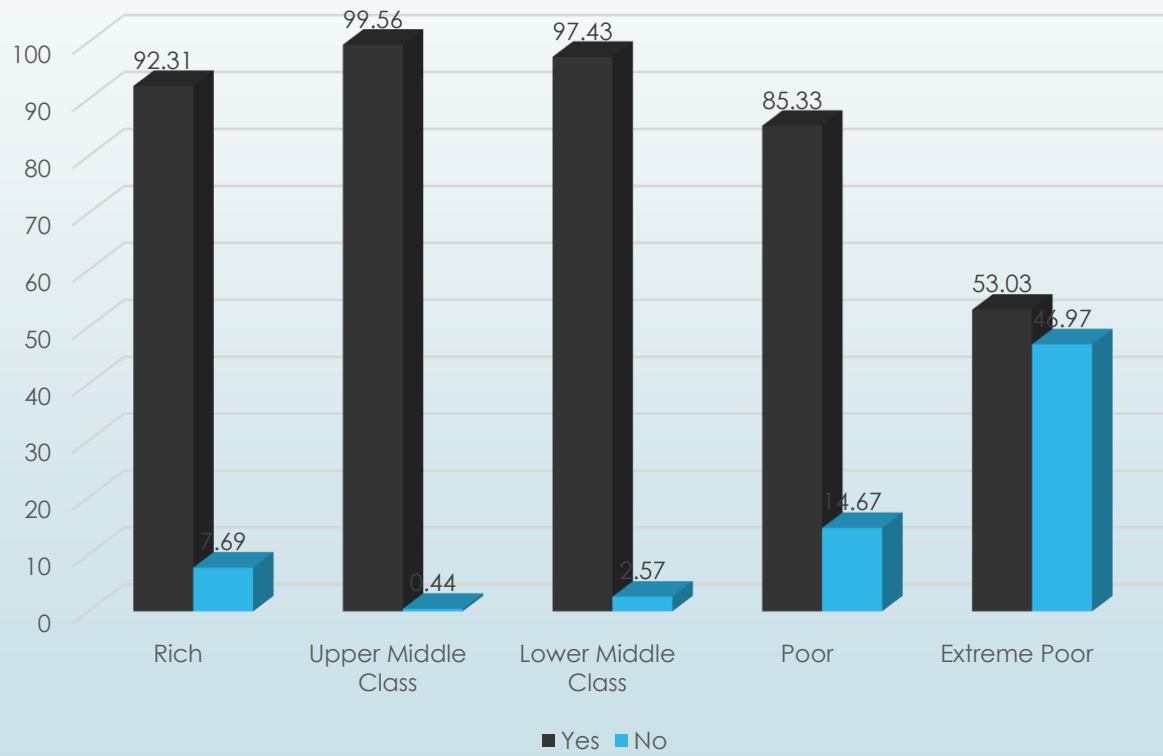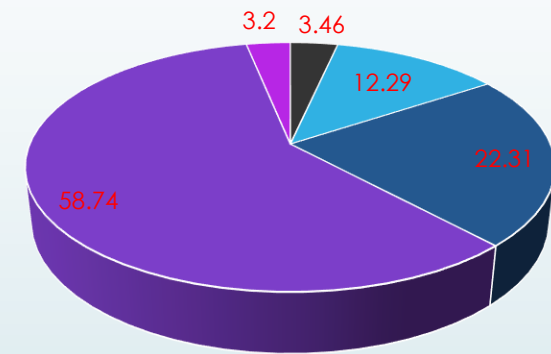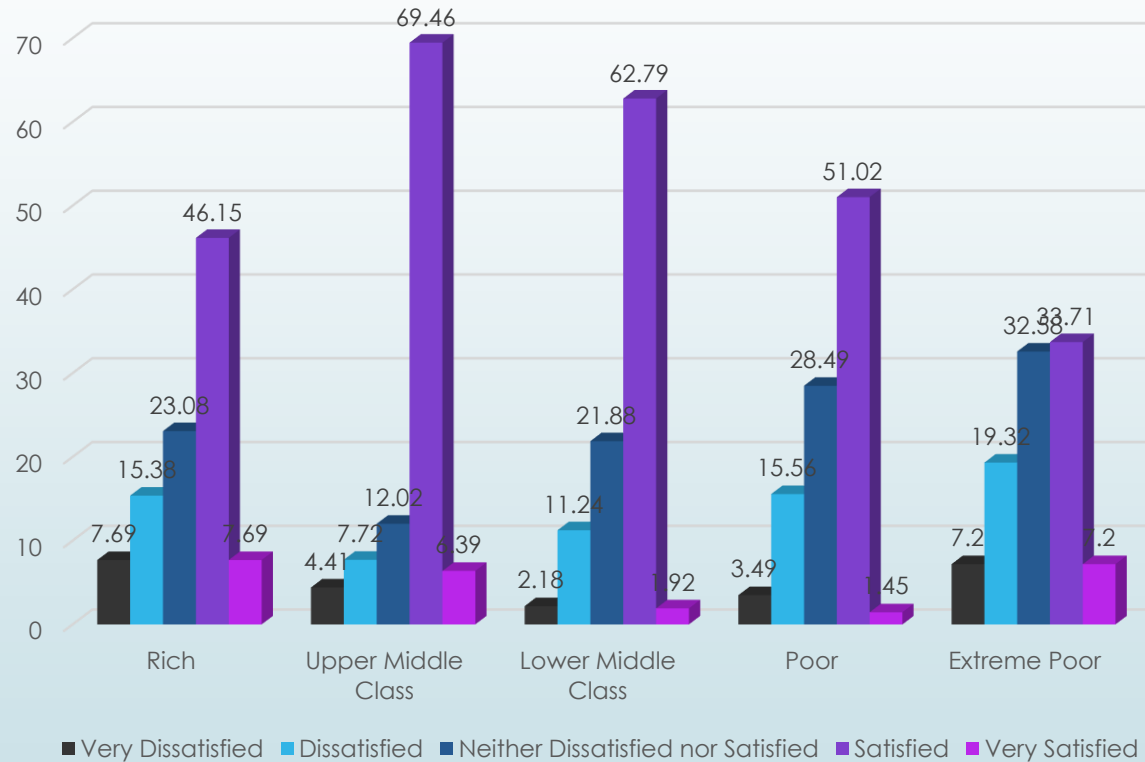**Figure 3: Current Intake of Three Full Meals throughout the Year (%)**
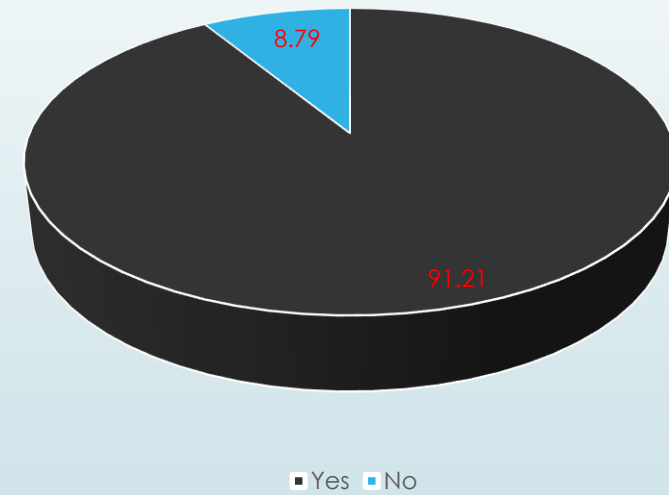
Figure 4: Overall Perceptions regarding Satisfaction/Happiness of Respondent's Own Life (%)

Trends in Aspiration

Figure 5: Perceptions Regarding Children's Living Standards Compared to Respondent's Own Life (%)
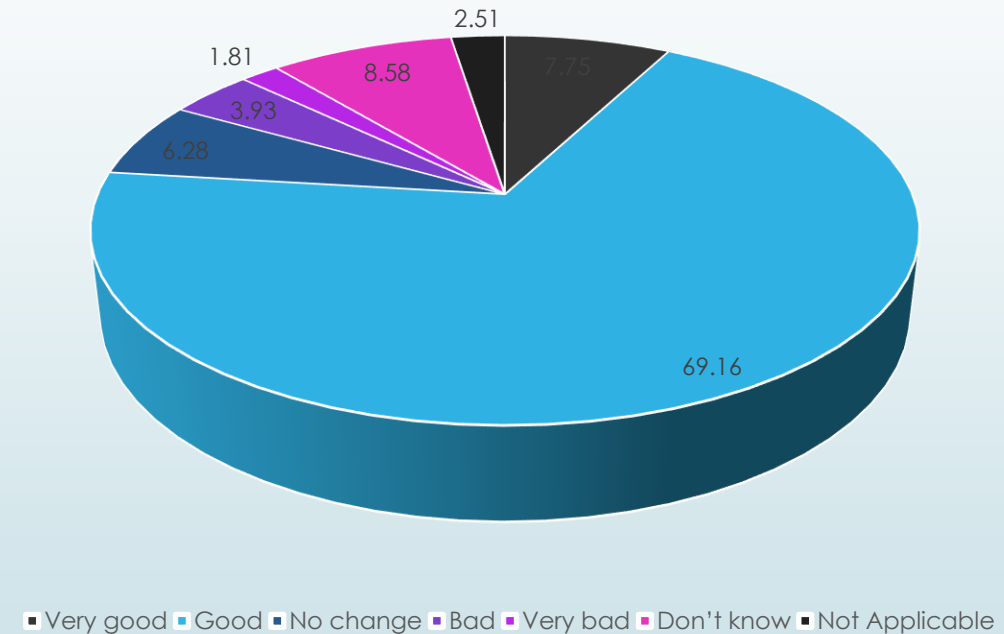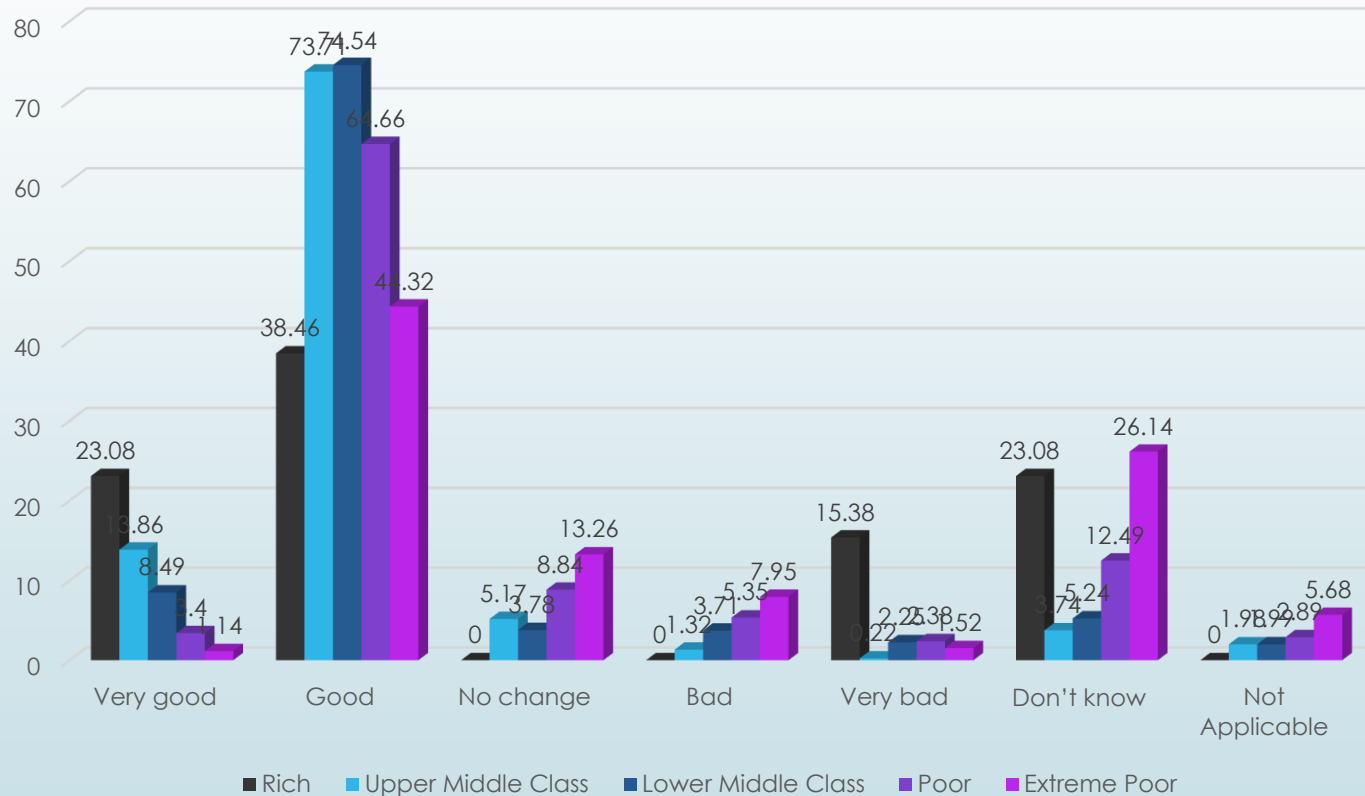
Trends in Aspirations (contd.)

Figure 6: Respondents' Perception about Future Financial Status (%)
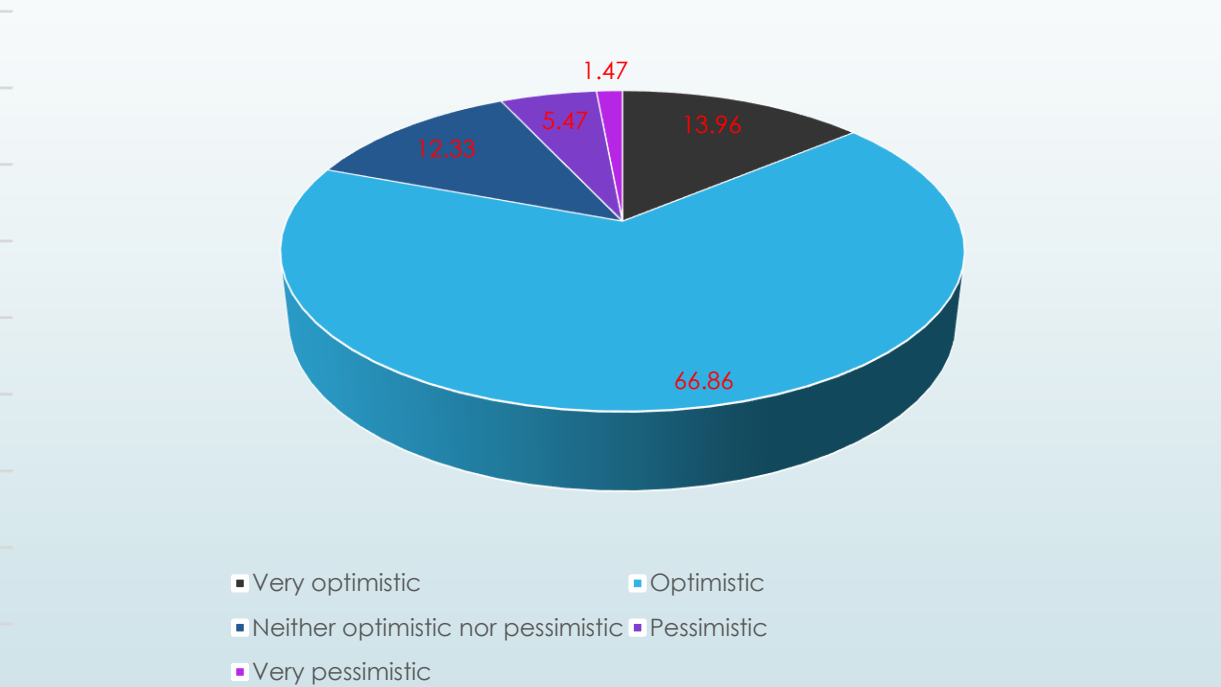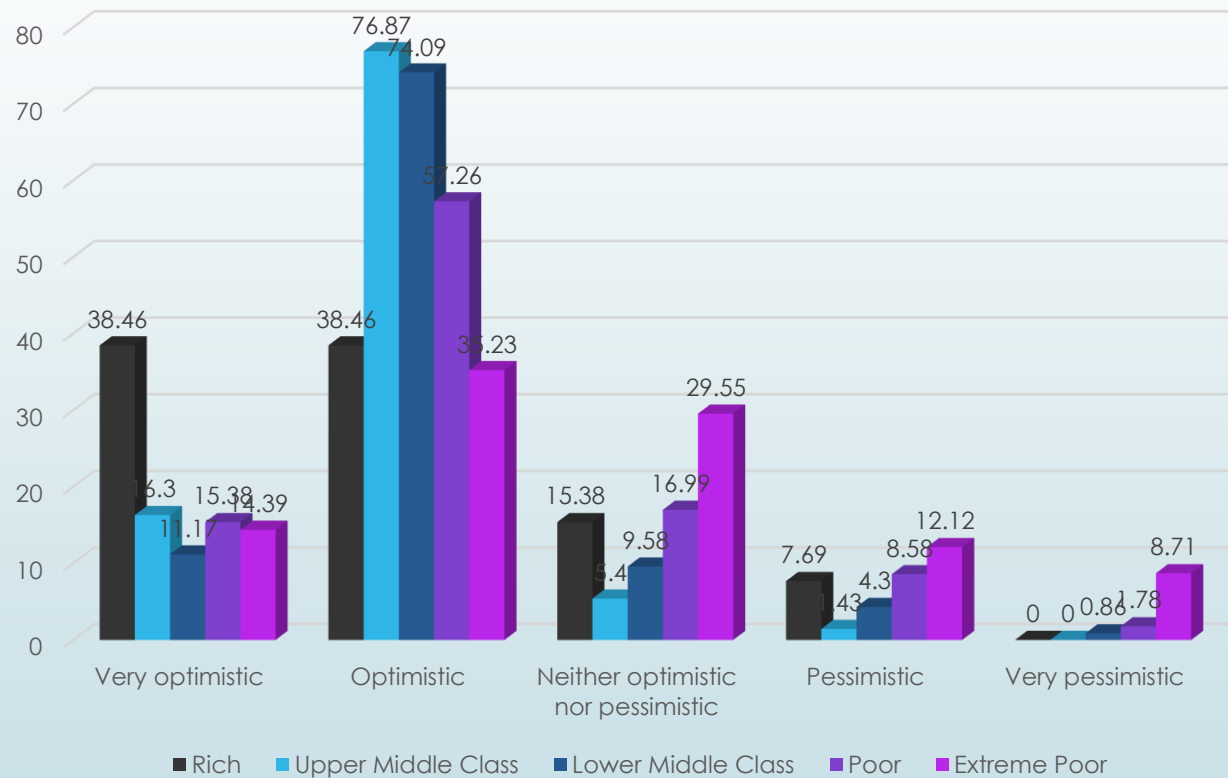
Trends in Aspirations (contd.)

Figure 7: Perceptions regarding the Situation of Respondent's Own Life after 5 Years (%)
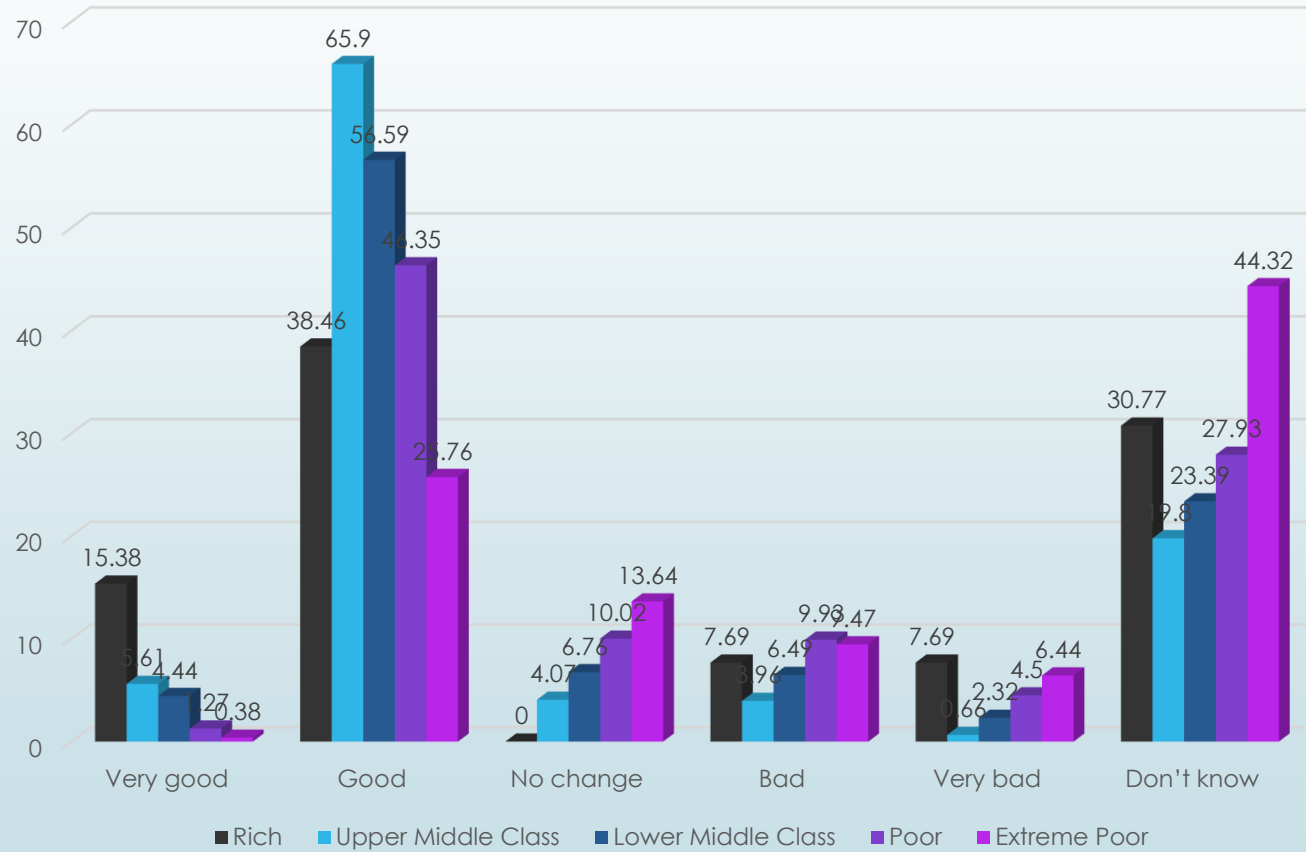
Empirical Strategy

When a dependent variable has more than two categories and the values of each category have a meaningful sequential order where a value is indeed 'higher' than the previous one, then we can use ordered logit regression.

$$Y_i = \beta_0 + \beta_1 X_{1i} + \cdots + \beta_k X_{ki} + \varepsilon_i$$

Y_i= Overall perceptions regarding satisfaction/Dependent variable

β_0=Intercept

$\beta_1 \ldots \ldots \beta_k$= Corresponding Coefficient

$X_{1i} \ldots \ldots X_{ki}$= Subjective wellbeing and aspirations related indicators/ independent variable

ε_i=Error term

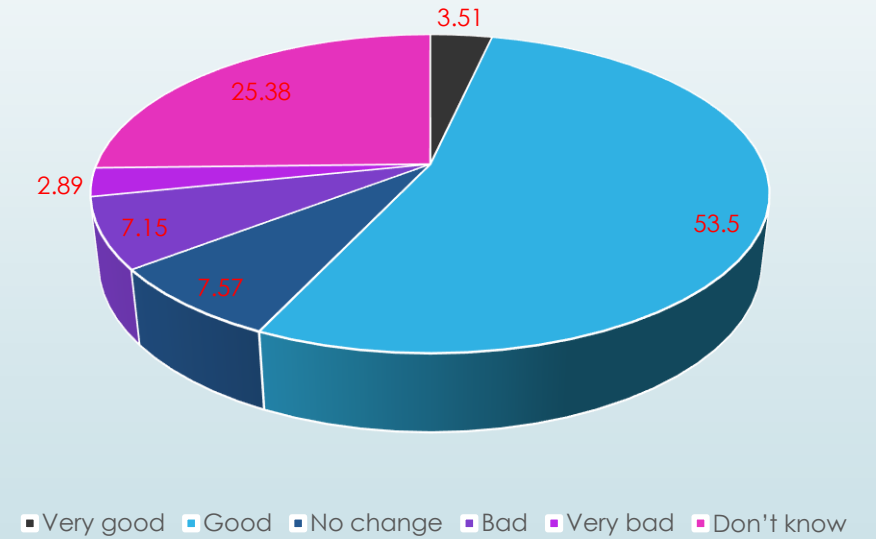The present paper uses responses that are ordered and categorical from the following survey question as the dependent variable: ''What is overall perceptions regarding satisfaction/happiness of respondent's own life?''. The respondent can answer five responses as 'very dissatisfied', 'dissatisfied', 'neither dissatisfied nor satisfied', 'satisfied' and 'very satisfied'

Life Satisfaction Regression:
Ordered Logit Results (Household-level)

Household-level variables	Ordered Logit		Marginal Effect				
	Coefficient	SE	Very Dissatisfied	Dissatisfied	Neither Dissatisfied nor Satisfied	Satisfied	Very Satisfied
Subjective Well-being							
Financial situation due to recent inflation (reference / base outcome= Very Bad)							
Bad	0.249	0.208	-0.006	-0.022	-0.019	0.041	0.007
Neither Good nor Bad/No Change	0.144	0.227	-0.004	-0.013	-0.011	0.024	0.004
Good	0.459*	0.247	-0.011*	-0.038*	-0.036*	0.072*	0.013**
Very Good	1.475***	0.595	-0.024***	-0.097***	-0.113***	0.163***	0.070
Responses in term of food intake throughout the year (reference / base outcome= Always Deficit)							
Sometimes Deficit	0.514***	0.188	-0.014**	-0.048**	-0.039***	0.089**	0.012***
Neither Deficit nor Surplus	0.550***	0.204	-0.015**	-0.051**	-0.041***	0.095**	0.013***
Surplus	0.691***	0.246	-0.018**	-0.063***	-0.053***	0.116***	0.018***
Subjective Household Level/status (reference / base outcome= Extreme Poor)							
Poor	-0.550**	0.215	0.011***	0.041***	0.043**	-0.075***	-0.020**
Lower middle class	-0.565**	0.222	0.011***	0.042***	0.044***	-0.077***	-0.021**
Upper middle class	-0.351	0.238	0.006	0.025	0.028	-0.045	-0.014
Rich	-1.397	1.046	0.040	0.124	0.098**	-0.226	-0.037**

Life Satisfaction Regression:
Ordered Logit Results (Household-level)

Household-level variables	Ordered Logit			Marginal Effect			
	Coefficient	SE	Very Dissatisfied	Dissatisfied	Neither Dissatisfied nor Satisfied	Satisfied	Very Satisfied
Responses regarding savings from household's current income (reference / base outcome= It is not enough, so need to borrow from others)							
Not enough	-0.143	0.160	0.004	0.013	0.011	-0.025	-0.003
Just enough to cover expenses	0.176	0.174	-0.004	-0.015	-0.014	0.029	0.005
Can save little from income	0.297	0.193	-0.007	-0.025	-0.024	0.047	0.009
Can save enough from income	0.456	0.320	-0.009	-0.037	-0.038	0.070	0.014
Responses regarding current financial situation compared to 1 year ago (reference / base outcome= Very bad)							
Bad	0.306	0.233	-0.008	-0.027	-0.024	0.051	0.008
No change	0.245	0.260	-0.006	-0.022	-0.019	0.041	0.006
Good	0.375	0.281	-0.009	-0.033	-0.029	0.062	0.010
Very good	2.505***	0.584	-0.030***	-0.133***	-0.172***	0.158***	0.177**
Responses regarding current financial situation compared to 5 years ago (reference / base outcome= Very bad)							
Bad	-0.420*	0.243	0.009*	0.031*	0.032*	-0.055**	-0.016
No change	-0.309	0.268	0.006	0.022	0.023	-0.039	-0.013
Good	-0.566**	0.279	0.012**	0.043**	0.042**	-0.077**	-0.021*
Very good	-0.754	0.490	0.018	0.059	0.056	-0.107	-0.026

Life Satisfaction Regression:

Ordered Logit Results (Household-level)

Household-level variables	Ordered Logit			Marginal Effect			
	Coefficient	SE	Very Dissatisfied	Dissatisfied	Neither Dissatisfied nor Satisfied	Satisfied	Very Satisfied
Perceptions regarding children's living standards compared to respondent's own life (reference / base outcome= Very bad)							
Bad	0.475	0.290	-0.021	-0.056	-0.020*	0.091	0.007*
No change	1.233***	0.325	-0.041***	-0.131***	-0.074***	0.221***	0.025***
Good	1.225***	0.304	-0.041***	-0.130***	-0.074***	0.220***	0.025***
Very good	0.721**	0.355	-0.029*	-0.083*	-0.036**	0.136**	0.011**
Whether respondents are worried about the young people in the family (reference / base outcome= Yes)							
No	-0.078	0.132	0.002	0.006	0.006	-0.012	-0.002
Not Applicable	-0.193	0.153	0.005	0.016	0.015	-0.029	-0.006
Perceptions regarding respondent's own life compared to their parents (reference / base outcome= Very bad)							
Bad	-0.666***	0.240	0.018***	0.069***	0.055**	-0.130*	-0.013**
No change	-0.539**	0.258	0.014**	0.055**	0.046*	-0.104**	-0.011
Good	0.408	0.254	-0.007	-0.032	-0.039	0.066	0.012
Very good	0.206	0.370	-0.004	-0.017	-0.020	0.035	0.006

Life Satisfaction Regression:
Ordered Logit Results (Household-level)

Household-level variables	Ordered Logit			Marginal Effect			
	Coefficient	SE	Very Dissatisfied	Dissatisfied	Neither Dissatisfied nor Satisfied	Satisfied	Very Satisfied
Household Aspirations							
Perceptions regarding the situation of respondent's own life after 5 years (reference / base outcome= Very bad)							
Bad	0.042	0.244	-0.001	-0.004	-0.003	0.007	0.001
No change	0.060	0.275	-0.001	-0.005	-0.005	0.009	0.002
Good	0.135	0.259	-0.003	-0.011	-0.010	0.021	0.004
Very good	-0.240	0.363	0.007	0.022	0.018	-0.040	-0.006
Respondents' perception about future financial Status (reference / base outcome= Very pessimistic)							
Pessimistic	0.741*	0.402	-0.045	-0.100*	-0.002	0.142**	0.006**
Neither optimistic nor pessimistic	1.275***	0.447	-0.064*	-0.165***	-0.032*	0.249***	0.013***
Optimistic	1.812***	0.438	-0.077**	-0.219***	-0.076***	0.347***	0.025***
Very optimistic	2.292***	0.457	-0.084**	-0.256***	-0.120***	0.418***	0.042***
Respondents' perception about Children (reference / base outcome= Very pessimistic)							
Pessimistic	0.019	0.337	0.000	-0.002	-0.002	0.003	0.001
Neither optimistic nor pessimistic	-0.054	0.418	0.001	0.005	0.004	-0.009	-0.001
Optimistic	-0.062	0.379	0.002	0.005	0.005	-0.010	-0.002
Very optimistic	0.370	0.391	-0.008	-0.029	-0.030	0.054	0.012
Pseudo R2	0.1241						
Log likelihood	-2624.1038						
Number of observations	2,685						

Note: *** denotes significance at 1 %, ** at 5 % and * at 10 %

Major Findings

➢ The results show that having a "Very Good" financial situation even after recent inflation significantly increases the likelihood of being "Very Satisfied," with a positive marginal effect of 0.07. Conversely, it reduces dissatisfaction by 0.024. This aligns with economic theory, as improved financial conditions enhance utility and subjective well-being.

➢ Households reporting food surpluses show significantly higher satisfaction levels. For instance, the marginal effect of food surplus households on satisfaction level is 0.018, with "Very Satisfied," indicating better nutrition and food security are strongly linked to higher well-being. This reflects the critical role of basic needs in economic welfare.

➢ Moreover, transitioning from "Extreme Poor" to "Poor" increases satisfaction probabilities and decreases dissatisfaction. However, the effect is stronger for lower-income groups than more affluent households, suggesting diminishing marginal returns to income on well-being.

➢ Additionally, the ability to save from current income positively correlates with satisfaction. This supports economic logic, as savings reduce financial vulnerability, improving subjective well-being.

➢ At the same time, optimism about financial prospects ("Very Optimistic") has the highest positive impact on satisfaction (0.042) and reduces dissatisfaction (-0.084). This highlights the importance of expectations in economic well-being.

➢ The lower part of the table presents results from an ordered logit model, analyzing satisfaction/happiness (measured in order) based on household-level variables like future aspirations, financial status, and perceptions about children.

➢ The results show the strongest positive marginal effect of optimism about financial stability is 0.418 for "Satisfied," which reflects that optimism boosts satisfaction due to reduced uncertainty and better resource planning.

➢ Moreover, the negative marginal effects on dissatisfaction levels of 0.256 imply that financial confidence reduces stress and increases contentment. This supports the life-cycle hypothesis where expectations about stable future income, smooth consumption, and well-being.

➢ The variables related to optimism about children show insignificant coefficients, indicating weak or inconclusive effects on well-being. This may reflect a weak role of children's future in influencing current well-being or the possibility that other factors, like financial stability, overshadow concerns about children's outcomes in this dataset.

Conclusions

➢ From survey, we found that despite being uncomfortable with the food price hike or recent inflation, households maintain an optimistic or positive view and aspirations towards their future life and status and have greater hopes for their future generation.

➢ The overall ordered logit regression results imply that the role of policies ensuring income stability (e.g., social safety nets, accessible credit) can significantly enhance subjective well-being. Enhanced data collection on children's education, health, and social outcomes may clarify their impact on parental well-being. This analysis highlights the interconnectedness of financial perceptions, aspirations, and subjective satisfaction, aligning well with established economic theories on utility, expectations, and human behavior.

Thanks for your Patience